PB85-215218

FINAL REPORT

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS FROM IRON FOUNDRY CASTING OPERATIONS

VOLUME V

CONTRACT NO. 210-78-0033
BORRISTON PROJECT NO. 0102

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Experimental Toxicology Branch
Division of Biomedical and Behavioral Science
National Institute for Occupational Safety and Health

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16. Abstract (Limit: 200 words)

Data tabulations for a carcinogenesis bioassay of condensed effluents from iron foundry casting operations that used hamsters as the test species are presented. In that study, Syrian-golden-hamsters were administered effluents from shell sand, green sand, furan (110009), or urethane (51796) casting molds once a week for 18 weeks by intratracheal instillation. The concentrations were 5 or 10 milligrams (mg) effluent in 0.2 milliliter of distilled water, except for the effluents from the urethane mold, which were administered in amounts of 2.5 or 5.0mg. Benzo(a)pyrene (50328) plus ferric-oxide (1309371) and ferric-oxide alone were administered as positive controls. The animals were maintained until 98 percent mortality occurred or until week 103 in the case of females or week 117 in the case of males. None of the effluents were found to be carcinogenic at the concentrations used. The histopathological results for each individual animals were tabulated. A tumor inventory for each animal was also constructed.

17. Document Analysis a. Descriptors

DiS

b. Identifiers/Open-Ended Terms

NIOSH-Publication, NIOSH-Contract, Lung-fibrosis, Iron-working-industry, Data-processing, Iron-oxide-fumes, Equipment-design, Pharmacodynamics, Quantitative-analysis, Pyrolysis, Toxicology, Contract-210-78-0033

c. COSATI Field/Group

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(See ANSI-Z39.18) See Instructions on Reverse OPTIONAL FORM 272 (4-77) (Formerly NTIS-35) Department of Commerce

APPENDIX 5

INDIVIDUAL HISTOPATHOLOGY

KEY TO GROUP IDENTIFICATION

GROUP NUMBER	TREATMENT	DOSE LEVEL (mg/0.2 ml distilled water)
1	Vehicle Control	--
2	Ferric Oxide Control (Fe_2O_3 + Vehicle)	3.0
3	Positive Control (BaP + Fe_2O_3)	3.0 + 3.0
4	Shell Sand	5.0
5	Shell Sand	10.0
6	Green Sand	5.0
7	Green Sand	10.0
8	Furan	5.0
9	Furan	10.0
10	Urethane	2.5
11	Urethane	5.0

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 1 MALES

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	2	2	2	2
	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4
SKIN	-	-	-	X	-	X	X	-	X	=	-	-	-	-	-	-	X	-	-	-	-	X	-	-	-
INFLAMMATION.	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
SKIN/MAMMARY	-	-	-	X	-	X	X	-	X	N	-	-	-	-	-	-	X	-	-	-	-	X	-	-	-
THIGH MUSCLE	-	-	-	X	-	X	X	-	X	-	-	-	-	-	-	-	X	-	-	-	-	X	-	-	-
SALIVARY GLAND	-	-	-	X	-	X	X	-	X	X	-	-	-	-	-	-	X	-	-	-	-	A	-	-	-
MANDIBULAR LYMPH NODE	-	-	-	M	-	X	M	-	M	M	-	-	-	-	-	-	=	-	-	-	-	X	-	-	-
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=
SCIATIC NERVE	-	-	-	X	-	X	X	-	X	-	-	-	-	-	-	-	X	-	-	-	-	X	-	-	-
BRAIN	-	-	-	X	-	X	X	-	X	A	-	-	-	-	-	-	X	-	-	-	-	X	-	-	-
PITUITARY	X	X	X	M	M	I	X	X	I	A	A	X	I	X	M	M	X	X	X	X	X	X	X	X	X
ADRENALS	A	X	=	X	X	=	=	=	=	A	A	=	=	=	=	A	=	X	I	=	I	=	=	=	=
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
AMYLOID.	=	=	2+	=	=	=	3+	4+	4+	=	=	=	2+	=	=	=	3+	=	4+	3+	=	4+	=	3+	=
HYPERPLASIA.	=	=	1+	=	=	=	=	=	P	=	=	2+	P	=	P	=	=	=	P	=	P	=	=	=	=
CORTICAL CELL HYPERPLASIA.	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	1+	=	=
MEDULLARY CELL HYPERPLASIA.	=	=	=	=	=	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ADENOMA.	=	=	=	=	=	=	P	=	=	=	=	=	=	P	=	=	P	=	=	P	=	=	=	P	P
THYMUS	X	X	N	X	N	N	X	=	N	A	N	A	M	N	N	M	X	N	X	X	I	M	X	M	X
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
INVOLUTED.	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
STOMACH	-	-	-	X	-	X	X	-	X	A	-	-	-	X	-	-	X	-	-	-	-	X	=	-	-
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	2+	=	=
PIGMENT.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	2+	=	=
MINERALIZATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
DUODENUM	-	-	-	X	-	X	X	-	X	A	-	-	-	-	-	-	X	-	-	-	-	X	-	-	-
JEJUNUM	-	-	-	X	-	X	X	-	X	A	-	-	-	-	-	-	X	-	-	-	-	X	-	-	-
CECUM	-	-	-	X	-	X	X	-	=	A	-	-	-	-	-	-	X	-	-	-	-	X	-	-	-
INFLAMMATION.	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 1 MALES

	18600	18601	18602	18603	18604	18605	18606	18607	18608	18609	18610	18611	18612	18613	18614	18615	18616	18617	18618	18619	18620	18621	18622	18623	18624
COLON	-	=	-	X	-	X	X	-	X	A	-	-	-	-	-	-	X	-	-	-	-	X	-	-	-
INFLAMMATION.	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
RECTUM	-	-	-	X	-	X	X	-	X	A	-	-	-	-	-	-	X	-	-	-	-	X	-	-	-
MESENTERIC LYMPH NODE	-	-	-	X	-	M	X	-	X	A	-	-	-	-	A	-	=	-	-	-	-	=	-	-	-
AMYLOID.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	P	=	=	=
ILEUM	-	-	-	X	-	X	X	-	X	A	-	-	-	-	-	-	X	-	-	-	-	X	-	-	-
LARYNX	=	X	X	X	X	X	X	X	X	A	A	X	X	X	X	A	X	=	X	X	X	X	X	X	X
INFLAMMATION.	1+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PAPILLOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=
MYOPATHY.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
TRACHEA	X	X	X	X	X	X	X	X	X	A	A	X	X	X	X	A	X	X	X	X	X	X	X	X	X
THYROID	=	N	=	X	=	=	=	=	=	A	A	A	=	X	I	A	=	=	=	=	=	=	X	X	X
AMYLOID.	P	=	2+	=	2+	=	4+	3+	3+	=	=	=	3+	=	=	=	3+	=	3+	4+	2+	4+	=	=	=
CYST(S).	=	=	=	=	=	P	P	=	=	=	=	=	=	=	=	=	=	P	P	=	P	=	=	=	=
PARATHYROID	N	N	X	X	X	X	X	X	X	A	A	N	X	X	N	A	=	X	X	X	X	X	N	X	X
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=
ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ESOPHAGUS	X	X	X	X	X	X	X	X	X	A	X	X	X	X	X	A	X	X	X	X	X	X	X	X	X
LUNG	=	=	X	=	=	=	=	=	=	A	X	X	=	=	X	=	X	=	X	=	=	=	=	=	X
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ALVEOLAR/BRONCHIOLAR CELL HYPERPLASIA.	2+	=	=	=	=	1+	=	2+	1+	=	=	=	2+	1+	=	2+	=	=	=	2+	=	=	=	=	=
PIGMENT.	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	2+	=	=	=	=	=	=	=
PNEUMOLITHIASIS.	=	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	1+	=	=	=
CONGESTION.	=	3+	=	1+	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=
HEMORRHAGE.	=	=	=	=	=	2+	=	=	=	=	=	=	2+	2+	=	=	=	=	=	=	=	=	3+	=	=
HISTIOCYTOSIS.	=	=	=	=	=	=	3+	=	3+	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=
FIBROSIS.	=	=	=	=	=	=	=	=	2+	=	=	=	=	=	=	=	=	=	=	=	2+	=	=	=	=
ALVEOLAR/BRONCHIOLAR CELL ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=
ATELECTASIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
EOSINOPHILIC MASS(ES).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
BRONCHIAL LYMPH NODES	M	I	X	N	X	N	X	M	=	A	X	A	M	N	N	M	X	=	X	X	I	X	M	X	=

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

GROUP 1 MALES

	18600	18601	18602	18603	18604	18605	18606	18607	18608	18609	18610	18611	18612	18613	18614	18615	18616	18617	18618	18619	18620	18621	18622	18623	18624
BRONCHIAL LYMPH NODES (CONTINUED)																									
AMYLOID.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PIGMENT.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	2+	=	=	=	=	=	=	3+
HYPERPLASIA.	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
LYMPHOID HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
MAINSTEM BRONCHI	X	X	X	X	X	X	X	X	X	A	M	X	X	X	X	A	X	X	X	X	X	X	X	X	X
LIVER	=	X	=	X	=	=	=	=	=	A	A	X	=	X	X	A	=	=	=	=	=	=	X	=	X
INFLAMMATION.	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
AMYLOID.	=	=	3+	=	3+	=	4+	3+	2+	=	=	=	2+	=	=	=	3+	3+	4+	2+	=	3+	=	3+	=
PIGMENT.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
BILE DUCT HYPERPLASIA.	1+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CONGESTION.	=	=	=	=	=	3+	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
KARYOMEGALY.	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HYPERTROPHY.	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
EXTRAMEDULLARY HEMATOPOIESIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	P	=	=	=	=
CLEAR CELL FOCUS/FOCI.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=
HEMANGIOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEPATOCELLULAR CYSTIC DEGENERATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEMOSIDEROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
GALLBLADDER	-	-	-	M	-	X	X	-	X	A	-	-	-	-	-	A	X	-	-	-	-	X	-	-	-
SPLEEN	X	X	=	=	X	X	=	=	=	A	M	X	X	X	X	A	=	X	M	=	X	=	X	X	X
AMYLOID.	=	=	3+	=	=	=	3+	3+	2+	=	=	=	=	=	=	=	2+	=	=	4+	=	3+	=	=	=
CONGESTION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
EXTRAMEDULLARY HEMATOPOIESIS.	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PANCREAS	X	X	X	M	X	X	X	X	X	A	M	I	X	X	X	A	M	X	M	A	X	X	X	X	X
DUCTAL ECTASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEART	-	-	-	X	-	X	=	X	=	A	-	-	-	-	-	A	X	-	-	-	-	X	-	-	-
THROMBOSIS.	=	=	=	=	=	=	P	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
MYOCARDIOPATHY.	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
KIDNEYS	=	=	=	=	=	=	=	X	=	A	=	=	=	=	=	A	=	=	=	=	=	=	=	=	=
AMYLOID.	3+	=	4+	=	4+	=	4+	=	4+	=	2+	3+	=	=	=	=	3+	=	4+	4+	=	4+	=	=	2+
GLOMERULAR NEPHROSIS.	=	1+	=	1+	=	4+	4+	=	3+	=	=	=	2+	3+	=	=	3+	2+	=	4+	3+	4+	2+	4+	3+
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	2+	=	=	=	=	=	=	=	=	=	=
PYELONEPHRITIS.	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 1 MALES

	1860	1861	1862	1863	1864	1865	1866	1867	1868	1869	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	1880	1881	1882	1883	1884
KIDNEYS (CONTINUED)																									
MINERALIZATION.	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=
URINARY BLADDER	-	-	-	X	-	=	X	-	X	A	-	-	-	-	-	A	X	-	-	-	-	X	-	-	-
HEMORRHAGE.	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PROSTATE	-	-	-	X	-	X	X	-	M	A	-	-	-	-	-	A	M	-	-	-	-	M	-	-	-
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
MINERALIZATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
TESTES	-	=	=	X	-	=	X	-	X	A	-	=	-	=	=	A	X	-	-	-	-	=	-	-	=
HYPOSPERMIA.	=	P	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=
OLIGOSPERMIA.	=	=	P	=	=	P	=	=	=	=	=	P	=	=	P	=	=	=	=	=	=	P	=	=	P
SEMINAL VESICLES	-	-	-	X	-	X	X	-	X	A	-	-	-	-	-	A	X	-	-	-	-	X	-	-	-
STERNUM & RIB JUNCTION	-	-	-	X	-	X	X	-	X	A	-	-	-	-	-	A	X	-	-	-	-	X	-	-	-
FEMUR & BONE MARROW	-	-	-	X	-	X	X	-	X	A	-	-	-	-	-	A	X	-	-	-	-	X	-	-	-
NASAL CAVITY	-	-	-	X	-	X	X	-	X	A	-	-	-	-	-	A	X	-	-	-	-	X	-	-	-
OTHER	=	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	=	-
(LARGE INTESTINE), NO SIGNIFICANT LESION RECOGNIZED.	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
(SMALL INTESTINE), NO SIGNIFICANT LESION RECOGNIZED.	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
(LARGE INTESTINE), MISSING.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=
(RENAL LYMPH NODE), NOT PRESENT IN SECTION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 1 MALES

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	2	2	2	3	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4
	6	7	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9
SKIN	-	-	-	X	X	X	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-	-
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=
SKIN/MAMMARY	-	-	-	X	N	X	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	N	-
THIGH MUSCLE	-	-	-	X	X	X	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-	-
SALIVARY GLAND	-	-	-	X	X	X	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-	-
MANDIBULAR LYMPH NODE	-	-	-	X	X	X	-	-	-	-	-	-	-	-	-	-	-	X	=	-	-	-	-
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=
SCIATIC NERVE	-	-	-	X	X	X	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-	-
BRAIN	-	-	-	X	X	X	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-	-
PITUITARY	X	X	X	X	M	X	X	X	I	I	I	I	X	X	X	X	I	X	I	X	M	A	X
ADRENALS	=	X	=	A	A	=	X	=	I	I	I	=	=	X	I	I	X	=	I	=	=	A	X
INFLAMMATION.	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
AMYLOID.	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	2+	=	=	3+	3+	=	=	=	=
HYPERPLASIA.	=	=	=	4+	=	P	=	3+	=	=	=	=	=	=	=	=	=	=	P	P	=	=	=
CORTICAL CELL HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	2+	=	=	=	=	=	=	=	=	=	=
MEDULLARY CELL HYPERPLASIA.	=	=	3+	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	P	=	=
CYST(S).	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ADENOMA.	=	=	=	=	=	=	=	=	=	P	=	P	=	=	=	=	=	=	=	P	=	=	=
THYMUS	N	M	X	X	A	N	I	X	X	X	N	N	=	X	X	X	X	N	=	N	N	A	=
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	P	=	=	=	=
INVOLUTED.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P
STOMACH	-	-	-	A	A	X	-	-	-	-	-	-	-	=	-	-	-	X	=	-	-	A	-
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=
PIGMENT.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
MINERALIZATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=
DUODENUM	-	-	-	A	A	X	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	A	-
JEJUNUM	-	-	-	X	A	X	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	A	-
CECUM	-	-	-	=	A	X	-	-	-	-	-	-	-	=	-	=	-	X	X	-	-	A	-
INFLAMMATION.	=	=	=	3+	=	=	=	=	=	=	=	=	=	3+	=	P	=	=	=	=	=	=	=

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
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CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 1 MALES

	1862	1867	1869	1870	1871	1872	1873	1874	1875	1876	1877	1878	1879	1880	1881	1882	1883	1884	1885	1886	1887	1889
COLON	-	-	-	A	A	X	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	A
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
RECTUM	-	-	-	A	A	X	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	A
MESENTERIC LYMPH NODE	-	-	-	M	A	M	-	-	-	-	-	-	-	-	-	-	-	X	=	-	-	A
AMYLOID.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=
ILEUM	-	-	-	A	A	X	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	A
LARYNX	X	X	X	X	=	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PAPILLOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
MYOPATHY.	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
TRACHEA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
THYROID	=	X	X	=	X	=	=	X	M	X	A	=	X	X	X	X	I	=	=	I	N	=	X
AMYLOID.	2+	=	=	=	=	=	=	=	=	=	=	2+	=	=	=	=	=	=	2+	=	=	3+	=
CYST(S).	=	=	=	P	=	P	P	=	=	=	=	=	=	=	=	=	=	P	P	=	=	=	=
PARATHYROID	X	X	X	X	X	X	X	I	M	=	A	X	X	X	X	X	N	X	X	I	N	X	N
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ADENOMA.	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=
ESOPHAGUS	X	X	X	X	X	X	X	X	X	X	A	X	X	X	X	X	X	X	X	X	X	X	X
LUNG	=	=	=	=	=	=	=	=	=	=	X	=	X	=	=	=	X	=	=	=	=	=	X
INFLAMMATION.	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	2+	=	=	=	=
ALVEOLAR/BRONCHIOLAR CELL HYPERPLASIA.	2+	2+	=	=	=	=	=	=	3+	=	=	=	2+	=	=	=	2+	2+	2+	2+	=	=
PIGMENT.	=	=	=	=	=	=	=	=	2+	=	=	=	=	=	3+	=	=	=	=	=	=	=
PNEUMOLITHIASIS.	2+	1+	=	=	=	=	=	=	2+	=	=	=	=	=	=	=	=	=	=	=	=	=
CONGESTION.	=	=	=	4+	=	=	3+	=	4+	=	=	=	=	=	=	=	=	=	4+	=	=	=
HEMORRHAGE.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	1+	=	=	=	2+	=	=	=
HISTIOCYTOSIS.	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	2+	=
FIBROSIS.	P	=	1+	=	=	=	=	1+	=	=	=	1+	=	=	=	=	=	1+	P	=	=	=	=
ALVEOLAR/BRONCHIOLAR CELL ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ATELECTASIS.	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
EOSINOPHILIC MASS(ES).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	P	=	=
BRONCHIAL LYMPH NODES	N	M	=	X	X	X	M	N	=	=	N	X	M	M	=	N	=	X	=	X	N	X	M

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
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CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 1 MALES

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	2	2	2	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4
	6	7	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9
BRONCHIAL LYMPH NODES (CONTINUED)																					
AMYLOID.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=
PIGMENT.	=	=	2+	=	=	=	=	=	2+	3+	=	=	=	=	=	=	3+	=	=	=	=	=	=
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=
LYMPHOID HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=
MAINSTEM BRONCHI	X	X	X	X	M	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
LIVER	=	X	=	=	A	X	A	X	A	X	A	=	X	X	X	X	X	X	=	X	=	=	X
INFLAMMATION.	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=
AMYLOID.	3+	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	2+	=
PIGMENT.	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
BILE DUCT HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CONGESTION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
KARYOMEGALY.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HYPERTROPHY.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
EXTRAMEDULLARY HEMATOPOIESIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	2+	=
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CLEAR CELL FOCUS/FOCI.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEMANGIOMA.	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=
HEPATOCELLULAR CYSTIC DEGENERATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=
HEMOSIDEROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	2+	=
GALLBLADDER	-	-	-	A	A	X	-	-	-	-	A	-	-	-	-	-	-	I	A	-	-	A	-
SPLEEN	=	X	X	=	A	X	X	X	X	X	A	X	X	X	X	X	M	=	=	X	X	=	X
AMYLOID.	4+	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	2+	=	=	3+	=
CONGESTION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=
EXTRAMEDULLARY HEMATOPOIESIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PANCREAS	A	X	X	A	A	=	A	X	X	X	A	X	X	X	X	X	A	=	X	X	X	A	X
DUCTAL ECTASIA.	=	=	=	=	=	2+	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=
HEART	-	-	-	X	A	=	-	-	-	-	A	-	-	-	-	-	-	X	X	-	-	=	-
THROMBOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=
MYOCARDIOPATHY.	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
KIDNEYS	=	X	=	=	=	=	A	=	=	=	A	=	X	X	=	=	X	=	=	=	=	=	=
AMYLOID.	4+	=	2+	=	=	=	=	=	=	3+	=	2+	=	=	=	=	=	3+	3+	=	2+	4+	=
GLOMERULAR NEPHROSIS.	=	=	=	2+	3+	=	2+	=	3+	3+	3+	=	2+	=	=	2+	3+	=	2+	4+	3+	3+	=	1+
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PYELONEPHRITIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 1 MALES

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	2	2	2	3	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4
	6	7	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9
KIDNEYS (CONTINUED)																						
MINERALIZATION.	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
URINARY BLADDER	-	-	-	A	X	X	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	A	-
HEMORRHAGE.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PROSTATE	-	-	-	=	=	M	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	A	-
INFLAMMATION.	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
MINERALIZATION.	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
TESTES	-	-	-	X	X	X	-	-	-	-	-	-	-	-	-	-	-	X	=	-	-	A	-
HYPOSPERMIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
OLIGOSPERMIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=
SEMINAL VESICLES	-	-	-	X	X	X	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	A	-
STERNUM & RIB JUNCTION	-	-	-	X	X	X	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-	-
FEMUR & BONE MARROW	-	-	-	X	X	X	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-	-
NASAL CAVITY	-	-	-	X	X	X	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-	-
OTHER	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	=	-	-	-	-
(LARGE INTESTINE); NO SIGNIFICANT LESION RECOGNIZED.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
(SMALL INTESTINE); NO SIGNIFICANT LESION RECOGNIZED.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
(LARGE INTESTINE); MISSING.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
(RENAL LYMPH NODE); NOT PRESENT IN SECTION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 2 MALES

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	2	2	2	2
	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4
SKIN	X	-	-	-	-	-	X	-	-	X	-	-	-	X	-	X	-	X	-	-	-	X	-	X	-
SKIN/MAMMARY	X	-	-	-	-	-	X	-	-	X	-	-	-	X	-	X	-	X	-	-	-	X	-	X	-
THIGH MUSCLE	X	-	-	-	-	-	X	-	-	X	-	-	-	X	-	X	-	X	-	-	-	X	-	X	-
SALIVARY GLAND	X	-	-	-	-	-	X	-	-	X	-	-	-	X	-	X	-	X	-	-	-	X	-	X	-
MANDIBULAR LYMPH NODE	=	-	-	-	-	-	X	-	-	=	-	-	-	M	-	X	-	M	-	-	-	X	-	X	-
HYPERPLASIA.	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
AMYLOID.	=	=	=	=	=	=	=	=	=	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
SCIATIC NERVE	X	-	-	-	-	-	X	-	-	X	-	-	-	X	-	X	-	X	-	-	-	X	-	X	-
BRAIN	X	-	-	-	-	-	=	-	-	X	-	-	-	X	-	X	-	X	-	-	-	X	-	X	-
MINERALIZATION.	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PITUITARY	X	M	X	X	X	I	I	X	X	I	X	A	M	X	X	I	M	I	I	I	M	I	I	I	X
ADRENALS	=	=	X	=	X	I	=	I	=	=	I	A	M	=	X	=	A	=	=	=	I	=	I	X	=
HYPERPLASIA.	P	P	=	P	=	=	=	=	P	=	=	=	=	P	=	P	=	P	P	P	=	=	P	=	P
AMYLOID.	3+	=	=	=	=	4+	3+	=	=	3+	3+	=	=	3+	=	3+	=	4+	3+	=	4+	=	=	=	=
ADENOMA.	=	=	=	P	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=
MEDULLARY CELL HYPERPLASIA.	=	=	=	=	=	=	=	=	=	1+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PHEOCHROMOCYTOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CORTICAL ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CORTICAL CELL HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
THYMUS	N	M	=	N	N	X	=	M	X	X	X	A	X	N	X	N	X	X	M	M	X	N	N	X	M
CYST(S).	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
INVOLUTED.	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
STOMACH	X	-	-	-	-	=	X	-	-	X	-	-	-	X	-	X	-	X	-	-	-	X	-	X	-
PIGMENT.	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
DUODENUM	X	-	-	A	-	-	X	-	-	X	-	-	-	X	-	X	-	X	-	-	-	X	-	X	-
JEJUNUM	X	-	-	A	-	-	X	-	-	X	-	-	-	X	-	X	-	X	-	-	-	X	-	X	-
CECUM	X	-	-	A	-	-	X	-	=	X	-	-	-	X	-	X	-	X	-	-	-	X	-	X	-
INFLAMMATION.	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

Reproduced from best available copy.

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 2 MALES

	187000	187001	187002	187003	187004	187005	187006	187007	187008	187009	187010	187011	187012	187013	187014	187015	187016	187017	187018	187019	187020	187021	187022	187023	187024
COLON	X	-	-	A	-	-	X	-	-	X	-	-	-	X	-	X	-	X	-	-	-	X	-	X	-
RECTUM	X	-	-	A	-	-	X	-	-	X	-	-	-	X	-	X	-	X	-	-	-	X	-	X	-
MESENTERIC LYMPH NODE	X	-	-	A	-	-	=	-	-	X	-	-	-	M	-	X	-	=	-	-	-	X	-	M	-
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
MUCOSAL ECTOPIA.	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
LEUKEMIA/LYMPHOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=
ILEUM	X	-	-	A	-	-	X	-	-	X	-	-	-	X	-	X	-	X	-	-	-	X	-	X	-
LARYNX	X	=	X	X	X	X	X	X	X	X	X	A	X	X	X	X	X	X	X	X	X	X	X	X	X
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PAPILLOMA.	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CARCINOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
TRACHEA	X	X	X	X	X	X	X	X	X	X	X	A	X	X	X	X	X	X	X	X	X	X	X	X	X
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CARCINOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
THYROID	X	A	X	=	X	=	X	X	M	=	=	A	X	=	A	X	X	=	X	X	=	=	X	X	X
AMYLOID.	=	=	=	2+	=	3+	=	=	=	=	3+	=	=	=	=	=	=	3+	=	=	3+	2+	=	=	=
CYST(S).	=	=	=	P	=	=	=	=	=	P	P	=	=	P	=	=	=	=	=	=	=	=	=	=	=
FOLLICULAR HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PARATHYROID	=	A	X	X	X	N	X	N	M	X	X	A	X	X	A	X	X	N	=	X	X	=	X	X	X
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	1+	=	=	=
CYST(S).	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ESOPHAGUS	X	X	X	X	X	X	X	X	X	X	X	A	X	X	X	X	X	X	X	X	X	X	X	X	X
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
LUNG	=	=	=	=	=	=	=	=	X	=	=	A	=	=	=	=	=	=	=	=	=	=	=	=	=
FIBROSIS.	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	1+	=	=	=	=	=	1+	=
PIGMENT.	2+	3+	2+	2+	3+	3+	3+	3+	=	3+	=	3+	3+	2+	3+	3+	2+	3+	2+	=	3+	1+	2+	2+	2+
ALVEOLAR/BRONCHIOLAR CELL HYPERPLASIA.	=	=	1+	=	=	3+	1+	P	=	3+	1+	=	3+	1+	=	1+	=	1+	2+	=	3+	=	2+	1+	2+
INFLAMMATION.	=	=	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=
ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HISTIOCYTOSIS.	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	3+	4+	=	=	=
HEMORRHAGE.	=	=	=	=	=	=	=	=	=	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
EOSINOPHILIC MASS(ES).	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ATELECTASIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 2 MALES

	18700	18701	18702	18703	18704	18705	18706	18707	18708	18709	18710	18711	18712	18713	18714	18715	18716	18717	18718	18719	18720	18721	18722	18723	18724
LUNG (CONTINUED)																									
CONGESTION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=
CARCINOMA, METASTATIC.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CARCINOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
BRONCHIAL LYMPH NODES	=	M	M	=	X	=	=	M	X	=	X	M	=	=	=	N	=	X	I	N	I	=	N	=	=
PIGMENT.	2+	=	=	3+	=	1+	1+	=	=	4+	=	=	3+	3+	3+	=	3+	=	=	=	=	2+	=	1+	4+
ALVEOLAR/BRONCHIOLAR CELL HYPERPLASIA.	1+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
MAINSTEM BRONCHI	X	X	X	X	X	X	X	X	X	X	X	A	X	X	X	X	X	X	X	X	X	X	X	X	X
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CARCINOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
LIVER	=	=	X	A	X	=	=	=	=	=	=	A	=	=	A	X	X	=	=	X	=	=	X	X	X
AMYLOID.	=	3+	=	=	=	3+	=	1+	=	3+	3+	=	2+	3+	=	=	=	4+	2+	=	3+	=	=	=	=
CYST(S).	=	=	=	=	=	P	=	=	P	P	P	=	P	P	=	=	=	P	=	=	=	=	=	=	=
INFLAMMATION.	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEMORRHAGE.	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
NECROSIS.	=	=	=	=	=	=	4+	=	2+	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=
CLEAR CELL FOCUS/FOCI.	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CONGESTION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	4+	=	=	=
HEPATOCELLULAR CYSTIC DEGENERATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
GALLBLADDER	X	-	-	A	X	-	X	-	-	X	-	A	-	X	-	X	-	X	-	-	-	X	-	X	-
SPLEEN	X	X	X	A	X	=	=	X	X	=	=	A	X	X	A	X	=	=	X	X	=	=	X	=	X
AMYLOID.	=	=	=	=	=	4+	=	=	=	2+	3+	=	=	=	=	=	=	4+	=	=	3+	2+	=	=	=
EXTRAMEDULLARY HEMATOPOIESIS.	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=
CONGESTION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=
HEMOSIDEROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PANCREAS	X	A	X	A	X	A	X	X	X	=	X	A	X	X	A	X	M	X	X	X	X	X	X	X	X
DUCTAL ECTASIA.	=	=	=	=	=	=	=	=	=	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEART	=	-	X	A	-	-	=	X	-	=	-	A	-	X	-	X	X	X	X	-	-	=	-	X	-
MYOCARDIOPATHY.	3+	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=
THROMBOSIS.	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
MURAL THROMBOSIS.	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
KIDNEYS	=	=	X	=	=	=	=	X	X	=	=	A	=	=	A	=	=	=	=	=	=	=	X	=	=
AMYLOID.	4+	=	=	4+	2+	4+	4+	=	=	2+	4+	=	=	=	=	2+	4+	4+	3+	=	4+	4+	=	3+	=
GLOMERULAR NEPHROSIS.	2+	2+	=	=	=	=	2+	=	=	4+	=	=	2+	4+	=	2+	=	=	=	2+	=	3+	=	3+	2+

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 2 MALES

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2
	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4
KIDNEYS (CONTINUED)																								
CARCINOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
URINARY BLADDER	X	-	-	-	-	-	X	-	-	X	-	-	-	X	-	X	-	X	-	-	-	X	-	X	-
PROSTATE	X	-	-	-	-	-	X	-	-	X	-	-	-	X	-	M	-	X	-	-	-	X	-	X	-
TESTES	X	-	-	-	=	-	X	-	-	=	-	-	=	X	-	X	-	=	-	-	-	=	-	X	=
AMYLOID.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=
OLIGOSPERMIA.	=	=	=	=	P	=	=	=	=	=	=	=	P	=	=	=	=	P	=	=	=	3+	=	=	P
NECROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ATROPHY.	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
DEGENERATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=
SEMINAL VESICLES	X	-	-	-	-	-	X	-	-	X	-	-	-	X	-	X	-	X	-	-	-	X	-	X	-
STERNUM & RIB JUNCTION	X	-	-	-	-	-	X	-	-	X	-	-	-	X	-	X	-	X	-	-	-	X	-	X	-
FEMUR & BONE MARROW	X	-	-	-	-	-	X	-	-	X	-	-	-	X	-	X	-	X	-	-	-	X	-	X	-
NASAL CAVITY	X	-	-	-	-	-	X	-	-	X	-	-	-	X	-	X	-	X	-	-	-	X	-	X	-
OTHER	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

(X) NO SIGNIFICANT LESION RECOGNIZED
(I) INSUFFICIENT TISSUE PRESENT IN SECTION
(N) NOT PRESENT IN SECTION
(M) MISSING
(A) AUTOLYZED
(-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 2 MALES

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4
	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9
SKIN	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-
SKIN/MAMMARY	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-
THIGH MUSCLE	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-
SALIVARY GLAND	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	N	-	-	-	-
MANDIBULAR LYMPH NODE	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	M	-	-	-	-	-	-	-
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
AMYLOID.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	=
SCIATIC NERVE	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-
BRAIN	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-
MINERALIZATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PITUITARY	I	I	I	I	X	I	X	X	X	M	X	A	X	X	X	X	X	I	X	I	X	X	X	I
ADRENALS	=	=	=	=	=	I	=	=	=	=	=	A	X	=	=	X	=	=	=	X	=	=	X	=	X
HYPERPLASIA.	P	=	P	=	P	=	=	=	P	=	=	=	=	P	P	=	=	P	=	=	=	=	=	P	=
AMYLOID.	=	3+	4+	=	=	3+	2+	3+	4+	=	2+	=	=	=	=	=	=	=	4+	=	3+	4+	=	=	=
ADENOMA.	=	P	=	=	=	=	=	=	=	P	=	=	=	=	=	=	P	P	=	=	=	=	=	=	=
MEDULLARY CELL HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PHEOCHROMOCYTOMA.	=	=	=	P	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CORTICAL ADENOMA.	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CORTICAL CELL HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=
THYMUS	A	X	M	M	N	N	N	I	M	N	N	A	X	X	N	X	N	N	X	X	N	N	X	N	X
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
INVOLUTED.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
STOMACH	A	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-
PIGMENT.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
DUODENUM	A	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	A	-	-	-	-	-	-	-
JEJUNUM	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-
CECUM	A	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	A	-	-	-	-	-	-	-
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 2 MALES

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4
	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9
COLON	A	X	M	-	-	-	-	-	-	-	-	-	-	-	-	-	X	A	-	-	-	-	-	-
RECTUM	A	X	M	-	-	-	-	-	-	-	-	-	-	-	-	-	X	A	-	-	-	-	-	-
MESENTERIC LYMPH NODE	-	M	-	-	-	-	-	-	=	-	-	-	-	-	-	-	M	-	-	-	-	=	-	-
INFLAMMATION.	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
MUCOSAL ECTOPIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
LEUKEMIA/LYMPHOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=
ILEUM	A	X	M	-	-	-	-	-	-	-	-	-	-	-	-	-	X	A	-	-	-	-	-	-
LARYNX	A	X	X	X	X	X	X	X	X	X	A	X	X	X	X	X	X	=	X	X	X	=	X	X
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=
PAPILLOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CARCINOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=
TRACHEA	A	X	X	X	X	X	X	X	X	X	A	X	X	X	X	X	X	=	X	X	X	=	X	X
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=
CARCINOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=
THYROID	A	=	=	X	=	X	X	=	=	X	X	A	X	=	X	X	X	X	X	X	X	=	X	X	X
AMYLOID.	=	=	3+	=	=	=	=	2+	3+	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=
CYST(S).	=	P	=	=	P	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	P	=	=	=
FOLLICULAR HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	2+	=	=	=	=	=	=	=	=	=	=
PARATHYROID	A	X	X	X	X	X	X	X	X	X	A	X	X	X	N	X	X	X	X	X	X	N	X	N
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ESOPHAGUS	X	X	X	X	X	X	X	X	X	X	A	X	X	X	X	X	X	X	X	X	X	=	X	X
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=
LUNG	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
FIBROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PIGMENT.	3+	2+	1+	3+	2+	1+	1+	2+	3+	2+	3+	2+	3+	2+	2+	2+	1+	2+	2+	3+	3+	2+	2+	2+	3+
ALVEOLAR/BRONCHIOLAR CELL HYPERPLASIA.	1+	2+	=	2+	P	=	1+	3+	2+	2+	3+	=	2+	1+	2+	1+	1+	1+	3+	2+	2+	1+	1+	1+	1+
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	P	=	=
HISTIOCYTOSIS.	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEMORRHAGE.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
EOSINOPHILIC MASS(ES).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ATELECTASIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 2 MALES

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4
	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9
LUNG (CONTINUED)																								
CONGESTION.	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CARCINOMA, METASTATIC.	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=
CARCINOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=
BRONCHIAL LYMPH NODES	=	=	=	=	=	=	N	I	M	=	N	A	=	=	=	M	N	N	M	=	=	N	M	=	M
PIGMENT.	3+	2+	2+	4+	2+	3+	=	=	=	3+	=	=	2+	4+	4+	=	=	=	=	4+	4+	=	=	3+	=
ALVEOLAR/BRONCHIOLAR CELL HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
MAINSTEM BRONCHI	A	X	X	X	X	X	X	X	X	X	X	A	X	X	X	X	X	X	=	X	X	X	=	X	X
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=
CARCINOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=
LIVER	A	=	=	X	X	=	X	=	=	=	X	A	X	=	=	=	=	X	X	X	=	=	X	=	X
AMYLOID.	=	2+	=	=	=	3+	=	3+	3+	=	=	=	=	=	3+	=	=	=	=	=	3+	2+	=	=	=
CYST(S).	=	=	P	=	=	=	=	=	=	P	=	=	=	=	=	=	P	=	=	=	=	P	=	=	=
INFLAMMATION.	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEMORRHAGE.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
NECROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	1+	=	=	=	=	=	=	=	=	=
CLEAR CELL FOCUS/FOCI.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CONGESTION.	=	=	4+	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	3+	=	=
HEPATOCELLULAR CYSTIC DEGENERATION.	=	=	=	=	=	=	=	1+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
GALLBLADDER	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-
SPLEEN	A	=	X	X	X	=	X	=	X	A	X	A	=	X	X	X	X	A	X	X	X	=	X	X	X
AMYLOID.	=	P	=	=	=	3+	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=
EXTRAMEDULLARY HEMATOPOIESIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CONGESTION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEMOSIDEROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=
PANCREAS	A	X	X	X	=	X	X	=	M	A	X	A	X	X	A	X	X	A	X	A	X	X	X	X	X
DUCTAL ECTASIA.	=	=	=	=	2+	=	=	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEART	A	=	=	-	-	-	-	-	-	-	-	-	-	-	-	X	X	-	X	-	-	-	X	-	X
MYOCARDIOPATHY.	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
THROMBOSIS.	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
MURAL THROMBOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
KIDNEYS	A	=	=	X	=	=	=	=	=	=	=	A	=	=	=	X	=	X	X	=	=	=	X	=	X
AMYLOID.	=	2+	4+	=	=	4+	=	4+	4+	=	=	=	=	=	=	=	=	=	=	=	4+	4+	=	=	=
GLOMERULAR NEPHROSIS.	=	4+	=	=	1+	=	2+	=	=	2+	=	=	2+	2+	4+	=	3+	=	=	2+	=	=	=	2+	=

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 2 MALES

	1187 25	1187 26	1187 27	1187 28	1187 29	1187 30	1187 31	1187 32	1187 33	1187 34	1187 35	1187 36	1187 37	1187 38	1187 39	1187 40	1187 41	1187 42	1187 43	1187 44	1187 45	1187 46	1187 47	1187 48	1187 49
KIDNEYS (CONTINUED)																									
CARCINOMA.	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=
URINARY BLADDER	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-
PROSTATE	-	M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	M	-	-	-	-	-	-	-	-
TESTES	A	X	-	=	-	-	-	-	=	=	=	-	-	-	-	X	X	-	-	-	=	-	-	-	-
AMYLOID.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
OLIGOSPERMIA.	=	=	=	P	=	=	=	=	P	P	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=
NECROSIS.	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ATROPHY.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
DEGENERATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
SEMINAL VESICLES	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-
STERNUM & RIB JUNCTION	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-
FEMUR & BONE MARROW	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-
NASAL CAVITY	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-
OTHER	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 3 MALES

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	2	2	2	2
	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4
SKIN	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	=	-	-	-	X	-	-
ACARIASIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=
SKIN/MAMMARY	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	X	-	-
THIGH MUSCLE	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	X	-	-
SALIVARY GLAND	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	X	-	-
MANDIBULAR LYMPH NODE	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	M	-	-
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
SARCOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
SCIATIC NERVE	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	X	-	-
BRAIN	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	A	-	-
PITUITARY	A	X	X	X	X	X	X	X	A	X	I	X	I	X	X	X	X	X	I	X	X	X	N	X	I
ADRENALS	A	X	X	=	X	X	X	A	A	=	X	X	X	I	X	X	X	X	=	X	X	X	=	X	X
CARCINOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HYPERPLASIA.	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=
ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CORTICAL ADENOMA.	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
AMYLOID.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	2+	=	=
CORTICAL CELL HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
THYMUS	M	X	X	=	M	X	M	A	A	X	X	X	X	X	X	X	X	N	N	X	X	X	X	X	M
CYST(S).	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
STOMACH	-	-	-	=	-	-	-	-	-	-	-	-	-	-	-	-	-	-	=	-	-	-	=	=	-
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=
PAPILLOMA.	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=
MUCOSAL ATYPIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=
NECROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=
DUODENUM	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	X	-	-
JEJUNUM	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	X	-	-
CECUM	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	X	-	-
COLON	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	X	-	=

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 3 MALES

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2
	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4
COLON (CONTINUED)																									
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+
RECTUM	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	X	-	-
MESENTERIC LYMPH NODE	-	-	-	M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	X	-	-
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ILEUM	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	X	-	-
LARYNX	=	=	=	=	=	=	=	X	A	=	M	=	=	=	=	=	=	=	X	=	=	=	=	X	X
CARCINOMA.	P	P	=	P	=	=	=	=	=	P	=	=	P	=	=	P	=	P	=	P	=	P	=	=	=
HYPERPLASIA.	=	=	3+	=	3+	3+	2+	=	=	=	=	3+	=	=	=	=	=	=	=	=	4+	=	=	=	=
ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=
METAPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	2+	3+	=	=	P	=	1+	=	=	=	=	=
MUCOSAL ATYPIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	2+	=	P	=	=	=	=	=	=	=	=
TRACHEA	=	X	=	=	X	=	=	=	A	=	M	X	=	=	=	=	=	=	X	=	=	=	X	=	X
CARCINOMA.	=	=	=	=	=	P	=	=	=	P	=	=	P	=	=	P	=	=	=	P	P	=	=	P	=
HYPERPLASIA.	P	=	2+	4+	=	=	2+	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	P	=	=
INFLAMMATION.	=	=	=	=	=	=	=	2+	=	=	=	=	=	P	=	=	P	=	=	=	=	=	=	=	=
METAPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	2+	3+	=	P	=	=	=	=	=	=	=	=
DYSKERATOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
EOSINOPHILIC MASS(ES).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
THYROID	X	X	X	X	I	X	X	A	A	X	M	=	M	X	X	=	X	X	X	=	=	X	X	N	=
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	P	=	=	=	P	P	=	=	=	P
PARATHYROID	N	X	N	X	N	X	N	X	A	N	M	N	M	X	N	X	X	X	X	=	N	N	X	N	X
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	2+	=	=	=	=	=
ESOPHAGUS	X	X	X	X	X	X	=	X	A	X	M	X	X	=	X	X	X	X	X	X	X	X	X	M	X
HYPERPLASIA.	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=
METAPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	2+	=	=	=	=	=	=	=	=	=	=	=
HYPERKERATOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
LUNG	=	=	=	=	=	=	=	A	A	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CARCINOMA.	=	P	=	P	=	=	P	=	=	P	=	P	P	=	P	P	P	P	=	P	=	=	=	=	P
BRONCHOPNEUMONIA.	4+	=	=	=	=	=	4+	=	=	=	4+	=	=	3+	=	=	=	=	=	=	=	4+	=	4+	=

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
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CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 3 MALES

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2
	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4
LUNG (CONTINUED)																									
PIGMENT.	4+	4+	3+	3+	3+	3+	2+	3+	=	3+	4+	3+	3+	2+	3+	3+	3+	2+	2+	1+	2+	2+	3+	3+	4+
ALVEOLAR/BRONCHIOLAR CELL HYPERPLASIA.	=	4+	=	=	=	4+	2+	=	=	3+	1+	=	=	1+	2+	3+	3+	=	=	=	1+	=	4+	2+	3+
PNEUMONITIS.	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+
CONGESTION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ADENOMA.	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	=
METAPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ADENOMATOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	2+	=	=	=	=	=	=	=	=	=
ALVEOLAR/BRONCHIOLAR CELL CARCINOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	P	=	=	=
NECROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	=
HEMOSIDEROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	=
ATELECTASIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=
BRONCHITIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ALVEOLAR/BRONCHIOLAR CELL ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
FIBROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEMORRHAGE.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
EOSINOPHILIC MASS(ES).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
EMPHYSEMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
BRONCHIAL LYMPH NODES	M	M	M	=	M	M	M	=	A	M	M	=	=	=	=	=	=	=	=	I	=	=	=	=	=
CARCINOMA.	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	P	=	=	=	=
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=
PIGMENT.	=	=	=	4+	=	=	=	2+	=	=	=	2+	4+	2+	2+	3+	2+	1+	4+	3+	2+	2+	4+	2+	3+
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
SARCOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
MAINSTEM BRONCHI	I	M	=	=	M	=	=	X	A	X	=	X	X	=	=	M	=	=	X	X	N	N	X	=	X
CARCINOMA.	=	=	=	P	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=
HYPERPLASIA.	=	=	3+	=	=	P	P	=	=	=	3+	=	=	4+	=	=	=	3+	=	=	=	=	=	3+	=
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=
METAPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=
DYSKERATOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CARCINOMA, SQUAMOUS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
LIVER	A	X	X	=	X	X	X	A	A	X	=	X	A	X	X	X	X	X	=	X	=	X	=	X	=
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CONGESTION.	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	4+	=	4+	=	4+
HEPATITIS.	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=
NECROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
AMYLOID.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
SARCOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

Reproduced from best available copy.

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUE[illegible]
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 3 MALES

	18800	18801	18802	18803	18804	18805	18806	18807	18808	18809	18810	18811	18812	18813	18814	18815	18816	18817	18818	18819	18820	18821	18822	18823	18824
LIVER (CONTINUED)																									
CLEAR CELL FOCUS/FOCI.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
GALLBLADDER	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	A	-	-	-	A	-	-
PAPILLARY HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
SPLEEN	A	X	X	=	X	X	X	A	A	X	X	X	A	X	X	X	X	=	X	X	X	X	X	X	X
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=
CONGESTION.	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
EXTRAMEDULLARY HEMATOPOIESIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PANCREAS	A	X	X	X	X	X	X	A	A	X	X	X	A	X	X	X	X	X	X	X	X	X	X	X	X
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEART	A	X	X	X	X	X	X	A	A	X	X	X	A	X	X	X	X	X	X	X	X	X	=	X	X
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
THROMBOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
MYOCARDIOPATHY.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	1+	=	=
MINERALIZATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
TUMOR EMBOLUS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
KIDNEYS	A	X	X	X	X	X	X	A	A	X	X	=	A	X	X	X	X	X	=	X	X	X	=	X	X
GLOMERULAR NEPHROSIS.	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	3+	=	=	=	3+	=	=
THROMBOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=
URINARY BLADDER	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	A	-	-
PROSTATE	-	-	-	M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	M	-	-	-	M	-	-
TESTES	-	-	-	=	-	-	-	-	-	-	-	-	-	-	-	-	-	-	=	=	-	-	X	-	-
OLIGOSPERMIA.	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	P	=	=	=	=	=
DEGENERATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
SEMINAL VESICLES	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	X	-	=
(EPIDIDYMIS), INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+
STERNUM & RIB JUNCTION	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	X	-	-
SARCOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HYPOPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
FEMUR & BONE MARROW	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	X	-	-
NASAL CAVITY	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	X	-	-

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENT 3
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 3 MALES

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	2	2	2	2
	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4
OTHER	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(VISCERAL PLEURA), HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=

(X) NO SIGNIFICANT LESION RECOGNIZED
(I) INSUFFICIENT TISSUE PRESENT IN SECTION
(N) NOT PRESENT IN SECTION
(M) MISSING
(A) AUTOLYZED
(-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 3 MALES

	18825	18826	18827	18828	18829	18830	18831	18832	18833	18834	18835	18836	18837	18838	18840	18841	18842	18843	18844	18846	18847	18848	18849
SKIN	-	-	-	X	-	X	-	-	X	-	X	-	X	-	-	-	-	-	-	-	-	A	X
ACARIASIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
SKIN/MAMMARY	-	-	-	X	-	X	-	-	X	-	X	-	X	-	-	-	-	-	-	-	-	X	X
THIGH MUSCLE	-	-	-	X	-	X	-	-	X	-	X	-	X	-	-	-	-	-	-	-	-	X	X
SALIVARY GLAND	-	-	-	X	-	X	-	-	X	-	X	-	X	-	-	-	-	-	-	-	-	A	X
MANDIBULAR LYMPH NODE	-	-	-	M	-	X	-	-	=	-	X	-	X	-	-	-	-	M	-	-	-	A	=
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+
SARCOMA.	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=
SCIATIC NERVE	-	-	-	X	-	X	-	-	X	-	X	-	X	-	-	-	-	-	-	-	-	X	X
BRAIN	-	-	-	X	-	X	-	-	X	-	X	-	X	-	-	-	-	-	-	-	-	A	X
PITUITARY	X	X	X	X	X	I	A	X	X	X	I	X	X	M	X	X	I	X	X	X	X	A	X
ADRENALS	=	A	X	=	X	=	A	A	X	=	X	X	X	=	=	X	I	=	=	X	X	A	=
CARCINOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=
HYPERPLASIA.	=	=	=	=	=	1+	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	P
ADENOMA.	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CORTICAL ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
AMYLOID.	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CORTICAL CELL HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	P	1+	=	=	=	=
THYMUS	X	X	X	N	X	N	A	X	M	X	I	X	N	X	A	X	X	X	X	X	N	A	=
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P
STOMACH	-	-	-	=	-	A	-	-	X	-	X	-	A	-	-	-	-	-	-	-	-	A	X
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PAPILLOMA.	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
MUCOSAL ATYPIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
NECROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
DUODENUM	-	-	-	X	-	A	-	-	X	-	X	-	A	-	-	-	-	-	-	-	-	A	X
JEJUNUM	-	-	-	X	-	X	-	-	X	-	X	-	X	-	-	-	-	-	-	-	-	X	X
CECUM	-	-	-	X	-	A	-	-	X	-	X	-	A	-	-	-	-	-	-	-	-	A	X
COLON	-	-	-	X	-	A	-	-	X	-	X	-	A	-	-	-	-	-	-	-	-	A	X

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
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CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 3 MALES

	1 8 6 2 5	1 8 6 2 6	1 8 6 2 7	1 8 6 2 8	1 8 6 2 9	1 8 6 3 0	1 8 6 3 1	1 8 6 3 2	1 8 6 3 3	1 8 6 3 4	1 8 6 3 5	1 8 6 3 6	1 8 6 3 7	1 8 6 3 8	1 8 6 4 0	1 8 6 4 1	1 8 6 4 2	1 8 6 4 3	1 8 6 4 4	1 8 6 4 6	1 8 6 4 7	1 8 6 4 8	1 8 6 4 9
COLON (CONTINUED)																							
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
RECTUM	-	-	-	X	-	A	-	-	X	-	X	-	A	-	-	-	-	-	-	-	-	A	X
MESENTERIC LYMPH NODE	-	-	-	M	-	I	-	-	M	-	M	-	M	-	-	-	-	-	-	-	-	A	=
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+
ILEUM	-	-	-	X	-	A	-	-	X	-	X	-	A	-	-	-	-	-	-	-	-	A	X
LARYNX	=	X	X	=	X	X	A	=	X	=	=	X	X	X	=	X	X	=	=	X	=	A	=
CARCINOMA.	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	P	=	=
HYPERPLASIA.	=	=	=	3+	=	=	=	3+	=	3+	=	=	=	=	3+	=	=	P	=	=	=	=	=
ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
METAPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
MUCOSAL ATYPIA.	=	=	=	3+	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	P
TRACHEA	=	X	X	X	=	X	A	X	X	X	X	X	X	=	X	X	=	=	=	X	=	A	X
CARCINOMA.	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	P	=	=
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	3+	=	=	=	=
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
METAPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
DYSKERATOSIS.	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
EOSINOPHILIC MASS(ES).	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=
THYROID	X	X	X	=	X	X	A	N	X	X	X	N	A	X	A	X	X	X	X	X	N	A	X
HYPERPLASIA.	=	=	=	1+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PARATHYROID	X	N	X	X	X	N	A	N	=	=	X	X	X	N	A	X	N	N	X	N	N	A	X
HYPERPLASIA.	=	=	=	=	=	=	=	=	3+	3+	=	=	=	=	=	=	=	=	=	=	=	=	=
ESOPHAGUS	X	=	X	X	X	X	A	X	X	X	X	X	X	X	X	X	X	I	X	X	X	A	X
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
METAPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HYPERKERATOSIS.	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
LUNG	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	A	=
CARCINOMA.	P	P	P	=	P	=	=	=	=	P	=	=	P	P	P	=	=	P	P	=	=	=	P
BRONCHOPNEUMONIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
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CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 3 MALES

	18825	18826	18827	18828	18829	18830	18831	18832	18833	18834	18835	18836	18837	18838	18840	18841	18842	18843	18844	18846	18847	18848	18849
LUNG (CONTINUED)																							
PIGMENT.	1+	2+	3+	2+	3+	2+	=	3+	1+	2+	3+	1+	1+	1+	1+	3+	3+	3+	2+	2+	1+	=	3+
ALVEOLAR/BRONCHIOLAR CELL HYPERPLASIA.	2+	=	2+	2+	=	4+	=	=	=	3+	=	=	1+	=	=	1+	=	3+	=	1+	=	=	=
PNEUMONITIS.	=	=	=	=	=	=	2+	=	1+	2+	=	=	=	=	4+	=	=	=	=	=	=	=	=
CONGESTION.	=	=	=	=	=	4+	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=
ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
METAPLASIA.	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=
ADENOMATOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ALVEOLAR/BRONCHIOLAR CELL CARCINOMA.	=	=	=	P	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	P
NECROSIS.	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	4+	=	=
HEMOSIDEROSIS.	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	4+
ATELECTASIS.	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	P	=	=	=	=	=	=
BRONCHITIS.	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ALVEOLAR/BRONCHIOLAR CELL ADENOMA.	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
FIBROSIS.	=	=	=	=	=	=	=	=	1+	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEMORRHAGE.	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	=
EOSINOPHILIC MASS(ES).	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=
EMPHYSEMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	=
BRONCHIAL LYMPH NODES	=	=	=	=	M	=	=	=	=	=	=	=	N	=	=	=	M	N	X	=	X	A	=
CARCINOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=
PIGMENT.	2+	2+	2+	2+	=	4+	4+	3+	2+	3+	3+	3+	=	1+	3+	1+	=	=	=	=	=	=	4+
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=
SARCOMA.	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=
MAINSTEM BRONCHI	=	X	X	X	=	X	A	=	X	X	M	X	=	X	X	X	X	=	X	X	=	A	X
CARCINOMA.	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	P	=	=	P	=	=
HYPERPLASIA.	4+	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
METAPLASIA.	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
DYSKERATOSIS.	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CARCINOMA, SQUAMOUS.	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=
LIVER	=	A	X	X	X	=	A	A	=	X	=	=	=	A	A	=	X	=	X	A	X	A	X
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=
CONGESTION.	=	=	=	=	=	3+	=	=	=	=	4+	=	=	=	=	4+	=	=	=	=	=	=	=
HEPATITIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
NECROSIS.	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	1+	=	=	=	=	=
AMYLOID.	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
SARCOMA.	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
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LIVER (CONTINUED)																							
CLEAR CELL FOCUS/FOCI.	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=
GALLBLADDER	-	-	-	=	-	A	A	-	A	-	A	-	A	-	-	-	-	-	-	-	-	A	A
PAPILLARY HYPERPLASIA.	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
SPLEEN	M	A	X	X	X	=	A	A	M	=	=	=	=	A	A	X	X	X	=	M	X	A	=
HYPERPLASIA.	=	=	=	=	=	3+	=	=	=	3+	=	4+	P	=	=	=	=	=	4+	=	=	=	=
CONGESTION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
EXTRAMEDULLARY HEMATOPOIESIS.	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	4+
PANCREAS	=	A	X	X	X	X	A	A	X	X	A	X	A	A	A	X	X	X	X	M	X	A	X
CYST(S).	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEART	X	A	X	=	X	=	A	A	X	=	=	=	X	A	A	X	X	X	X	X	X	A	=
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	=
THROMBOSIS.	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=
MYOCARDIOPATHY.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	2+
MINERALIZATION.	=	=	=	3+	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
TUMOR EMBOLUS.	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=
KIDNEYS	X	A	X	=	X	=	A	A	=	=	=	X	=	A	A	X	X	X	X	X	X	A	=
GLOMERULAR NEPHROSIS.	=	=	=	2+	=	4+	=	=	3+	4+	3+	=	3+	=	=	=	=	=	=	=	=	=	2+
THROMBOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
URINARY BLADDER	-	-	-	X	-	M	-	-	X	-	X	-	A	-	-	-	-	-	-	-	-	A	X
PROSTATE	-	-	-	X	-	X	-	-	M	-	X	-	X	-	-	-	-	-	-	-	-	A	M
TESTES	-	-	-	=	-	=	-	-	X	-	X	-	X	-	-	-	-	-	-	-	-	A	X
OLIGOSPERMIA.	=	=	=	P	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
DEGENERATION.	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
SEMINAL VESICLES	-	-	-	X	-	X	-	-	X	-	X	-	X	-	-	-	-	-	-	-	-	A	X
(EPIDIDYMIS); INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
STERNUM & RIB JUNCTION	-	-	-	X	-	X	-	-	=	-	M	-	X	-	-	-	-	-	-	-	-	A	=
SARCOMA.	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HYPOPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+
FEMUR & BONE MARROW	-	-	-	X	-	X	-	-	X	-	X	-	X	-	-	-	-	-	-	-	-	A	X
NASAL CAVITY	-	-	-	X	-	X	-	-	X	-	X	-	X	-	-	-	-	-	-	-	-	A	X

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
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CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 3 MALES

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
	2	2	2	2	2	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4
	5	6	7	8	9	0	1	2	3	4	5	6	7	8	0	1	2	3	4	6	7	8	9
OTHER	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(VISCERAL PLEURA), HYPERPLASIA.	=	=	=	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
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CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 4 MALES

	18900	18901	18902	18903	18904	18905	18906	18907	18908	18909	18910	18911	18912	18913	18914	18915	18916	18917	18918	18919	18920	18921	18922	18923	18924
SKIN	-	X	X	-	X	-	X	X	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-	-
ACARIASIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
SKIN/MAMMARY	-	X	X	-	X	-	X	X	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-	-
THIGH MUSCLE	-	X	X	-	X	-	X	X	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-	-
SALIVARY GLAND	-	X	X	-	X	-	X	X	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-	-
MANDIBULAR LYMPH NODE	-	X	X	-	X	-	X	X	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-	-
CONGESTION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
SCIATIC NERVE	-	X	X	-	X	-	X	X	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-	-
BRAIN	-	X	X	-	X	-	X	X	-	-	-	-	-	A	-	-	-	-	-	X	X	-	-	-	-
MINERALIZATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PITUITARY	I	M	I	X	I	X	M	M	X	X	M	A	X	I	X	I	X	X	I	M	I	A	N	X	X
ADRENALS	=	=	=	=	=	X	=	I	=	=	M	A	X	=	X	=	=	=	=	=	=	A	N	=	X
AMYLOID.	3+	=	2+	4+	3+	=	3+	3+	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ADENOMA.	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	P	=	=	=	P	=
HYPERPLASIA.	=	=	P	=	=	=	=	=	=	=	=	=	=	P	=	=	1+	P	3+	=	P	=	=	=	=
CORTICAL CELL HYPERPLASIA.	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEMORRHAGE.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
MEDULLARY CELL HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=
CARCINOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CORTICAL ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ADENOMA, (MEDULLARY).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
THYMUS	N	M	N	N	=	X	X	=	N	X	N	A	X	N	M	N	=	N	X	=	M	A	X	N	N
AMYLOID.	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PIGMENT.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CYST(S).	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	P	=	=	P	=	=	=	=	=
STOMACH	=	X	X	-	X	-	X	X	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-	-
PIGMENT.	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
DUODENUM	-	X	X	-	X	-	X	X	-	-	-	-	-	-	-	-	-	-	-	X	M	-	-	-	-
JEJUNUM	-	X	X	-	X	-	X	X	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-	-

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FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 4 MALES

	18900	18901	18902	18903	18904	18905	18906	18907	18908	18909	18910	18911	18912	18913	18914	18915	18916	18917	18918	18919	18920	18921	18922	18923	18924
CECUM	-	X	X	-	X	-	X	X	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-	-
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
COLON	X	X	X	A	X	-	X	X	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-	-
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
RECTUM	-	X	X	-	X	-	X	X	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-	-
MESENTERIC LYMPH NODE	-	M	X	-	M	-	=	X	-	-	-	-	-	-	-	-	-	-	-	X	M	-	-	-	-
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
RETICULUM CELL HYPERPLASIA.	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ILEUM	-	X	X	-	X	-	X	X	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-	-
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
LARYNX	X	X	X	X	X	X	X	X	X	X	X	A	X	X	X	=	X	X	X	X	X	A	A	X	X
PAPILLOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=
TRACHEA	X	X	X	X	X	X	X	X	X	X	X	A	X	X	X	X	X	X	X	X	X	A	A	X	X
THYROID	X	X	=	X	=	X	=	=	X	X	X	A	X	X	=	X	=	X	X	X	=	A	A	X	X
AMYLOID.	=	=	2+	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CYST(S).	=	=	=	=	P	=	P	=	=	=	=	=	=	=	P	=	P	=	=	=	P	=	=	=	=
FOLLICULAR CELL ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PARATHYROID	X	X	=	X	X	X	X	X	X	X	X	A	=	X	M	X	X	X	X	=	X	N	A	X	X
AMYLOID.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ADENOMA.	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	4+	=	=	=	=	=
ESOPHAGUS	X	X	X	X	X	X	X	X	X	X	X	A	X	X	X	X	X	X	X	X	X	A	A	X	X
LUNG	=	=	=	=	=	=	=	=	=	=	=	A	=	=	=	=	=	=	=	=	=	=	A	=	X
AMYLOID.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PIGMENT.	3+	2+	2+	2+	2+	2+	2+	2+	1+	2+	2+	=	2+	2+	3+	2+	2+	3+	3+	2+	3+	3+	=	2+	=
HISTIOCYTOSIS.	3+	3+	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=
ALVEOLAR/BRONCHIOLAR CELL HYPERPLASIA.	2+	1+	2+	2+	1+	2+	1+	1+	1+	1+	2+	=	1+	2+	1+	2+	2+	2+	2+	1+	1+	=	=	1+	=
LYMPHOCYTOSIS.	=	=	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEMORRHAGE.	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=
ADENOMATOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	2+	=	=	=	=	=	=	=	=	=	=	=

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GROUP 4 MALES

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LUNG (CONTINUED)																									
ATELECTASIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	3+	=	=	=	=
PNEUMONITIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	1+	=	=	=
EOSINOPHILIC MASS(ES).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
FIBROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
EMPHYSEMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
METAPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
BRONCHIAL LYMPH NODES	N	I	=	N	=	=	=	=	=	=	=	A	=	=	=	N	X	=	=	=	=	X	A	M	X
AMYLOID.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PIGMENT.	=	=	3+	=	4+	3+	4+	3+	4+	4+	2+	=	1+	2+	3+	=	=	4+	3+	3+	3+	=	=	=	=
MAINSTEM BRONCHI	X	X	X	X	X	X	X	X	X	X	X	A	X	X	X	X	X	X	X	X	X	A	A	X	X
LIVER	=	=	=	=	=	X	=	=	=	X	=	A	=	X	X	X	=	=	X	=	=	A	A	X	=
AMYLOID.	=	=	2+	2+	=	=	3+	3+	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CONGESTION.	4+	4+	=	=	=	=	=	=	=	=	4+	=	3+	=	=	=	4+	=	=	=	3+	=	=	=	=
LYMPHOCYTOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	1+	=	=	=	=	=
CYST(S).	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	P	P	=	P	=	=	=	=	P
HEPATOCELLULAR CYSTIC DEGENERATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=
HEMOSIDEROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	2+
CHOLANGIOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
LEUKEMIA/LYMPHOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
GALLBLADDER	-	A	X	-	X	-	A	X	-	-	-	-	-	-	-	-	-	-	-	X	A	-	-	-	-
SPLEEN	X	X	=	=	=	M	=	=	=	X	X	A	X	X	X	X	=	X	=	=	X	A	A	X	X
AMYLOID.	=	=	=	3+	=	=	3+	4+	3+	=	=	=	=	=	=	=	=	=	2+	2+	=	=	=	=	=
CONGESTION.	=	=	4+	=	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
EXTRAMEDULLARY HEMATOPOIESIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=
PANCREAS	A	X	=	X	X	X	X	=	=	X	X	A	X	X	X	X	X	X	=	=	X	A	A	X	X
AMYLOID.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HYPERPLASIA.	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=
DUCTAL ECTASIA.	=	=	3+	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ATROPHY.	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	=
HEPATOCELLULAR REGENERATION.	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=
HEART	-	=	=	-	-	X	-	=	-	X	-	A	-	-	-	-	-	-	-	-	=	A	A	-	-
THROMBOSIS.	=	P	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=
MYOCARDIOPATHY.	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 4 MALES

	18900	18901	18902	18903	18904	18905	18906	18907	18908	18909	18910	18911	18912	18913	18914	18915	18916	18917	18918	18919	18920	18921	18922	18923	18924
KIDNEYS	=	=	=	=	=	=	=	=	=	X	=	A	=	=	X	X	=	=	=	=	=	A	A	=	X
AMYLOID,	3+	3+	3+	4+	=	=	4+	4+	2+	=	2+	=	=	=	=	=	4+	3+	3+	4+	3+	=	=	2+	=
GLOMERULAR NEPHROSIS,	2+	3+	4+	=	4+	1+	=	=	2+	=	=	=	2+	1+	=	=	2+	=	3+	2+	=	=	=	3+	=
PYELONEPHRITIS,	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
URINARY BLADDER	-	X	X	-	X	-	A	X	-	-	-	-	-	-	-	-	-	-	-	X	A	-	-	-	-
PROSTATE	-	X	X	-	X	-	X	X	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-	-
TESTES	-	X	X	-	X	=	X	=	=	-	=	-	=	A	-	-	-	-	-	X	=	-	-	-	-
AMYLOID,	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
OLIGOSPERMIA,	=	=	=	=	=	P	=	P	P	=	P	=	P	=	=	=	=	=	=	=	=	=	=	=	=
GIANT CELL,	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=
SEMINAL VESICLES	-	X	X	-	X	-	X	M	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-	-
STERNUM & RIB JUNCTION	-	X	X	-	X	-	X	X	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-	-
FEMUR & BONE MARROW	-	X	X	-	X	-	X	X	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-	-
NASAL CAVITY	-	X	X	-	X	-	X	X	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-	-
OTHER	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(LARGE INTESTINE), NO SIGNIFICANT LESION RECOGNIZED,	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
(SMALL INTESTINE), NO SIGNIFICANT LESION RECOGNIZED,	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
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Reproduced from best available copy.

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 4 MALES

	18925	18926	18927	18928	18929	18930	18931	18932	18933	18934	18935	18936	18937	18938	18939	18940	18941	18942	18943	18944	18945	18946	18947	18948	18949
SKIN	-	-	-	-	-	-	=	=	-	-	-	-	-	-	-	-	-	-	X	-	X	-	X	-	-
ACARIASIS.	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
INFLAMMATION.	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
SKIN/MAMMARY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	X	-	X	-	-
THIGH MUSCLE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	X	-	X	-	-
SALIVARY GLAND	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	X	-	X	-	-
MANDIBULAR LYMPH NODE	-	-	-	-	-	-	-	-	=	-	-	-	-	-	-	-	-	-	=	-	X	-	X	-	-
CONGESTION.	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=
SCIATIC NERVE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	X	-	X	-	-
BRAIN	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	=	-	X	-	-
MINERALIZATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	2+	=	=	=	=
PITUITARY	I	X	X	X	I	X	I	X	X	X	A	X	X	M	X	I	X	X	X	X	M	X	I	M	X
ADRENALS	=	=	=	X	=	X	=	=	=	I	A	X	=	=	=	I	=	X	=	=	=	=	=	=	X
AMYLOID.	3+	=	3+	=	4+	=	=	=	=	3+	=	=	=	2+	=	4+	3+	=	=	3+	3+	=	3+	3+	=
ADENOMA.	=	=	=	=	=	=	=	P	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=
HYPERPLASIA.	P	1+	=	=	=	=	=	=	=	=	=	=	P	P	P	=	=	=	=	P	P	P	=	P	=
CORTICAL CELL HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	P	=	=	=	=	=	=
HEMORRHAGE.	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=
MEDULLARY CELL HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	P	=	=
CARCINOMA.	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CORTICAL ADENOMA.	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=
ADENOMA; (MEDULLARY).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=
THYMUS	X	X	=	N	I	N	M	N	X	X	A	X	M	N	N	M	N	N	X	X	X	N	X	X	I
AMYLOID.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PIGMENT.	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
STOMACH	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	X	-	X	-	-
PIGMENT.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
DUODENUM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	X	-	X	-	-
JEJUNUM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	X	-	X	-	-

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
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FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 4 MALES

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CECUM	-	-	-	-	-	-	-	-	-	=	-	=	-	-	-	-	-	-	X	-	X	-	X	-	-
INFLAMMATION.	=	=	=	=	=	=	=	=	=	P	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=
COLON	-	-	-	-	-	-	-	-	-	=	-	=	-	-	-	-	-	-	X	-	X	-	X	-	-
INFLAMMATION.	=	=	=	=	=	=	=	=	=	P	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=
RECTUM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	X	-	X	-	-
MESENTERIC LYMPH NODE	-	-	-	-	-	-	-	-	-	=	-	=	-	-	-	-	-	-	=	-	=	-	X	-	-
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	P	=	=	=	=
RETICULUM CELL HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
INFLAMMATION.	=	=	=	=	=	=	=	=	=	4+	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=
ILEUM	-	-	-	-	-	-	-	-	-	-	-	=	-	-	-	-	-	-	X	-	X	-	X	-	-
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=
LARYNX	X	X	X	X	X	X	X	A	X	X	A	X	X	M	X	X	X	X	X	X	X	X	X	X	X
PAPILLOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
TRACHEA	X	X	X	X	X	X	X	A	X	X	A	X	X	M	X	X	X	X	X	X	X	X	X	X	X
THYROID	=	X	X	=	=	X	=	A	=	X	A	=	X	M	X	=	X	X	X	X	=	X	=	=	X
AMYLOID.	2+	=	=	=	3+	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	1+	=	=	2+	=
ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=
CYST(S).	=	=	=	P	=	=	=	=	P	=	=	=	=	=	=	P	=	=	=	=	P	=	P	P	=
FOLLICULAR CELL ADENOMA.	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PARATHYROID	=	X	X	X	I	X	X	A	X	X	A	N	X	M	X	X	X	X	X	X	=	X	X	X	=
AMYLOID.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	1+	=	=	=	=
ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HYPERPLASIA.	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P
ESOPHAGUS	X	X	X	X	I	X	X	A	X	X	A	X	X	X	X	X	X	X	X	X	X	X	X	X	X
LUNG	=	=	=	=	=	=	=	=	A	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
AMYLOID.	=	=	=	=	=	=	=	=	=	=	=	=	2+	=	=	=	3+	=	=	=	=	=	=	=	=
PIGMENT.	2+	3+	2+	2+	2+	3+	3+	2+	1+	3+	2+	1+	2+	2+	2+	2+	2+	3+	4+	2+	3+	2+	1+	2+	1+
HISTIOCYTOSIS.	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	4+	=
ALVEOLAR/BRONCHIOLAR CELL HYPERPLASIA.	1+	2+	1+	1+	3+	2+	1+	1+	1+	2+	2+	1+	=	1+	1+	2+	=	1+	3+	2+	2+	1+	P	1+	1+
LYMPHOCYTOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEMORRHAGE.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ADENOMATOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
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CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 4 MALES

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4
	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9
LUNG (CONTINUED)																							
ATELECTASIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	4+	=	=	=	=	3+	=	=	=	=
PNEUMONITIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=
EOSINOPHILIC MASS(ES).	=	=	=	=	=	=	=	=	=	=	=	P	=	1+	=	=	=	=	=	=	=	=	=	=	=
FIBROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	1+	=	=	=	=	=	=	=	=	=
EMPHYSEMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=
METAPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	2+	=	=	=	=
BRONCHIAL LYMPH NODES	=	=	=	=	=	=	=	=	A	=	=	=	X	N	N	X	N	N	=	=	M	=	M	=	N
AMYLOID.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	2+	=
PIGMENT.	3+	3+	4+	3+	3+	4+	3+	2+	=	1+	3+	2+	=	=	=	=	=	=	3+	3+	=	4+	=	=	=
MAINSTEM BRONCHI	X	X	X	X	X	X	X	A	X	X	A	X	X	M	X	X	X	X	X	X	X	X	X	X	X
LIVER	=	X	=	X	=	X	=	X	=	=	A	=	=	=	X	=	=	A	=	=	=	X	=	=	X
AMYLOID.	3+	=	=	3+	=	=	=	=	3+	=	4+	4+	3+	=	=	3+	=	=	3+	3+	=	2+	3+	=	=
CONGESTION.	=	=	=	=	=	=	1+	=	=	=	=	=	=	=	=	4+	=	=	=	4+	=	=	2+	4+	=
LYMPHOCYTOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CYST(S).	P	=	=	=	=	=	P	=	=	=	=	=	P	=	=	=	=	=	P	=	P	=	=	=	=
HEPATOCELLULAR CYSTIC DEGENERATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEMOSIDEROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CHOLANGIOMA.	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=
LEUKEMIA/LYMPHOMA.	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
GALLBLADDER	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	X	-	X	-	-
SPLEEN	=	X	=	X	=	X	=	=	A	=	A	X	=	=	X	X	X	A	X	X	=	X	X	=	X
AMYLOID.	=	=	3+	=	4+	=	=	1+	=	3+	=	=	2+	2+	=	=	=	=	=	=	=	=	=	=	=
CONGESTION.	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=
EXTRAMEDULLARY HEMATOPOIESIS.	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=
PANCREAS	X	X	X	X	A	X	X	A	A	X	A	X	X	X	X	X	X	A	X	X	X	X	=	=	X
AMYLOID.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	2+	=
HYPERPLASIA.	=	=	=	1	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	1+	=	=
DUCTAL ECTASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=
ATROPHY.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEPATOCELLULAR REGENERATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=
HEART	-	-	-	-	-	-	-	-	A	-	A	-	-	-	-	=	-	-	=	=	=	=	-	-	-
THROMBOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	P	=	=	P	=	=
HYOCARDIOPATHY.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	2+	=	2+	=	=	=	=

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GROUP 4 MALES

	18925	18926	18927	18928	18929	18930	18931	18932	18933	18934	18935	18936	18937	18938	18939	18940	18941	18942	18943	18944	18945	18946	18947	18948	18949
KIDNEYS	=	=	=	X	=	X	=	=	A	=	A	=	=	=	=	=	=	A	=	=	=	=	=	=	X
AMYLOID.	3+	=	4+	=	4+	=	4+	3+	=	4+	=	4+	4+	4+	=	4+	4+	=	4+	4+	4+	=	4+	4+	=
GLOMERULAR NEPHROSIS.	2+	1+	=	=	=	=	1+	=	=	=	=	=	2+	3+	2+	4+	3+	=	2+	=	=	4+	2+	2+	=
PYELONEPHRITIS.	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
URINARY BLADDER	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	X	-	X	-	-
PROSTATE	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	X	-	X	-	-
TESTES	-	-	=	-	-	-	-	-	-	=	-	-	=	-	-	-	-	-	X	-	X	-	X	-	-
AMYLOID.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
OLIGOSPERMIA.	=	=	P	=	=	=	=	=	=	P	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=
GIANT CELL.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
SEMINAL VESICLES	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	X	-	X	-	-
STERNUM & RIB JUNCTION	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	X	-	X	-	-
FEMUR & BONE MARROW	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	X	-	X	-	-
NASAL CAVITY	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	X	-	X	-	-
OTHER	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	=	-
(LARGE INTESTINE), NO SIGNIFICANT LESION RECOGNIZED.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=
(SMALL INTESTINE), NO SIGNIFICANT LESION RECOGNIZED.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 5 MALES

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	2	2	2	2
	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4
SKIN	X	-	X	-	-	-	-	X	-	-	-	-	-	-	X	-	X	-	-	-	-	-	-	X	-
SKIN/MAMMARY	X	-	X	-	-	-	-	X	-	-	-	-	-	-	X	-	X	-	-	-	-	-	-	X	-
THIGH MUSCLE	X	-	X	-	-	-	-	X	-	-	-	-	-	-	X	-	X	-	-	-	-	-	-	X	-
SALIVARY GLAND	X	-	X	-	-	-	-	X	-	-	-	=	-	-	X	-	X	-	-	-	-	-	-	X	-
ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=
LEUKEMIA/LYMPHOMA.	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=
MANDIBULAR LYMPH NODE	X	-	X	-	-	-	-	X	-	-	-	X	-	-	M	-	A	-	-	-	-	-	-	X	-
SCIATIC NERVE	X	-	X	-	-	-	-	X	-	-	-	-	-	-	X	-	X	-	-	-	-	-	-	X	-
BRAIN	X	-	X	-	-	-	-	X	-	-	-	-	-	-	X	-	A	-	-	-	-	-	-	X	-
PITUITARY	X	X	X	X	X	X	X	X	I	I	I	X	X	X	M	I	A	X	I	I	I	I	X	X	I
ADRENALS	=	X	=	X	X	X	=	A	=	=	I	X	=	=	=	I	=	I	I	=	X	=	=	=	I
ADENOMA.	P	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=
HYPERPLASIA.	P	=	P	=	=	=	P	=	P	P	=	=	P	P	P	=	P	=	=	P	=	P	=	P	=
AMYLOID.	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	4+	=	=	2+	3+	4+	4+
CYST(S).	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=
MEDULLARY CELL HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=
THYMUS	M	=	X	X	X	=	X	M	N	X	M	X	X	X	X	N	M	X	X	N	X	N	N	M	=
HYPERPLASIA.	=	P	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
AMYLOID.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P
STOMACH	A	-	=	-	-	-	-	X	-	-	-	-	-	-	X	-	A	-	-	-	-	-	-	X	-
HYPERPLASIA.	=	=	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
DUODENUM	A	-	X	-	-	-	-	X	-	-	-	-	-	-	X	-	A	-	-	-	-	-	-	X	-
JEJUNUM	X	-	X	-	-	-	-	X	-	-	-	-	-	-	X	-	X	-	-	-	-	-	-	X	-
CECUM	A	-	=	-	-	-	-	=	-	-	-	-	-	-	X	-	A	=	-	-	-	-	-	X	-
AMYLOID.	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=
INFLAMMATION.	=	=	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEMORRHAGE.	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
COLON	A	-	X	-	-	-	-	X	-	-	-	-	-	-	X	-	A	-	-	-	-	-	-	X	-

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
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CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 5 MALES

	19000	19001	19002	19003	19004	19005	19006	19007	19008	19009	19010	19011	19012	19013	19014	19015	19016	19017	19018	19019	19020	19021	19022	19023	19024
RECTUM	A	-	X	-	-	-	-	X	-	-	-	-	-	-	X	-	A	-	-	-	-	-	-	X	-
MESENTERIC LYMPH NODE	M	-	X	-	-	-	-	X	=	-	-	-	-	-	X	-	M	-	-	-	-	-	-	X	-
CONGESTION.	=	=	=	=	=	=	=	=	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ILEUM	A	-	X	-	-	-	-	X	-	-	-	-	-	-	X	-	A	-	-	-	-	-	-	X	-
LARYNX	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	A	X	X	X	X	X	X
TRACHEA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	A	X	X	X	X	X	X
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
THYROID	=	=	=	=	=	=	X	X	=	=	A	=	=	X	=	=	X	=	A	A	X	=	=	X	=
ADENOMA.	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PAPILLARY ADENOMA.	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ADENOMA, NOS.	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
AMYLOID.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	2+	3+	=	=	=	=	=	=	4+	=	3+
CYST(S).	=	P	=	P	P	P	=	=	P	P	=	P	P	=	=	=	=	P	=	=	=	P	=	=	=
PARATHYROID	X	X	=	X	X	X	X	X	X	X	X	X	X	X	=	X	X	X	A	X	X	X	X	=	X
ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=
HYPERPLASIA.	=	=	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	1+	=
ESOPHAGUS	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	A	X	X	X	X	X	X
LUNG	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ALVEOLAR/BRONCHIOLAR CELL HYPERPLASIA.	3+	3+	3+	3+	2+	1+	1+	3+	1+	2+	2+	=	2+	2+	3+	2+	2+	1+	1+	2+	2+	2+	2+	3+	1+
PIGMENT.	3+	4+	3+	3+	=	3+	2+	3+	3+	3+	1+	1+	=	3+	3+	3+	2+	1+	=	=	=	=	=	3+	=
CONGESTION.	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ADENOMATOSIS.	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEMORRHAGE.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
EOSINOPHILIC MASS(ES).	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HISTIOCYTOSIS.	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	2+	=
ATELECTASIS.	=	=	=	=	=	=	=	=	=	3+	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=
PNEUMOLITHIASIS.	=	=	=	=	=	=	=	=	=	=	1+	=	=	=	=	=	=	=	=	=	=	=	=	=	=
FIBROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	1+	=	=	=	=	=	=	=	=	=	=
BRONCHIAL LYMPH NODES	=	X	=	N	=	=	=	M	=	N	M	=	N	=	=	=	M	=	M	=	=	=	=	=	X
HYPERPLASIA.	=	=	P	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PIGMENT.	3+	=	2+	=	3+	=	4+	=	3+	=	=	1+	=	4+	4+	3+	=	1+	=	2+	2+	2+	2+	2+	=
LYMPHOID HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=
HEMOSIDEROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 5 MALES

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	2	2	2	2
	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4
MAINSTEM BRONCHI	X	X	X	X	X	=	X	X	X	X	X	X	X	X	X	X	X	A	X	X	X	X	X	X
HYPERPLASIA.	=	=	=	=	=	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
LIVER	=	X	=	=	X	X	X	=	=	X	=	=	X	X	=	=	A	X	A	X	X	=	=	=
PIGMENT.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CONGESTION.	4+	=	=	=	=	=	=	4+	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=
AMYLOID.	3+	2+	=	=	=	=	3+	=	=	=	=	=	=	3+	2+	=	=	=	=	3+	4+	3+	3+	
HEPATOCELLULAR CYSTIC DEGENERATION.	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
THROMBOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=
CYST(S).	=	=	=	=	=	=	=	=	P	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=
INFLAMMATION.	=	=	=	3+	=	=	=	=	=	=	=	=	=	2+	=	=	=	=	=	1+	=	=	=	
NECROSIS.	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=
FIBROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=
HEPATOCELLULAR VACUOLATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
GALLBLADDER	I	-	X	-	-	-	-	A	-	-	-	-	-	-	X	-	A	-	-	-	-	-	=	-
PAPILLARY HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=
SPLEEN	=	X	=	X	X	X	X	X	X	X	X	A	X	=	=	A	X	A	X	X	=	=	=	=
CONGESTION.	=	=	3+	=	=	=	=	=	=	=	=	=	=	2+	=	=	=	=	=	=	=	=	3+	
AMYLOID.	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	3+	2+	4+	
HEMOSIDEROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=
EXTRAMEDULLARY HEMATOPOIESIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PANCREAS	A	X	=	X	X	X	X	X	X	X	X	A	X	X	A	A	X	A	A	X	X	A	X	X
ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
DUCTAL ECTASIA.	=	=	1+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEPATOCELLULAR DIFFERENTIATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEART	=	-	X	-	-	-	-	X	=	-	-	=	-	-	X	-	X	-	-	-	-	-	X	-
MYOCARDIOPATHY.	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
THROMBOSIS.	P	=	=	=	=	=	=	P	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
KIDNEYS	=	X	=	=	X	X	=	=	X	=	=	X	=	=	=	=	X	A	=	X	=	=	=	=
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=
AMYLOID.	3+	4+	=	=	=	=	=	=	=	=	=	=	=	3+	4+	=	=	=	=	=	3+	4+	4+	4+
GLOMERULAR NEPHROSIS.	3+	=	4+	1+	1+	=	=	3+	1+	=	=	4+	=	=	4+	=	2+	=	=	2+	=	3+	=	4+
CYST(S).	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	=
MINERALIZATION.	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=
ATROPHY.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

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CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 3 MALES

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	2	2	2	2
	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4
URINARY BLADDER	A	-	X	-	-	-	-	X	-	-	-	-	-	-	X	-	A	-	-	-	-	-	-	X	-
PROSTATE	M	-	M	-	-	-	-	X	-	-	=	-	-	-	M	-	M	-	-	-	-	-	-	X	-
OLIGOSPERMIA.	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=
TESTES	A	-	X	-	M	-	=	X	-	-	-	-	-	=	X	-	A	-	-	-	=	-	-	X	-
OLIGOSPERMIA.	=	=	=	=	=	=	P	=	=	=	=	=	=	P	=	=	=	=	=	=	P	=	=	=	=
HEMORRHAGE.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
SEMINAL VESICLES	X	-	X	-	-	-	-	X	-	-	-	-	-	-	X	-	X	-	-	-	-	-	-	X	-
STERNUM & RIB JUNCTION	A	-	X	-	-	-	-	I	-	-	-	-	-	-	X	-	X	-	-	-	-	-	-	X	-
FEMUR & BONE MARROW	X	-	X	-	-	-	-	X	-	-	-	-	-	-	X	-	X	-	-	-	-	-	-	X	-
NASAL CAVITY	X	-	X	-	-	-	-	X	-	-	-	-	-	-	X	-	X	-	-	-	-	-	-	X	-
OTHER	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	=	-	-	-	-	-	-	-
(RENAL LYMPH NODE), MISSING.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
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CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 5 MALES

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2	2	2	2	2	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4
	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9
SKIN	X	-	X	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-
SKIN/MAMMARY	X	-	X	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-
THIGH MUSCLE	X	-	X	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-
SALIVARY GLAND	X	-	X	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-
ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
LEUKEMIA/LYMPHOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
MANDIBULAR LYMPH NODE	X	-	X	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-
SCIATIC NERVE	X	-	X	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-
BRAIN	X	-	X	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-
PITUITARY	X	X	X	I	X	A	X	I	M	I	X	I	X	M	X	A	M	I	X	I	X	I	X	A	I
ADRENALS	=	=	I	=	=	A	=	=	=	=	=	=	I	=	I	A	X	=	=	=	=	X	=	=
ADENOMA.	P	=	=	=	=	=	P	=	=	=	=	P	=	P	=	=	=	=	=	=	P	P	=	=	=
HYPERPLASIA.	=	=	=	P	=	=	=	=	P	P	P	=	=	P	=	=	=	=	=	P	=	=	=	=	=
AMYLOID.	=	1+	4+	=	3+	=	3+	=	=	2+	=	3+	=	=	=	=	=	3+	3+	=	=	=	=	3+	3+
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
MEDULLARY CELL HYPERPLASIA.	=	=	=	=	=	=	P	P	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=
THYMUS	X	=	X	N	X	A	=	X	=	X	X	X	I	N	X	A	X	X	=	M	X	N	X	A	N
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
AMYLOID.	=	=	=	=	=	=	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CYST(S).	=	P	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=
STOMACH	X	-	X	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	A	-
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
DUODENUM	X	-	X	-	-	A	X	-	-	-	-	-	-	-	-	A	-	-	-	A	-	X	-	A	-
JEJUNUM	X	-	X	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-
CECUM	X	-	X	-	-	A	X	-	-	-	-	-	-	-	=	A	-	-	-	A	-	X	-	A	-
AMYLOID.	=	=	=	=	=	=	=	=	=	=	=	=	=	2+	=	=	=	=	=	=	=	=	=	=	=
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEMORRHAGE.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
COLON	X	-	X	-	-	A	X	-	-	-	-	-	-	-	-	A	-	-	-	A	-	X	-	A	-

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GROUP 5 MALES

	19025	19026	19027	19028	19029	19030	19031	19032	19033	19034	19035	19036	19037	19038	19039	19040	19041	19042	19043	19044	19045	19046	19047	19048	19049
RECTUM	X	-	X	-	-	A	X	-	-	-	-	-	-	-	-	A	-	-	-	A	-	X	-	A	-
MESENTERIC LYMPH NODE	X	-	M	-	-	-	X	-	-	-	-	-	-	-	-	A	-	-	-	-	-	X	-	-	-
CONGESTION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ILEUM	X	-	X	-	-	A	X	-	-	-	-	-	-	-	-	A	-	-	-	A	-	X	-	A	-
LARYNX	X	X	X	X	X	A	X	X	X	X	X	X	X	X	X	A	X	X	X	X	A	X	X	A	X
TRACHEA	X	X	X	X	X	A	X	X	X	X	X	X	X	X	X	A	=	X	X	X	A	X	X	A	X
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	1+	=	=	=	=	=	=	=	=
THYROID	=	X	=	X	=	A	=	X	X	=	X	=	=	=	X	A	=	=	=	I	A	X	X	=	=
ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PAPILLARY ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ADENOMA, NOS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
AMYLOID.	=	=	2+	=	3+	=	2+	=	=	=	=	4+	=	=	=	=	=	2+	=	=	=	=	=	3+	3+
CYST(S).	P	=	P	=	=	=	P	=	=	P	=	=	P	P	=	=	P	=	P	=	=	=	=	=	=
PARATHYROID	=	X	X	X	X	A	X	X	X	X	X	X	X	X	X	A	=	X	X	X	A	X	X	A	X
ADENOMA.	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=
ESOPHAGUS	X	X	X	X	X	A	X	X	X	X	X	X	X	X	X	A	X	X	X	X	A	X	X	A	X
LUNG	=	=	=	=	=	A	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ALVEOLAR/BRONCHIOLAR CELL HYPERPLASIA.	2+	2+	3+	2+	1+	=	2+	1+	1+	1+	3+	1+	2+	3+	3+	1+	1+	=	3+	2+	1+	2+	3+	1+	2+
PIGMENT.	3+	=	3+	3+	3+	=	3+	3+	3+	3+	3+	3+	3+	3+	3+	2+	3+	=	3+	3+	2+	2+	3+	2+	3+
CONGESTION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=
ADENOMATOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEMORRHAGE.	=	=	=	=	3+	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=
EOSINOPHILIC MASS(ES).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HISTIOCYTOSIS.	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ATELECTASIS.	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	2+	=	3+	=	=	=	=	=	2+
PNEUMOLITHIASIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
FIBROSIS.	1+	=	=	=	=	=	1+	=	=	=	=	=	=	1+	=	=	=	=	=	=	=	1+	=	=	=
BRONCHIAL LYMPH NODES	M	=	=	=	X	A	=	=	X	=	=	M	N	=	=	=	=	=	X	M	=	=	X	=	N
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PIGMENT.	=	4+	3+	2+	=	=	4+	3+	=	4+	3+	=	=	3+	3+	4+	1+	1+	=	=	2+	3+	=	3+	=
LYMPHOID HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEMOSIDEROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=

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MAINSTEM BRONCHI	X	X	X	X	X	A	X	X	X	X	X	X	X	X	X	A	X	X	X	X	A	X	X	A	X
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
LIVER	X	=	=	=	=	A	=	=	X	=	X	=	X	X	X	A	=	=	=	=	=	=	X	=	=
PIGMENT.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	2+	=	=	=	=	=
CONGESTION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
AMYLOID.	=	=	3+	=	3+	=	=	=	=	2+	=	2+	=	=	=	=	=	3+	2+	=	2+	2+	=	4+	3+
HEPATOCELLULAR CYSTIC DEGENERATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
THROMBOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CYST(S).	=	P	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	P	=	=	P	=	=	=
INFLAMMATION.	=	=	=	P	=	=	2+	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=
NECROSIS.	=	=	=	3+	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
FIBROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEPATOCELLULAR VACUOLATION.	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
GALLBLADDER	X	-	X	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-
PAPILLARY HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
SPLEEN	=	X	M	X	=	A	X	=	X	X	=	X	=	X	X	A	X	=	=	M	=	=	X	A	M
CONGESTION.	3+	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=
AMYLOID.	=	=	=	=	3+	=	=	=	=	=	=	=	1+	=	=	=	=	4+	2+	=	2+	=	=	=	=
HEMOSIDEROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
EXTRAMEDULLARY HEMATOPOIESIS.	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PANCREAS	X	X	M	X	X	A	=	=	X	X	X	X	X	X	X	A	X	X	X	A	A	=	X	A	M
ADENOMA.	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
DUCTAL ECTASIA.	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEPATOCELLULAR DIFFERENTIATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=
HEART	=	-	X	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	=	-	-	-
MYOCARDIOPATHY.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
THROMBOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=
INFLAMMATION.	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
KIDNEYS	=	=	=	=	=	A	=	=	X	X	X	=	X	=	X	A	=	=	=	=	=	=	=	A	=
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
AMYLOID.	=	=	4+	=	4+	=	4+	3+	=	=	=	=	=	=	=	=	3+	4+	4+	=	4+	2+	=	=	4+
GLOMERULAR NEPHROSIS.	3+	3+	=	3+	=	=	2+	=	=	=	=	3+	=	4+	=	=	3+	3+	3+	2+	=	3+	2+	=	=
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
MINERALIZATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ATROPHY.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=

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GROUP 5 MALES

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	4
	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9
URINARY BLADDER	X	-	X	-	-	A	X	-	-	-	-	-	-	-	-	A	-	-	-	-	-	X	-	-	-
PROSTATE	X	-	M	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-
OLIGOSPERMIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
TESTES	X	-	=	-	-	A	=	-	-	-	-	-	-	-	=	A	-	-	-	-	-	X	-	A	-
OLIGOSPERMIA.	=	=	P	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=
HEMORRHAGE.	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
SEMINAL VESICLES	X	-	X	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-
STERNUM & RIB JUNCTION	X	-	X	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-
FEMUR & BONE MARROW	X	-	X	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-
NASAL CAVITY	X	-	X	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-
OTHER	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(RENAL LYMPH NODE); MISSING.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
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FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 6 MALES

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2
	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4
SKIN	-	-	X	X	X	-	X	=	-	=	X	-	-	-	-	-	-	-	X	-	-	-	-	-	-
INFLAMMATION.	=	=	=	=	=	=	=	P	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
SARCOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
SKIN/MAMMARY	-	-	X	X	X	-	X	-	-	X	X	-	-	-	-	-	-	-	X	-	-	-	-	-	-
THIGH MUSCLE	-	-	X	X	X	-	X	-	-	X	X	-	-	-	-	-	-	-	X	-	-	-	-	-	-
SALIVARY GLAND	-	-	X	X	X	-	M	-	-	X	X	-	-	-	-	-	-	-	X	-	-	-	-	-	-
MANDIBULAR LYMPH NODE	-	-	X	M	X	-	M	-	-	X	X	-	-	-	-	-	-	-	X	-	-	-	-	-	-
SCIATIC NERVE	-	-	X	X	X	-	X	-	-	X	X	-	-	-	-	-	-	-	X	-	-	-	-	-	-
BRAIN	-	-	X	X	X	-	X	-	-	X	X	-	X	-	-	-	X	-	X	-	-	-	-	-	-
AMYLOID.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PITUITARY	X	X	I	I	M	=	X	I	M	I	X	I	X	I	X	X	N	X	I	I	X	X	M	X	X
CYST(S).	=	=	=	=	=	P	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=
VACUOLATION.	=	=	=	=	=	1+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ADRENALS	A	=	=	I	=	=	=	=	X	=	=	=	X	=	=	=	A	N	=	X	X	X	X	X	X
HYPERPLASIA.	=	P	=	P	P	P	P	=	=	=	P	P	=	=	=	=	=	P	=	=	=	=	=	=	=
AMYLOID.	=	=	2+	=	=	3+	2+	2+	=	2+	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	P	=	=	=	=	=	=	=	=	=
FIBROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	1+	=	=	=	=	=	=	=	=	=	=	=
ADENOMA.	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CARCINOMA.	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CORTICAL CELL HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=
MEDULLARY CELL HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
THYMUS	X	I	X	I	X	N	M	X	X	M	X	X	M	I	=	M	A	N	M	M	M	M	M	X	M
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
INVOLUTED.	=	=	=	P	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=
STOMACH	-	-	X	X	X	-	X	-	-	X	X	-	-	-	-	A	A	-	X	-	-	-	-	-	-
PIGMENT.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=
NECROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
DUODENUM	-	-	X	X	X	-	X	-	-	X	X	-	-	-	-	A	A	-	X	-	-	-	-	-	-
JEJUNUM	-	-	X	X	X	-	X	-	-	X	X	-	-	-	-	-	-	-	X	-	-	-	-	-	-

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GROUP 6 MALES

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	2	2	2	2	2
	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4
CECUM	-	-	X	X	X	-	X	-	-	X	X	=	-	-	-	A	A	-	X	-	-	A	-	-	-
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=
SARCOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
COLON	-	-	X	X	X	-	X	-	-	X	X	-	-	-	-	A	A	-	X	-	-	-	-	-	-
RECTUM	-	-	X	X	X	-	M	-	-	X	X	-	-	-	-	A	A	-	X	-	-	-	-	-	-
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
MESENTERIC LYMPH NODE	-	-	X	=	X	-	X	-	-	M	X	-	-	-	-	-	-	-	X	-	-	-	-	-	-
HISTIOCYTOSIS.	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ILEUM	-	-	X	X	X	-	X	-	-	X	X	-	-	-	-	A	A	-	X	-	-	-	-	-	-
LARYNX	A	X	X	X	X	X	X	X	X	N	X	X	X	X	X	X	A	X	X	X	X	X	X	X	X
TRACHEA	A	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	A	X	X	X	X	X	X	X	X
THYROID	A	X	=	X	=	=	=	=	X	=	=	X	X	=	X	=	A	=	=	=	=	X	=	X	X
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	1+	=	=	=	=	=	=	=
AMYLOID.	=	=	2+	=	=	3+	=	3+	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=
CYST(S).	=	=	P	=	P	=	P	=	=	P	P	=	=	P	=	=	=	P	P	P	P	=	P	=	=
ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PARATHYROID	A	X	=	X	X	X	X	X	X	X	=	X	X	X	N	X	A	X	=	X	X	X	X	N	N
HYPERPLASIA.	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=
ADENOMA.	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ESOPHAGUS	A	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	A	X	X	X	X	X	X	X	X
DYSKERATOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
LUNG	=	=	=	=	=	=	=	=	=	=	=	X	X	=	X	=	A	X	=	=	X	=	=	X	X
ALVEOLAR/BRONCHIOLAR CELL HYPERPLASIA.	1+P		1+	1+	=	1+P	P	=	P	=	=	=	2+	=	=	=	=	2+	1+	=	1+	1+	=	=	
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PIGMENT.	=	=	=	=	1+	=	1+	=	=	=	=	=	=	=	=	=	=	1+	=	=	=	=	=	=	=
CONGESTION.	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=
HISTIOCYTOSIS.	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
FIBROSIS.	=	=	=	P	=	=	1+	=	=	1+	1+	=	=	=	=	2+	=	=	=	=	=	=	=	=	=
PNEUMOLITHIASIS.	=	=	=	=	1+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ATELECTASIS.	=	=	=	=	2+	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEMORRHAGE.	=	=	=	=	=	=	=	=	1+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
EOSINOPHILIC MASS(ES).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=

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	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	2	2	2	2	2
	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4
BRONCHIAL LYMPH NODES	X	N	=	I	X	N	=	N	=	M	X	N	N	N	A	A	A	N	X	M	N	M	=	X	X
PIGMENT.	=	=	1+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CONGESTION.	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HISTIOCYTOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=
LYMPHOID HYPERPLASIA.	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEMOSIDEROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
MAINSTEM BRONCHI	A	X	X	X	X	X	X	X	X	X	X	X	X	X	X	A	X	X	X	X	X	X	X	X	X
LIVER	A	X	=	=	=	=	=	=	A	X	X	=	X	X	X	=	A	=	X	X	X	X	=	X	X
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
AMYLOID.	=	=	3+	=	=	2+	2+	3+	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=
CYST(S).	=	=	P	=	P	=	P	P	=	=	=	P	=	=	=	=	=	=	=	=	=	=	P	=	=
PIGMENT.	=	=	=	=	1+	=	1+	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=
CONGESTION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
NECROSIS.	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEPATOCELLULAR CYSTIC DEGENERATION.	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	2+	=	=	=	=	=	=	=
GALLBLADDER	-	-	X	X	X	-	A	-	-	X	X	-	-	-	-	-	-	-	X	-	-	-	-	-	-
SPLEEN	A	X	=	X	X	=	X	=	A	=	X	X	X	=	X	=	A	X	X	X	X	=	X	X	X
AMYLOID.	=	=	=	=	=	2+	=	3+	=	2+	=	=	=	2+	=	4+	=	=	=	=	=	=	=	=	=
CONGESTION.	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
EXTRAMEDULLARY HEMATOPOIESIS.	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
RETICULUM CELL HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=
PANCREAS	A	X	X	=	=	X	X	X	A	X	=	X	X	X	X	A	A	X	X	X	A	X	X	X	X
DUCTAL ECTASIA.	=	=	=	1+	1+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ADENOMA.	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEPATOCELLULAR DIFFERENTIATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEPATOCELLULAR REGENERATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEART	A	-	X	X	=	-	=	-	=	X	X	-	-	-	-	=	A	-	X	-	-	-	-	-	-
MYOCARDIOPATHY.	=	=	=	=	3+	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
THROMBOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=
KIDNEYS	A	=	=	=	=	=	=	=	A	=	=	=	=	=	X	=	A	X	=	X	X	=	=	X	X
AMYLOID.	=	3+	3+	=	=	4+	=	4+	=	=	=	=	=	2+	=	4+	=	=	=	=	=	=	2+	=	=
GLOMERULAR NEPHROSIS.	=	1+	3+	2+	3+	=	4+	3+	=	3+	3+	=	3+	=	=	=	=	=	4+	=	=	2+	=	=	=
MINERALIZATION.	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=
URINARY BLADDER	-	-	X	X	X	-	A	-	-	X	X	-	-	-	-	-	-	-	-	X	-	-	-	-	-

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	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	2	2	2	2	2
	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4
PROSTATE	-	-	X	X	X	-	X	-	-	M	X	-	-	-	-	-	-	-	M	-	-	-	-	-	-
TESTES	-	-	X	X	X	-	X	-	-	=	=	-	=	-	=	-	A	-	X	-	-	-	=	-	-
HEMORRHAGE,	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=
MINERALIZATION,	=	=	=	=	=	=	=	=	=	1+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
OLIGOSPERMIA,	=	=	=	=	=	=	=	=	=	=	=	=	P	=	P	=	=	=	=	=	=	=	P	=	=
SEMINAL VESICLES	-	-	X	X	X	-	X	-	-	X	X	-	-	-	-	-	-	-	X	-	-	-	-	-	-
STERNUM & RIB JUNCTION	-	-	X	=	X	-	X	-	-	X	X	-	-	-	-	-	-	-	X	-	-	-	-	-	-
HISTIOCYTOSIS,	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
FEMUR & BONE MARROW	-	-	X	X	X	-	X	-	-	X	X	-	-	-	-	-	-	-	X	-	-	-	-	-	-
NASAL CAVITY	-	-	X	X	X	-	X	-	-	X	X	-	-	-	-	-	-	-	X	-	-	-	-	-	-
OTHER	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 6 MALES

	19125	19126	19127	19128	19129	19130	19131	19132	19133	19134	19135	19136	19137	19138	19139	19140	19141	19142	19143	19144	19145	19146	19147	19148	19149
SKIN	-	-	-	X	-	-	-	-	-	X	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
SARCOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=
SKIN/MAMMARY	-	-	-	X	-	-	-	-	-	X	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-
THIGH MUSCLE	-	-	-	X	-	-	-	-	-	X	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-
SALIVARY GLAND	-	-	-	X	-	-	-	-	-	X	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-
MANDIBULAR LYMPH NODE	-	-	-	X	-	-	-	-	-	X	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-
SCIATIC NERVE	-	-	-	X	-	-	-	-	-	X	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-
BRAIN	-	-	-	X	-	A	-	-	-	=	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-
AMYLOID.	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PITUITARY	X	X	M	I	X	I	I	X	X	I	X	M	X	I	M	X	I	=	X	X	I	A	X	I	I
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
VACUOLATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=
ADRENALS	=	I	M	=	X	=	=	=	=	I	=	=	=	=	X	=	=	=	=	X	X	A	X	=	=
HYPERPLASIA.	P	P	=	=	=	P	=	=	P	=	P	P	=	P	=	=	=	=	=	=	=	=	=	P	P
AMYLOID.	=	=	=	4+	=	=	3+	3+	3+	4+	=	=	=	3+	=	3+	=	=	3+	=	=	=	=	3+	3+
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
FIBROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ADENOMA.	=	=	=	=	=	=	=	P	=	=	=	=	=	=	P	P	P	=	=	=	=	=	=	=	=
CARCINOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CORTICAL CELL HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
MEDULLARY CELL HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=
THYMUS	I	I	M	X	X	M	M	X	A	M	I	X	=	N	N	=	X	N	N	N	X	A	X	X	M
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	P	=	=	=	=	=	=	=	=	=
INVOLUTED.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
STOMACH	-	-	-	X	-	-	-	-	-	X	-	-	-	X	-	-	-	-	-	=	-	-	-	-	-
PIGMENT.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
NECROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=
DUODENUM	-	-	-	X	-	-	-	-	-	X	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-
JEJUNUM	-	-	-	X	-	-	-	-	-	X	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
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CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 6 MALES

	19125	19126	19127	19128	19129	19130	19131	19132	19133	19134	19135	19136	19137	19138	19139	19140	19141	19142	19143	19144	19145	19146	19147	19148	19149
CECUM	-	-	-	X	-	-	-	-	-	X	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P
SARCOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=
COLON	-	-	-	X	-	-	-	-	-	X	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-
RECTUM	-	-	-	=	-	-	-	-	-	X	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-
INFLAMMATION.	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
MESENTERIC LYMPH NODE	-	-	-	X	-	-	-	-	-	=	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-
HISTIOCYTOSIS.	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ILEUM	-	-	-	X	-	-	-	-	-	X	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-
LARYNX	X	X	M	X	X	X	X	X	A	N	X	X	X	X	X	X	X	X	X	X	A	M	X	X	
TRACHEA	X	X	M	X	X	X	X	X	A	X	X	X	X	X	X	X	X	X	X	X	A	X	X	X	
THYROID	X	X	M	=	X	=	X	X	=	=	X	X	=	=	=	=	X	=	=	X	=	A	=	=	X
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
AMYLOID.	=	=	=	3+	=	=	=	=	=	4+	=	=	=	=	=	2+	=	=	3+	=	=	=	=	2+	=
CYST(S).	=	=	=	P	=	P	=	=	P	=	=	=	P	=	P	=	=	=	=	=	P	=	P	=	=
ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	P	=	=	=	=	=	=	=
PARATHYROID	X	X	M	=	X	X	X	X	X	X	X	X	=	X	X	X	X	X	X	X	X	A	X	I	X
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=
ADENOMA.	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ESOPHAGUS	X	X	X	X	X	X	X	X	A	X	X	X	X	X	X	X	X	X	X	X	X	A	=	X	X
DYSKERATOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=
LUNG	=	X	M	=	=	=	=	=	A	=	X	=	X	=	=	=	=	=	=	=	X	A	X	=	X
ALVEOLAR/BRONCHIOLAR CELL HYPERPLASIA.	1+	=	=	1+	1+	1+	2+	2+	=	=	=	=	=	1+	2+	=	=	1+	1+	1+	=	=	=	1+	=
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=
PIGMENT.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=
CONGESTION.	4+	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HISTIOCYTOSIS.	=	=	=	3+	=	=	=	4+	=	2+	=	1+	=	=	=	3+	=	=	=	=	=	=	=	=	=
FIBROSIS.	=	=	=	=	=	=	=	=	=	=	=	1+	=	1+	=	=	=	=	=	=	=	=	=	=	=
PNEUMOLITHIASIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ATELECTASIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	3+	=	=	=	=	=
HEMORRHAGE.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	2+	=	=	=	=	=	=	=
EOSINOPHILIC MASS(ES).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
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CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 6 MALES

	19112	19113	19114	19115	19116	19117	19118	19119	19120	19121	19122	19123	19124	19125	19126	19127	19128	19129	19130	19131	19132	19133	19134	19135	19136	19137	19138	19139
BRONCHIAL LYMPH NODES	I	=	M	M	X	X	I	=	A	X	I	X	=	X	X	X	=	I	I	=	X	A	X	X	X
PIGMENT.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	1+	=	=	2+	=	=	=	=	=	=
CONGESTION.	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HISTIOCYTOSIS.	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
LYMPHOID HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEMOSIDEROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	2+	=	=	=	=	=	=	=	=	=	=	=	=
MAINSTEM BRONCHI	X	X	M	X	X	X	X	X	A	X	X	X	X	X	X	X	X	X	X	X	X	A	M	X	X
LIVER	X	X	=	=	X	X	=	=	A	=	X	A	=	=	X	=	X	X	=	X	X	A	X	=	=
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=
AMYLOID.	=	=	=	2+	=	=	2+	3+	=	3+	=	=	1+	=	=	3+	=	=	3+	=	=	=	=	3+	3+
CYST(S).	=	=	=	P	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=
PIGMENT.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CONGESTION.	=	=	4+	=	=	=	=	4+	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	=
NECROSIS.	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEPATOCELLULAR CYSTIC DEGENERATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=
GALLBLADDER	-	-	-	X	-	-	-	-	-	A	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-
SPLEEN	X	=	M	X	X	X	=	=	A	=	=	=	X	=	X	=	X	X	=	X	X	A	X	=	X
AMYLOID.	=	3+	=	=	=	2+	=	=	3+	=	=	=	2+	=	2+	=	=	3+	=	=	=	=	=	3+	=
CONGESTION.	=	=	=	=	=	=	=	=	=	=	=	3+	2+	=	=	=	=	=	=	=	=	=	=	=	=
EXTRAMEDULLARY HEMATOPOIESIS.	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
RETICULUM CELL HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PANCREAS	X	=	X	=	X	X	X	X	A	X	=	A	X	=	X	=	X	X	X	X	X	A	A	X	X
DUCTAL ECTASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	1+	=	=	=	=	=	=	=	=	=
ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=
HEPATOCELLULAR DIFFERENTIATION.	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEPATOCELLULAR REGENERATION.	=	=	=	3+	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEART	-	-	-	=	-	-	-	=	-	X	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-
MYOCARDIOPATHY.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
THROMBOSIS.	=	=	=	P	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
KIDNEYS	X	=	=	=	X	=	=	=	A	=	=	=	=	=	=	I	=	=	=	X	A	X	=	=	
AMYLOID.	=	4+	=	4+	=	2+	4+	4+	=	4+	=	=	4+	=	=	4+	=	4+	4+	=	=	=	=	4+	2+
GLOMERULAR NEPHROSIS.	=	4+	=	4+	=	3+	2+	=	=	4+	3+	2+	2+	4+	2+	4+	2+	2+	3+	2+	=	=	=	2+	2+
MINERALIZATION.	=	=	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
URINARY BLADDER	-	-	-	X	-	-	-	-	-	X	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
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CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 6 MALES

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	4
	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9
PROSTATE	-	-	-	M	-	-	-	-	-	X	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-
TESTES	-	=	-	X	=	-	-	-	-	X	=	-	-	X	-	-	-	-	-	-	-	-	-	-	-
HEMORRHAGE.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
MINERALIZATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
OLIGOSPERMIA.	=	P	=	=	P	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=
SEMINAL VESICLES	-	-	-	X	-	-	-	-	-	X	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-
STERNUM & RIB JUNCTION	-	-	-	X	-	-	-	-	-	X	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-
HISTIOCYTOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
FEMUR & BONE MARROW	-	-	-	X	-	-	-	-	-	X	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-
NASAL CAVITY	-	-	-	X	-	-	-	-	-	X	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-
OTHER	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
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(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 7 MALES

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2
	0	1	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5
SKIN	-	X	X	-	X	-	-	-	X	-	=	=	X	-	-	-	-	-	-	-	-	-	-	-	-
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=
NECROSIS.	=	=	=	=	=	=	=	=	=	=	1+	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CARCINOMA, METASTATIC.	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=
SKIN/MAMMARY	-	X	X	-	X	-	-	-	X	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-
THIGH MUSCLE	-	X	X	-	X	-	-	-	X	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-
SALIVARY GLAND	-	X	X	-	X	-	-	-	X	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-
MANDIBULAR LYMPH NODE	-	X	M	-	=	-	-	-	X	-	-	=	X	-	-	-	-	-	-	-	-	-	-	-	-
LEUKEMIA/LYMPHOMA.	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CARCINOMA.	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=
SCIATIC NERVE	-	X	X	-	X	-	-	-	X	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-
BRAIN	-	X	X	-	X	-	-	-	X	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	A
PITUITARY	I	I	X	M	X	I	X	I	X	I	X	X	M	M	A	I	X	X	X	M	X	X	I	I	X
ADRENALS	=	=	=	X	=	=	=	M	=	X	X	=	=	X	A	I	I	=	X	=	X	=	=	=	=
ADENOMA.	P	=	=	=	=	=	=	=	P	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=
AMYLOID.	2+	=	4+	=	3+	3+	=	=	=	=	=	=	=	=	=	4+	4+	=	=	=	=	=	2+	4+	=
MEDULLARY CELL HYPERPLASIA.	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=
HYPERPLASIA.	=	P	=	=	=	P	P	=	=	=	=	=	=	=	P	=	P	=	=	=	=	=	P	=	P
PIGMENT.	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEMORRHAGE.	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CARCINOMA.	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=
CORTICAL CELL HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=
THYMUS	N	I	M	X	M	N	N	N	=	=	X	N	=	N	A	M	X	M	X	M	=	N	X	N	=
CYST(S).	=	=	=	=	=	=	=	=	P	=	=	=	P	=	=	=	=	=	=	=	P	=	=	=	P
RETICULUM CELL HYPERPLASIA.	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
STOMACH	-	X	X	-	X	-	-	-	X	=	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-
PIGMENT.	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
DUODENUM	-	=	X	-	X	A	-	-	A	-	-	-	X	A	-	-	-	-	-	-	-	-	-	-	-
INFLAMMATION.	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
LYMPHOID HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
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CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 7 MALES

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2
	0	1	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5
JEJUNUM	-	X	X	-	X	-	-	-	X	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-
CECUM	-	X	=	-	X	-	-	-	A	=	-	-	X	A	-	-	-	-	-	-	-	-	-	-	-
INFLAMMATION.	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CONGESTION.	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEMORRHAGE.	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
COLON	-	X	X	-	X	A	-	-	A	-	-	-	X	A	-	-	-	-	-	-	-	-	-	-	-
RECTUM	-	X	X	-	X	-	-	-	A	-	-	-	X	A	-	-	-	-	-	-	-	-	-	-	-
MESENTERIC LYMPH NODE	-	=	=	-	=	-	-	-	X	-	-	=	=	-	-	-	-	-	-	-	-	-	-	-	-
MUCOSAL ECTOPIA.	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CONGESTION.	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	=
HISTIOCYTOSIS.	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
LEUKEMIA/LYMPHOMA.	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CARCINOMA.	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=
PLASMACYTOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ILEUM	-	X	X	-	X	-	-	-	A	-	-	-	X	A	-	-	-	-	-	-	-	-	-	-	-
LARYNX	X	X	X	X	X	X	X	X	X	X	X	X	X	X	A	X	X	X	X	X	X	X	X	X	X
TRACHEA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	A	X	X	X	X	X	X	X	X	X	X
THYROID	=	X	=	X	X	I	=	=	X	=	X	X	=	=	A	=	X	=	=	=	X	X	X	=	=
ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=
AMYLOID.	=	=	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	3+	=	
CYST(S).	P	=	=	=	=	=	P	P	=	P	=	=	=	P	=	=	=	=	P	P	=	=	=	=	P
NEOPLASM, N.O.S..	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=
PARATHYROID	=	X	=	X	X	I	X	X	N	X	X	X	X	X	A	=	X	=	X	=	X	=	X	X	=
AMYLOID.	=	=	1+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HYPERPLASIA.	2+	=	1+	=	=	=	=	=	=	=	=	=	=	=	P	=	P	=	P	=	3+	=	=	P	
ESOPHAGUS	X	X	X	X	X	X	X	X	X	X	X	X	X	X	A	=	X	X	X	X	X	X	X	X	X
DYSKERATOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	=
LUNG	=	=	=	=	=	=	=	=	=	=	=	=	=	=	A	=	=	=	=	=	=	=	=	=	=
ALVEOLAR/BRONCHIOLAR CELL HYPERPLASIA.	2+	=	=	P	2+	2+	2+	1+	=	1+	2+	=	2+	2+	=	1+	P	=	=	P	1+	1+	=	=	=
PIGMENT.	=	=	3+	=	=	=	=	=	=	1+	1+	=	=	=	=	=	1+	3+	=	=	=	=	=	=	=
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=

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FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 7 MALES

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2
	0	1	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5
LUNG (CONTINUED)																								
PNEUMOLITHIASIS.	=	1+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CONGESTION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	3+	4+
HISTIOCYTOSIS.	=	=	3+	=	2+	=	=	=	4+	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=
HEMORRHAGE.	=	=	=	2+	=	=	=	=	=	=	1+	=	=	1+	=	=	=	=	=	2+	=	=	=	=
LEUKEMIA/LYMPHOMA.	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ATELECTASIS.	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=
EOSINOPHILIC MASS(ES).	=	=	=	=	=	=	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
BRONCIECTASIS.	=	=	=	=	=	=	=	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CARCINOMA, METASTATIC.	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=
LEUKOSTASIS.	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=
FIBROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	1+	=	=	=	=	=	=	=	=	=	=	=
BRONCHIAL LYMPH NODES	=	X	=	N	=	=	N	N	=	X	X	N	X	N	A	M	=	M	=	M	X	X	X	=	=
PIGMENT.	3+	=	=	=	1+	=	=	=	=	=	=	=	=	=	=	2+	=	3+	=	=	=	=	3+	1+
CONGESTION.	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ERYTHROPHAGOCYTOSIS.	=	=	1+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
LEUKEMIA/LYMPHOMA.	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
MAINSTEM BRONCHI	X	X	X	X	X	X	X	X	X	X	X	X	X	X	A	X	X	X	X	X	X	X	X	X
LIVER	=	=	=	=	=	=	=	X	=	X	X	=	=	X	A	=	X	=	A	=	X	X	=	=	A
AMYLOID.	2+	=	4+	=	=	3+	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	2+	3+	=
CYST(S).	=	=	P	=	P	P	=	=	P	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=
INFLAMMATION.	=	=	4+	=	3+	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CONGESTION.	=	=	=	=	=	=	=	=	=	4+	=	=	=	4+	=	=	=	=	=	=	=	=	=	=
LEUKEMIA/LYMPHOMA.	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
NECROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	2+	=	=	=	=	=	=	=	=	=	=	=
CARCINOMA, METASTATIC.	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=
HEPATOCELLULAR CYSTIC DEGENERATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	3+	=	=	=	=	=	=
HEPATOCELLULAR VACUOLATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
GALLBLADDER	-	=	X	-	A	-	-	-	A	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-
INFLAMMATION.	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
SPLEEN	X	=	=	X	=	=	X	X	X	X	X	=	=	X	A	X	=	=	X	X	=	X	=	=	=
AMYLOID.	=	=	3+	=	3+	=	=	=	=	=	=	=	=	=	=	3+	3+	=	=	=	=	3+	3+	=
EXTRAMEDULLARY HEMATOPOIESIS.	=	4+	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+
CONGESTION.	=	=	=	=	=	4+	=	=	=	=	=	4+	3+	=	=	=	=	=	=	4+	=	=	=	=
LEUKEMIA/LYMPHOMA.	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
FIBROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=
PANCREAS	X	X	X	X	X	X	X	X	X	=	X	X	=	X	A	X	X	A	X	=	X	X	A	N	A

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CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 7 MALES

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2	2
	0	1	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5
PANCREAS (CONTINUED)																									
ATROPHY.	=	=	=	=	=	=	=	=	=	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
DUCTAL ECTASIA.	=	=	=	=	=	=	=	=	=	3+	=	=	3+	=	=	=	=	=	=	2+	=	=	=	=	=
HEPATOCELLULAR REGENERATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEART	-	=	=	=	-	X	-	-	-	=	-	-	-	=	-	-	-	-	-	-	-	-	-	-	-
MURAL THROMBOSIS.	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
THROMBOSIS.	=	=	P	=	=	=	=	=	P	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=
MYOCARDIOPATHY.	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	=
KIDNEYS	=	X	=	X	=	=	=	=	=	=	=	=	=	=	A	X	=	=	A	=	=	=	=	=	=
AMYLOID.	2+	=	4+	=	3+	4+	=	=	4+	1+	=	2+	=	3+	=	=	4+	4+	=	=	2+	=	3+	4+	2+
GLOMERULAR NEPHROSIS.	2+	=	=	=	2+	3+	2+	1+	=	=	2+	=	3+	2+	=	=	4+	=	=	2+	1+	4+	3+	=	2+
LEUKEMIA/LYMPHOMA.	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CARCINOMA, METASTATIC.	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=
URINARY BLADDER	-	M	X	-	X	-	-	-	A	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-
PROSTATE	-	X	X	-	X	-	-	-	X	-	-	-	=	-	-	-	-	-	-	-	-	-	-	-	-
AMYLOID.	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=
TESTES	-	X	=	-	X	-	=	-	X	-	=	=	=	=	-	-	-	-	=	=	-	-	-	-	-
INFLAMMATION.	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
OLIGOSPERMIA.	=	=	=	=	=	=	P	=	=	=	P	=	=	P	=	=	=	=	P	P	=	=	=	=	=
ATROPHY.	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=
DEGENERATION.	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=
SEMINAL VESICLES	-	X	X	-	X	-	-	-	X	-	-	-	X	-	-	-	-	-	-	=	-	-	-	-	-
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
(EPIDIDYMIS), NO SIGNIFICANT LESION RECOGNIZED.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=
STERNUM & RIB JUNCTION	-	X	X	-	X	-	-	-	A	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-
FEMUR & BONE MARROW	-	X	X	-	X	-	-	-	X	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-
NASAL CAVITY	-	X	X	-	X	-	-	-	X	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-
OTHER	-	-	-	-	=	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(PANCREATIC LYMPH NODE), LEUKEMIA/LYMPHOMA.	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
(PERITONEUM), INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 7 MALES

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	2	2	2	2	3	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4
	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	2	3	4	5	6	7	8	9
SKIN	-	X	-	X	-	X	-	-	-	-	X	-	-	-	X	-	-	-	-	-	-	-	-
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
NECROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CARCINOMA, METASTATIC.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
SKIN/MAMMARY	-	X	-	X	-	X	-	-	-	-	X	-	-	-	X	-	-	-	-	-	-	-	-
THIGH MUSCLE	-	X	-	X	-	X	-	-	-	-	X	-	-	-	X	-	-	-	-	-	-	-	-
SALIVARY GLAND	-	X	-	X	-	X	-	-	-	-	X	-	-	-	X	-	-	-	-	-	-	-	-
MANDIBULAR LYMPH NODE	-	X	-	X	-	X	-	-	-	-	X	-	-	=	X	-	-	-	-	-	-	-	-
LEUKEMIA/LYMPHOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=
CARCINOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
SCIATIC NERVE	-	X	-	X	-	X	-	-	-	-	X	-	-	-	X	-	-	-	-	-	-	-	-
BRAIN	-	X	-	X	-	X	A	-	-	-	X	-	-	-	X	-	-	-	A	-	-	-	-
PITUITARY	M	I	M	X	I	X	A	X	I	A	I	M	A	X	I	I	X	A	I	I	I	X	X
ADRENALS	=	=	X	=	X	=	A	X	=	A	=	X	A	=	=	=	=	A	I	X	=	=	=
ADENOMA.	=	P	=	P	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=
AMYLOID.	4+	2+	=	=	=	=	=	=	3+	=	=	=	3+	=	3+	3+	=	=	=	3+	=	=	=
MEDULLARY CELL HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HYPERPLASIA.	=	=	=	=	=	3+	=	=	=	=	P	=	=	P	P	=	=	=	=	=	=	P	P
PIGMENT.	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEMORRHAGE.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CARCINOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CORTICAL CELL HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
THYMUS	X	X	X	I	N	X	A	X	N	A	M	X	A	=	M	N	N	A	X	N	A	N	=
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	P
RETICULUM CELL HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
STOMACH	-	X	-	X	-	X	-	=	-	-	X	-	-	-	X	-	-	-	-	N	-	-	-
PIGMENT.	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
DUODENUM	-	X	-	=	-	X	-	-	-	-	X	-	-	-	X	-	-	-	-	-	-	-	-
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
LYMPHOID HYPERPLASIA.	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
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CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 7 MALES

	1 9 2 2 6	1 9 2 2 7	1 9 2 2 8	1 9 2 3 9	1 9 2 3 0	1 9 2 3 1	1 9 2 3 2	1 9 2 3 3	1 9 2 3 4	1 9 2 3 5	1 9 2 3 6	1 9 2 3 7	1 9 2 3 8	1 9 2 3 9	1 9 2 4 0	1 9 2 4 2	1 9 2 4 3	1 9 2 4 4	1 9 2 4 5	1 9 2 4 6	1 9 2 4 7	1 9 2 4 8	1 9 2 4 9
JEJUNUM	-	X	-	X	-	X	-	-	-	-	X	-	-	-	X	-	-	-	-	-	-	-	-
CECUM	-	X	-	X	-	X	-	-	-	-	X	-	-	-	X	-	=	-	-	-	-	-	-
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=
CONGESTION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEMORRHAGE.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
COLON	-	X	-	X	-	X	-	-	-	-	X	-	-	-	X	-	-	-	-	-	-	-	-
RECTUM	-	X	-	X	-	X	-	-	-	-	X	-	-	-	X	-	-	-	-	-	-	-	-
MESENTERIC LYMPH NODE	-	X	-	X	-	X	-	-	-	-	X	=	-	=	=	-	-	-	-	-	-	-	-
MUCOSAL ECTOPIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CONGESTION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HISTIOCYTOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
LEUKEMIA/LYMPHOMA.	=	=	=	=	=	=	=	=	=	=	=	P	=	P	=	=	=	=	=	=	=	=	=
CARCINOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PLASMACYTOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=
ILEUM	-	X	-	X	-	X	-	-	-	-	X	-	-	-	X	-	-	-	-	-	-	-	-
LARYNX	X	X	A	X	A	X	A	X	X	A	X	X	A	X	X	X	X	A	X	X	X	X	X
TRACHEA	X	X	A	X	A	X	A	X	X	A	X	X	A	X	X	X	X	A	X	X	X	X	X
THYROID	X	X	A	X	A	X	A	X	=	A	X	X	A	=	X	=	=	A	X	=	=	=	=
ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
AMYLOID.	=	=	=	=	=	=	=	=	3+	=	=	=	=	2+	=	3+	4+	=	=	1+	3+	=	=
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	P	P	P	P
NEOPLASM, N.O.S..	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PARATHYROID	X	=	A	=	A	I	A	X	I	A	X	X	A	X	X	X	X	A	X	I	X	X	X
AMYLOID.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HYPERPLASIA.	=	P	=	1+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ESOPHAGUS	X	X	A	X	A	X	A	X	X	A	X	X	A	X	X	X	X	A	X	X	X	X	X
DYSKERATOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
LUNG	=	=	=	=	A	=	A	=	=	A	=	=	A	=	=	=	X	A	=	=	=	X	=
ALVEOLAR/BRONCHIOLAR CELL HYPERPLASIA.	2+	2+	2+	2+	=	2+	=	P	P	=	2+	1+	=	=	3+	1+	=	=	=	1+	2+	=	2+
PIGMENT.	=	=	1+	=	=	=	=	=	1+	=	=	=	=	=	=	2+	=	=	=	=	=	=	2+
INFLAMMATION.	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
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CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 7 MALES

	1 9 2 2 6	1 9 2 2 7	1 9 2 2 8	1 9 2 3 9	1 9 2 3 0	1 9 2 3 1	1 9 2 3 2	1 9 2 3 3	1 9 2 3 4	1 9 2 3 5	1 9 2 3 6	1 9 2 3 7	1 9 2 3 8	1 9 2 3 9	1 9 2 4 0	1 9 2 4 2	1 9 2 4 3	1 9 2 4 4	1 9 2 4 5	1 9 2 4 6	1 9 2 4 7	1 9 2 4 8	1 9 2 4 9
LUNG (CONTINUED)																							
PNEUMOLITHIASIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CONGESTION.	=	=	=	=	=	=	=	=	3+	=	=	=	=	3+	=	=	=	=	3+	=	=	=	=
HISTIOCYTOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	2+
HEMORRHAGE.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
LEUKEMIA/LYMPHOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ATELECTASIS.	4+	3+	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=
EOSINOPHILIC MASS(ES).	=	=	=	=	=	=	=	=	=	=	1+	=	=	=	=	=	=	=	=	=	=	=	=
BRONCIECTASIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CARCINOMA, METASTATIC.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
LEUKOSTASIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
FIBROSIS.	=	=	=	1+	=	1+	=	=	=	=	2+	=	=	=	=	=	=	=	=	=	=	=	=
BRONCHIAL LYMPH NODES	X	X	=	X	N	M	A	I	N	A	X	N	A	X	M	=	N	A	N	N	N	=	=
PIGMENT.	=	=	2+	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	3+
CONGESTION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=
ERYTHROPHAGOCYTOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
LEUKEMIA/LYMPHOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
MAINSTEM BRONCHI	X	X	A	X	A	X	A	X	X	A	X	X	A	X	X	X	X	A	X	X	X	X	X
LIVER	=	=	X	X	A	=	A	=	=	A	X	=	A	=	X	=	=	A	A	X	=	=	X
AMYLOID.	4+	2+	=	=	=	=	=	=	3+	=	=	=	=	3+	=	3+	4+	=	=	=	3+	=	=
CYST(S).	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	2+	=	=
CONGESTION.	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=
LEUKEMIA/LYMPHOMA.	=	=	=	=	=	=	=	=	=	=	=	P	=	P	=	=	=	=	=	=	=	=	=
NECROSIS.	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CARCINOMA, METASTATIC.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEPATOCELLULAR CYSTIC DEGENERATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEPATOCELLULAR VACUOLATION.	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
GALLBLADDER	-	X	-	X	-	X	-	-	-	-	X	-	-	-	X	-	-	-	-	-	-	-	-
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
SPLEEN	=	X	A	X	A	=	A	M	=	A	=	X	A	=	=	=	=	A	A	X	=	X	X
AMYLOID.	3+	=	=	=	=	=	=	=	3+	=	=	=	=	3+	=	3+	4+	=	=	=	4+	=	=
EXTRAMEDULLARY HEMATOPOIESIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CONGESTION.	=	=	=	=	=	4+	=	=	=	=	3+	=	=	=	3+	=	=	=	=	=	=	=	=
LEUKEMIA/LYMPHOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
FIBROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PANCREAS	A	X	A	X	A	X	A	M	A	A	X	X	A	=	X	X	A	A	A	X	A	X	X

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
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CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 7 MALES

	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1942	1943	1944	1945	1946	1947	1948	1949
PANCREAS (CONTINUED)																							
ATROPHY.	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=
DUCTAL ECTASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEPATOCELLULAR REGENERATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=
HEART	-	=	-	X	-	X	-	-	-	-	=	-	-	-	X	-	-	-	-	-	-	-	-
MURAL THROMBOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
THROMBOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
MYOCARDIOPATHY.	=	3+	=	=	=	=	=	=	=	=	2+	=	=	=	=	=	=	=	=	=	=	=	=
KIDNEYS	=	=	A	=	A	=	A	=	=	A	=	=	A	=	=	=	=	=	A	X	=	=	=
AMYLOID.	4+	4+	=	=	=	=	=	=	4+	=	=	=	=	3+	=	4+	4+	=	=	=	4+	=	=
GLOMERULAR NEPHROSIS.	=	=	=	3+	=	3+	=	2+	=	=	3+	2+	=	=	4+	=	=	=	=	2+	=	3+	2+
LEUKEMIA/LYMPHOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CARCINOMA; METASTATIC.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
URINARY BLADDER	-	X	-	X	-	X	-	-	-	-	X	-	-	-	X	-	-	-	-	-	-	A	-
PROSTATE	-	M	-	X	-	X	-	-	-	-	X	-	-	-	X	-	-	-	-	-	-	-	-
AMYLOID.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
TESTES	-	=	-	X	A	X	-	-	=	-	X	-	-	-	X	=	-	-	-	-	-	=	-
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
OLIGOSPERMIA.	=	=	=	=	=	=	=	=	P	=	=	=	=	=	P	=	=	=	=	=	=	P	=
ATROPHY.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
DEGENERATION.	=	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
SEMINAL VESICLES	-	X	-	X	-	X	-	-	-	-	X	-	-	-	X	-	-	-	-	-	=	-	-
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=
(EPIDIDYMIS); NO SIGNIFICANT LESION RECOGNIZED.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
STERNUM & RIB JUNCTION	-	X	-	X	-	X	-	-	-	-	X	-	-	-	X	-	-	-	-	-	-	-	-
FEMUR & BONE MARROW	-	X	-	X	-	X	-	-	-	-	X	-	-	-	X	-	-	-	-	-	-	-	-
NASAL CAVITY	-	X	-	X	-	X	-	-	-	-	X	-	-	-	X	-	-	-	-	-	-	-	-
OTHER	-	-	-	-	-	-	-	-	=	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(PANCREATIC LYMPH NODE); LEUKEMIA/LYMPHOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
(PERITONEUM); INFLAMMATION.	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 8 MALES

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	2	2	2	2
	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4
SKIN	-	X	-	-	-	-	X	-	X	-	-	-	X	-	X	-	-	-	-	-	-	-	X	-
SKIN/MAMMARY	-	X	-	-	-	-	X	-	X	-	-	-	X	-	X	-	-	-	-	-	-	-	X	-
THIGH MUSCLE	-	X	-	-	-	-	X	-	X	-	-	-	X	-	X	-	-	-	-	-	-	-	X	-
SALIVARY GLAND	-	X	-	-	-	-	X	-	X	-	-	-	X	-	X	-	-	-	-	-	-	-	X	-
MANDIBULAR LYMPH NODE	-	X	-	-	-	-	X	-	X	-	-	-	=	-	X	-	-	-	-	-	-	-	X	-
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PLASMACYTOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=
SCIATIC NERVE	-	X	-	-	-	-	X	-	X	-	-	-	X	-	X	-	-	-	-	-	-	-	X	-
BRAIN	-	X	-	-	-	-	X	-	X	-	-	-	=	-	X	-	-	-	-	-	-	A	X	-
AMYLOID.	=	=	=	=	=	=	=	=	=	=	=	=	2+	=	=	=	=	=	=	=	=	=	=	=
PITUITARY	N	X	N	I	X	I	X	I	X	M	I	I	I	I	M	I	X	I	I	X	A	X	A	X	=
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P
ADRENALS	=	=	A	=	=	X	=	=	=	A	I	=	=	=	=	=	=	=	=	A	=	A	=	=
AMYLOID.	2+	4+	=	=	=	3+	=	=	=	=	=	3+	3+	3+	3+	=	2+	=	=	=	=	=	3+	2+
HYPERPLASIA.	=	=	=	P	P	=	P	P	P	=	=	=	P	=	=	P	P	=	P	P	=	=	=	P	P
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=
ADENOMA.	=	=	=	P	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	P	=	P	=
EXTRAMEDULLARY HEMATOPOIESIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
THYMUS	N	M	=	X	X	M	X	N	X	N	N	X	=	I	=	M	X	N	X	X	A	N	A	M	I
PIGMENT.	=	=	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	P	=	P	=	=	=	=	=	=	=	=	=	=
STOMACH	X	X	-	-	-	-	X	-	X	-	-	-	X	-	X	-	-	-	-	-	-	-	=	-
DYSKERATOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=
INTUSSUSCEPTION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
(MASS), MISSING.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
DUODENUM	-	X	-	-	-	-	X	-	X	A	-	-	X	-	X	-	-	-	-	-	-	-	X	-
CONGESTION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
JEJUNUM	-	X	-	-	-	-	X	-	X	-	-	-	X	-	X	-	-	-	-	-	-	-	X	-
INTUSSUSCEPTION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CECUM	-	X	-	-	-	-	X	-	X	=	-	-	X	-	X	-	-	-	-	-	-	X	-	X	-

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 6 MALES

	19300	19301	19302	19303	19304	19305	19306	19307	19308	19309	19310	19311	19312	19313	19314	19315	19316	19317	19318	19319	19320	19321	19322	19323	19324
CECUM (CONTINUED)																									
INFLAMMATION.	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
COLON	-	X	-	-	-	-	X	-	X	A	-	-	X	-	X	-	-	-	-	-	-	-	-	X	-
RECTUM	-	X	-	-	-	-	X	-	X	A	-	-	X	-	X	-	-	-	-	-	-	-	-	X	-
MESENTERIC LYMPH NODE	-	X	-	-	-	-	X	-	M	=	-	-	X	-	X	-	-	-	-	-	-	-	-	X	-
INFLAMMATION.	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
RETICULUM CELL HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ILEUM	-	X	-	-	-	-	X	-	X	A	-	-	X	-	X	-	-	-	-	-	-	-	-	X	-
LARYNX	X	X	X	X	X	X	X	M	X	X	X	X	X	X	X	X	X	X	X	X	A	X	A	X	M
TRACHEA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	A	X	A	X	X
THYROID	=	X	X	=	X	A	=	=	=	=	X	=	X	=	=	=	X	=	=	X	A	=	A	=	M
AMYLOID.	3+	=	=	=	=	=	=	=	=	2+	=	=	=	3+	=	3+	=	=	=	=	=	2+	=	=	=
HYPERPLASIA.	=	=	=	=	=	=	1+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	1+	=
CARCINOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=
CYST(S).	=	=	=	P	=	=	=	P	P	=	=	P	=	=	P	=	=	P	P	=	=	P	=	=	=
ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=
PARATHYROID	=	X	X	X	X	A	X	X	=	X	X	X	X	X	X	X	X	X	X	N	A	X	A	X	M
HYPERPLASIA.	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ADENOMA.	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ESOPHAGUS	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	A	X	A	X	X
LUNG	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
AMYLOID.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ALVEOLAR/BRONCHIOLAR CELL HYPERPLASIA.	3+	3+	3+	3+	1+	3+	3+	2+	3+	3+	3+	1+	3+	1+	3+	3+	3+	2+	1+	2+	1+	3+	3+	3+	3+
PIGMENT.	3+	3+	3+	3+	2+	2+	3+	3+	3+	2+	3+	2+	3+	3+	3+	2+	3+	2+	2+	2+	1+	2+	2+	3+	2+
FIBROSIS.	=	1+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CONGESTION.	=	=	=	3+	=	=	=	=	=	=	4+	4+	3+	=	=	=	=	=	=	=	=	=	=	=	=
HEMORRHAGE.	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
EMPHYSEMA.	=	=	=	=	=	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ATELECTASIS.	=	=	=	=	=	=	3+	=	=	=	=	=	3+	=	=	2+	=	=	=	=	=	=	2+	4+	=
HISTIOCYTOSIS.	=	=	=	=	=	=	=	=	=	2+	=	=	3+	4+	=	=	=	=	=	=	=	=	=	=	=
EOSINOPHILIC MASS(ES).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=
ALVEOLAR/BRONCHIOLAR CELL ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 8 MALES

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	2	2	2	2
	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4
BRONCHIAL LYMPH NODES	=	M	M	=	=	=	M	X	I	N	=	N	X	=	X	M	X	=	=	N	A	=	A	M	=
HYPERPLASIA.	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ALVEOLAR/BRONCHIOLAR CELL HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PIGMENT.	3+	=	=	4+	2+	2+	=	=	=	=	3+	=	=	3+	=	=	=	3+	4+	=	=	3+	=	=	2+
CONGESTION.	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=
RETICULUM CELL HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
MAINSTEM BRONCHI	X	X	X	X	X	M	X	X	X	X	I	X	X	X	X	X	X	X	X	X	A	X	A	X	X
PIGMENT.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
LIVER	=	=	A	X	X	=	=	X	X	=	=	X	=	=	=	=	X	=	X	=	A	=	A	=	=
AMYLOID.	3+	2+	=	=	=	2+	=	=	4+	=	=	=	4+	=	3+	=	2+	=	2+	=	3+	=	=	3+	
CARCINOMA.	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
NECROSIS.	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=
CLEAR CELL FOCUS/FOCI.	P	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=
CYST(S).	=	P	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	P	=	=	=
CONGESTION.	=	=	=	=	=	=	=	=	=	=	4+	=	4+	=	=	=	=	=	=	=	=	=	=	4+	=
HEMANGIECTASIS.	=	=	=	=	=	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
LYMPHOCYTOSIS.	=	=	=	=	=	=	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
EXTRAMEDULLARY HEMATOPOIESIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEPATOCELLULAR CYSTIC DEGENERATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
GALLBLADDER	-	X	-	-	-	-	X	-	X	-	-	-	A	-	X	-	-	-	-	-	-	-	-	A	-
SPLEEN	=	=	M	X	X	X	=	=	=	=	=	X	=	=	X	X	X	X	X	X	A	=	A	X	X
AMYLOID.	3+	=	=	=	=	=	=	=	1+	4+	3+	=	=	4+	=	=	=	=	=	=	=	3+	=	=	=
CONGESTION.	=	3+	=	=	=	=	3+	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=
EXTRAMEDULLARY HEMATOPOIESIS.	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PANCREAS	X	=	M	A	X	X	X	X	X	X	X	X	=	X	=	X	X	X	X	X	A	=	A	X	X
AMYLOID.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CONGESTION.	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=
DUCTAL ECTASIA.	=	1+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	1+	=	=	=
HEPATOCELLULAR REGENERATION.	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=
HEART	-	X	-	-	-	-	X	-	=	-	-	-	=	-	X	-	-	-	-	-	-	-	=	-	
AMYLOID.	=	=	=	=	=	=	=	=	1+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
THROMBOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	P	=
KIDNEYS	=	=	A	=	=	X	=	A	=	=	X	=	=	=	=	=	=	=	=	=	A	=	A	=	=
AMYLOID.	4+	=	=	=	=	=	=	=	=	4+	=	=	=	4+	=	3+	=	=	=	3+	=	4+	=	4+	2+

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 8 MALES

	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954
KIDNEYS (CONTINUED)																									
CARCINOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
GLOMERULAR NEPHROSIS.	=	4+	=	2+	4+	=	3+	=	4+	3+	=	3+	3+	3+	4+	2+	3+	3+	2+	3+	=	=	=	4+	3+
ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
URINARY BLADDER	-	X	-	-	-	-	=	-	X	-	-	-	X	-	X	-	-	-	-	-	-	-	-	X	-
ATYPICAL EPITHELIAL HYPERPLASIS.	=	=	=	=	=	=	1+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ATYPICAL EPITHELIAL HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PROSTATE	-	X	-	-	-	-	X	-	X	-	-	-	X	-	X	-	-	-	-	-	-	-	-	X	-
TESTES	=	X	-	=	-	=	X	-	X	-	-	-	X	M	X	=	-	-	-	=	-	=	-	X	-
OLIGOSPERMIA.	P	=	=	P	=	P	=	=	=	=	=	=	=	=	=	P	=	=	=	P	=	P	=	=	=
DEGENERATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
SEMINAL VESICLES	-	X	-	-	-	-	X	-	X	-	-	-	X	-	X	-	-	-	-	-	-	-	-	X	-
STERNUM & RIB JUNCTION	-	X	-	-	-	-	X	-	X	-	-	-	X	-	X	-	-	-	-	-	-	-	-	X	-
SARCOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
FEMUR & BONE MARROW	-	X	-	-	-	-	X	-	X	-	-	-	X	-	X	-	-	-	-	-	-	-	-	X	-
NASAL CAVITY	-	X	-	-	-	-	X	-	X	-	-	-	X	-	X	-	-	-	-	-	-	-	-	X	-
OTHER	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 8 MALES

	19325	19326	19327	19328	19329	19330	19331	19332	19333	19334	19335	19336	19337	19338	19339	19340	19341	19342	19343	19344	19345	19346	19347	19348	19349
SKIN	-	-	-	-	X	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-
SKIN/MAMMARY	-	-	-	-	X	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-
THIGH MUSCLE	-	-	-	-	X	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-
SALIVARY GLAND	-	-	-	-	X	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-
MANDIBULAR LYMPH NODE	-	-	-	-	X	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	X	=	-	-	-
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=
PLASMACYTOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
SCIATIC NERVE	-	-	-	-	X	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-
BRAIN	-	-	-	-	X	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-
AMYLOID.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PITUITARY	X	X	I	I	X	I	X	X	X	X	X	I	X	I	I	M	I	I	I	A	X	X	I	I	X
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ADRENALS	A	=	X	I	=	X	=	=	I	=	=	I	X	=	A	X	X	=	X	A	=	=	X	I	=
AMYLOID.	3+	=	=	3+	=	=	3+	4+	3+	3+	=	4+	=	3+	=	=	=	=	=	=	3+	3+	=	=	=
HYPERPLASIA.	P	P	=	=	P	=	P	P	=	=	=	=	=	P	=	=	=	P	=	=	=	P	=	P	1+
CYST(S).	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
EXTRAMEDULLARY HEMATOPOIESIS.	=	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
THYMUS	X	M	X	N	X	X	X	X	X	N	N	X	N	M	=	X	N	=	N	M	M	I	N	N	X
PIGMENT.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	2+	=	=	2+	=	=	=	=	=	=	=
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
STOMACH	-	-	-	-	X	-	-	X	-	=	-	-	-	=	-	-	-	-	-	-	X	X	-	-	-
DYSKERATOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
INTUSSUSCEPTION.	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
(MASS), MISSING.	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=
DUODENUM	=	-	-	-	X	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-
CONGESTION.	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
JEJUNUM	-	-	-	-	X	-	-	X	-	=	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-
INTUSSUSCEPTION.	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CECUM	=	-	-	-	X	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP B MALES

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	4
	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9
CECUM (CONTINUED)																									
INFLAMMATION.	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
COLON	-	-	-	-	X	A	-	X	X	-	-	-	-	-	-	-	-	-	-	A	X	X	-	-	-
RECTUM	-	-	-	-	X	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-
MESENTERIC LYMPH NODE	-	-	-	A	X	A	-	X	-	-	-	-	-	-	-	=	-	-	-	-	M	X	-	-	-
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
RETICULUM CELL HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=
ILEUM	-	-	-	-	X	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-
LARYNX	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
TRACHEA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
THYROID	X	=	X	X	=	A	=	X	=	=	X	=	=	=	=	X	X	X	X	=	X	X	A	X	=
AMYLOID.	=	2+	=	=	=	=	=	=	3+	1+	=	3+	=	3+	=	=	=	=	=	=	=	=	=	=	=
HYPERPLASIA.	=	=	=	=	1+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CARCINOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CYST(S).	=	P	=	=	=	=	P	=	=	=	=	=	P	=	P	=	=	=	=	P	=	=	=	=	P
ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PARATHYROID	X	X	X	=	X	A	X	=	X	X	X	X	X	=	X	X	X	X	X	A	X	X	A	N	X
HYPERPLASIA.	=	=	=	P	=	=	=	P	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=
ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ESOPHAGUS	X	X	X	X	X	A	X	X	X	X	X	X	X	X	A	X	X	X	X	A	X	X	A	X	X
LUNG	=	=	=	=	=	=	=	=	=	=	=	=	=	=	A	=	=	=	=	A	=	=	=	=	=
AMYLOID.	=	=	=	=	=	=	=	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ALVEOLAR/BRONCHIOLAR CELL HYPERPLASIA.	3+	2+	2+	3+	3+	1+	3+	3+	3+	3+	2+	3+	3+	=	=	3+	=	3+	3+	3+	3+	3+	2+	1+	3+
PIGMENT.	2+	2+	2+	2+	3+	2+	3+	3+	2+	2+	2+	2+	3+	=	3+	1+	=	2+	2+	3+	3+	3+	2+	1+	3+
FIBROSIS.	=	=	=	=	=	=	=	1+	=	=	=	=	=	1+	=	3+	=	=	=	=	=	=	=	=	=
CONGESTION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	4+	3+	=	=	=	=	3+	=
HEMORRHAGE.	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=
EMPHYSEMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ATELECTASIS.	3+	3+	=	=	3+	=	=	=	=	=	=	=	=	3+	=	=	2+	3+	3+	=	4+	3+	=	=	=
HISTIOCYTOSIS.	=	=	=	=	=	=	=	=	3+	3+	=	2+	=	=	=	=	=	=	=	=	=	3+	=	=	=
EOSINOPHILIC MASS(ES).	=	=	=	=	4+	=	=	=	=	3+	=	=	=	=	=	=	=	=	P	=	=	P	=	=	P
ALVEOLAR/BRONCHIOLAR CELL ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 8 MALES

	19322	19323	19324	19325	19326	19327	19328	19329	19330	19331	19332	19333	19334	19335	19336	19337	19338	19339	19340	19341	19342	19343	19344	19345	19346	19347	19348	19349
BRONCHIAL LYMPH NODES	M	=	=	N	=	M	N	M	X	X	=	N	=	M	N	N	=	=	M	M	=	=	N	=	=
HYPERPLASIA.	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ALVEOLAR/BRONCHIOLAR CELL HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	1+	=	=	=	=	=	=	=	=
PIGMENT.	=	3+	1+	=	=	=	=	=	=	3+	=	1+	=	=	=	3+	1+	=	=	2+	2+	=	4+	2+	
CONGESTION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=
RETICULUM CELL HYPERPLASIA.	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
MAINSTEM BRONCHI	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	N	=	X	X	X	X	X	X	X
PIGMENT.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	2+	=	=	=	=	=	=	=	
LIVER	X	X	X	=	X	A	=	=	=	=	A	=	X	=	A	X	X	X	X	A	=	=	A	=	X
AMYLOID.	=	=	=	2+	=	=	3+	2+	3+	3+	=	3+	=	3+	=	=	=	=	=	=	2+	=	=		
CARCINOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
NECROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=
CLEAR CELL FOCUS/FOCI.	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=
CYST(S).	=	=	=	=	=	=	P	P	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=
CONGESTION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	
HEMANGIECTASIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
LYMPHOCYTOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
EXTRAMEDULLARY HEMATOPOIESIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=
HEPATOCELLULAR CYSTIC DEGENERATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	
GALLBLADDER	-	-	-	-	X	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-
SPLEEN	X	X	X	X	X	A	X	=	X	=	A	=	X	=	A	=	X	X	X	A	=	X	X	X	=
AMYLOID.	=	=	=	=	=	=	=	=	=	3+	=	3+	=	3+	=	=	=	=	=	=	=	=	=	=	=
CONGESTION.	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+
EXTRAMEDULLARY HEMATOPOIESIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	4+	=	=	=	
PANCREAS	X	X	X	A	X	A	=	X	X	=	A	X	X	X	A	X	X	X	X	A	=	X	A	X	X
AMYLOID.	=	=	=	=	=	=	2+	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	1+	=	=	=	=
CONGESTION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
DUCTAL ECTASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEPATOCELLULAR REGENERATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEART	-	-	-	-	X	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	=	=	-	-	-
AMYLOID.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
THROMBOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	P	=	=	=
KIDNEYS	X	=	=	=	=	A	=	=	=	=	A	=	=	=	A	X	X	=	=	A	=	=	=	=	=
AMYLOID.	=	2+	=	2+	2+	=	4+	4+	4+	4+	=	4+	=	4+	=	=	=	=	=	=	=	=	=	=	=

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 8 MALES

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	2	2	2	2	2	3	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	4
	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9
KIDNEYS (CONTINUED)																									
CARCINOMA.	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=
GLOMERULAR NEPHROSIS.	=	2+	3+	2+	=	=	3+	3+	2+	=	=	=	2+	=	=	=	=	2+	2+	=	3+	4+	3+	3+	3+
ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=
URINARY BLADDER	-	-	-	-	X	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	=	X	-	-	-
ATYPICAL EPITHELIAL HYPERPLASIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ATYPICAL EPITHELIAL HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	1+	=	=	=	=
PROSTATE	-	-	-	-	X	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-
TESTES	-	-	-	-	=	-	-	X	-	-	-	-	-	-	-	-	A	-	-	-	X	=	-	-	-
OLIGOSPERMIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=
DEGENERATION.	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
SEMINAL VESICLES	-	-	-	-	X	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-
STERNUM & RIB JUNCTION	-	-	-	-	X	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	=	X	-	-	-
SARCOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=
FEMUR & BONE MARROW	-	-	-	-	X	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-
NASAL CAVITY	-	-	-	-	X	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-
OTHER	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
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CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 9 MALES

	1 9 4 0 0	1 9 4 0 1	1 9 4 0 2	1 9 4 0 4	1 9 4 0 5	1 9 4 0 6	1 9 4 0 7	1 9 4 0 8	1 9 4 0 9	1 9 4 1 0	1 9 4 1 1	1 9 4 1 2	1 9 4 1 3	1 9 4 1 4	1 9 4 1 5	1 9 4 1 6	1 9 4 1 7	1 9 4 1 8	1 9 4 1 9	1 9 4 2 0	1 9 4 2 1	1 9 4 2 2	1 9 4 2 3	1 9 4 2 4	1 9 4 2 5
SKIN	X	-	-	-	-	-	-	X	-	-	X	X	-	-	-	X	-	-	-	-	-	-	-	-	-
SKIN/MAMMARY	X	-	-	-	-	-	-	X	-	-	X	X	-	-	-	X	-	-	-	-	-	-	-	-	-
THIGH MUSCLE	X	-	-	-	-	-	-	X	-	-	X	X	-	-	-	X	-	-	-	-	-	-	-	-	-
SALIVARY GLAND	X	-	-	-	-	-	-	X	-	-	X	A	-	-	-	X	-	-	-	-	-	-	-	-	-
MANDIBULAR LYMPH NODE	X	-	-	-	-	-	-	=	-	-	I	A	-	-	-	=	-	-	-	-	-	-	-	-	-
PIGMENT.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
INFLAMMATION.	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
RETICULUM CELL HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=
SCIATIC NERVE	X	-	-	-	-	-	-	X	-	-	X	X	-	-	-	X	-	-	-	-	-	-	-	-	-
BRAIN	X	-	-	-	-	-	-	X	-	-	X	M	-	-	-	=	-	-	-	-	-	-	-	-	-
MINERALIZATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	1+	=	=	=	=	=	=	=	=	=
PITUITARY	M	I	I	X	A	A	A	M	I	I	M	I	X	X	I	I	I	M	X	X	X	I	X	X	M
ADRENALS	=	=	=	X	A	A	A	M	=	I	=	=	X	X	=	=	X	A	=	X	=	=	X	=	I
HYPERPLASIA.	P	P	=	=	=	=	=	=	P	=	1+	=	=	=	=	P	=	=	P	=	P	=	=	=	=
AMYLOID.	3+	3+	4+	=	=	=	=	=	=	3+	4+	4+	=	=	=	4+	=	=	=	=	=	=	=	=	3+
ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	P	=	P	=
MEDULLARY CELL HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CARCINOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
THYMUS	N	N	N	N	M	A	A	N	N	X	N	N	N	N	X	X	N	M	A	N	M	X	=	X	N
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
EOSINOPHILIC MASS(ES).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=
STOMACH	X	=	-	-	-	-	-	X	-	-	X	A	-	-	-	X	-	-	-	-	-	-	-	-	-
PIGMENT.	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
DUODENUM	X	-	-	-	-	-	-	X	-	-	X	A	-	-	-	X	-	-	-	-	-	-	-	-	-
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
JEJUNUM	X	-	A	-	-	-	-	X	-	-	X	X	-	-	-	X	-	-	-	-	-	-	-	-	-
CECUM	X	-	-	-	-	-	-	X	-	-	X	A	-	-	-	A	=	-	-	X	-	-	=	=	-
CONGESTION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
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CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 9 MALES

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2
	0	1	2	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5
COLON	X	-	-	-	-	-	-	=	=	-	X	A	-	-	-	A	-	-	-	-	-	-	-	-	-
AMYLOID.	=	=	=	=	=	=	=	1+	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
INFLAMMATION.	=	=	=	=	=	=	=	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
RECTUM	X	-	-	-	-	-	-	X	-	-	X	A	-	-	-	A	-	-	-	-	-	-	-	-	-
MESENTERIC LYMPH NODE	X	-	-	-	-	-	-	=	-	-	X	A	-	-	-	A	=	-	-	-	-	-	-	-	-
AMYLOID.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=
INFLAMMATION.	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ILEUM	X	-	-	-	-	-	-	X	-	-	X	A	-	-	-	X	-	-	-	-	-	-	-	-	-
LARYNX	X	X	X	X	A	A	A	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
TRACHEA	X	X	X	X	A	A	A	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
THYROID	=	=	=	X	N	A	A	=	X	=	=	=	X	X	=	X	=	A	A	I	=	X	X	X	=
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
AMYLOID.	3+	=	3+	=	=	=	=	=	=	2+	2+	3+	=	=	2+	=	=	=	=	=	=	=	=	=	=
CYST(S).	P	P	=	=	=	=	=	P	=	=	=	=	=	=	=	=	P	=	=	=	P	=	=	=	P
PAPILLARY ADENOMA.	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PARATHYROID	X	X	X	X	N	A	A	X	X	X	X	A	X	X	=	X	X	N	A	N	=	I	X	X	X
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	1+	=	=	=	=
AMYLOID.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ESOPHAGUS	X	X	X	X	A	A	A	X	X	X	X	A	X	X	X	X	X	X	X	X	X	X	X	X	X
LUNG	=	=	=	=	=	A	A	=	=	=	=	A	=	=	=	=	=	A	A	=	=	=	=	=	=
HISTIOCYTOSIS.	3+	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
EOSINOPHILIC MASS(ES).	P	P	P	=	=	=	=	=	=	=	=	P	=	=	=	P	=	=	=	=	P	P	=	=	P
ALVEOLAR/BRONCHIOLAR CELL HYPERPLASIA.	3+	4+	3+	3+	2+	=	=	3+	3+	3+	3+	3+	2+	3+	3+	3+	3+	=	1+	3+	3+	3+	2+	=	=
PIGMENT.	3+	3+	3+	3+	2+	=	2+	3+	3+	3+	3+	3+	1+	3+	3+	3+	3+	2+	2+	3+	2+	2+	2+	2+	=
CONGESTION.	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	2+	=	4+	=	=	4+	
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PAPILLARY HYPERPLASIA.	=	=	=	1+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ATELECTASIS.	=	=	=	=	=	=	=	2+	=	3+	=	=	=	3+	3+	=	3+	=	=	=	=	3+	=	=	=
SARCOMA, METASTATIC.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=
METAPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=
FIBROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	2+

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GROUP 9 MALES

	19400	19401	19402	19404	19405	19406	19407	19408	19409	19410	19411	19412	19413	19414	19415	19416	19417	19418	19419	19420	19421	19422	19423	19424	19425
LUNG (CONTINUED)																									
HEMORRHAGE.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	2+
EMPHYSEMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
BRONCHIAL LYMPH NODES	N	=	N	=	N	A	=	=	N	N	=	A	N	=	X	=	=	M	X	N	M	=	N	=	=
ALVEOLAR/BRONCHIOLAR CELL HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+
PIGMENT.	=	4+	=	3+	=	=	3+	2+	=	=	2+	2+	=	3+	=	4+	3+	=	=	=	=	3+	=	3+	3+
CONGESTION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=
ERYTHROPHAGOCYTOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
MAINSTEM BRONCHI	X	X	X	X	A	A	A	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
LIVER	=	=	=	=	A	A	A	=	=	=	=	A	X	=	X	=	=	A	A	=	X	X	X	=	=
AMYLOID.	=	=	3+	=	=	=	=	4+	=	3+	3+	=	=	=	=	3+	=	=	=	=	4+	=	=	=	3+
CYST(S).	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	P	=
PIGMENT.	=	=	=	=	=	=	=	=	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CONGESTION.	4+	4+	=	3+	=	=	=	4+	P	=	=	=	=	3+	=	=	=	=	=	3+	=	=	=	3+	=
NECROSIS.	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=
EXTRAMEDULLARY HEMATOPOIESIS.	=	=	=	=	=	=	=	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CLEAR CELL FOCUS/FOCI.	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEPATOCELLULAR VACUOLATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CHOLANGIOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
GALLBLADDER	A	-	-	-	-	-	-	X	-	-	X	A	-	-	-	A	-	-	-	-	-	-	-	-	-
SPLEEN	X	=	=	X	A	A	A	=	X	=	=	A	X	X	X	X	X	A	A	X	=	X	X	X	=
AMYLOID.	=	2+	4+	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	3+
CONGESTION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
EXTRAMEDULLARY HEMATOPOIESIS.	=	=	=	=	=	=	=	4+	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PANCREAS	X	=	X	X	A	A	A	=	X	X	=	A	X	X	A	X	X	A	A	X	X	X	X	=	X
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CONGESTION.	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
DUCTAL ECTASIA.	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	1+	=
ATROPHY.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEART	=	-	X	-	A	-	A	X	-	-	=	A	-	-	-	X	-	-	-	-	-	-	-	-	-
THROMBOSIS.	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
MYOCARDIOPATHY.	=	=	=	=	=	=	=	=	=	=	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	=
KIDNEYS	=	=	=	=	A	A	A	=	=	=	=	A	=	=	=	=	=	A	A	=	=	=	=	=	=
AMYLOID.	4+	3+	4+	=	=	=	=	4+	=	4+	4+	=	3+	=	4+	4+	=	=	=	=	4+	=	=	=	3+

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CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 9 MALES

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2
	0	1	2	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5
KIDNEYS (CONTINUED)																								
GLOMERULAR NEPHROSIS.	3+	=	4+	2+	=	=	=	3+	3+	=	3+	=	3+	1+	4+	4+	2+	=	=	2+	=	2+	2+	2+	3+
INFARCT.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
URINARY BLADDER	X	-	-	-	-	-	-	X	-	-	X	A	-	-	-	A	-	-	-	-	-	-	-	-	-
PROSTATE	=	-	-	-	-	-	-	M	-	-	X	A	-	-	-	X	-	-	-	-	-	-	-	-	-
INFLAMMATION.	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
TESTES	X	-	-	-	-	-	-	X	-	-	X	A	-	-	-	X	-	-	-	-	-	-	-	=	-
ATROPHY.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=
OLIGOSPERMIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
SEMINAL VESICLES	X	-	-	-	-	-	-	X	-	-	X	A	-	-	-	X	-	-	-	-	-	-	-	-	-
STERNUM & RIB JUNCTION	X	-	-	-	-	-	-	=	-	-	X	A	-	-	-	X	-	-	-	-	=	-	-	-	-
HYPOPLASIA.	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
FEMUR & BONE MARROW	X	-	-	-	-	-	-	X	-	-	X	X	-	-	-	X	-	-	-	-	-	-	-	-	-
NASAL CAVITY	X	-	-	-	-	-	-	X	-	-	X	X	-	-	-	X	-	-	-	-	-	-	-	-	-
OTHER	-	=	-	-	-	-	-	=	-	-	-	-	-	-	-	-	-	=	-	-	-	-	-	-	=
(SMALL INTESTINE), NO SIGNIFICANT LESION RECOGNIZED.	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
(MASS), FAT NECROSIS.	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
(MASS), SARCOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=
(VERTEBRAE), OSTEOGENIC SARCOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P
(PERITONEUM), INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
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CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 9 MALES

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
	2	2	2	2	3	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	4
	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9
SKIN	X	-	-	X	-	-	-	-	-	-	-	X	-	-	-	X	-	-	-	-	-	-	-	X
SKIN/MAMMARY	X	-	-	X	-	-	-	-	-	-	-	X	-	-	-	X	-	-	-	-	-	-	-	X
THIGH MUSCLE	X	-	-	X	-	-	-	-	-	-	-	X	-	-	-	X	-	-	-	-	-	-	-	X
SALIVARY GLAND	X	-	-	X	-	-	-	-	-	-	-	X	-	-	-	X	-	-	-	-	-	-	-	A
MANDIBULAR LYMPH NODE	X	-	-	X	-	-	-	-	-	-	-	=	-	-	-	X	-	-	-	-	-	-	-	A
PIGMENT.	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
RETICULUM CELL HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
SCIATIC NERVE	X	-	-	X	-	-	-	-	-	-	-	X	-	-	-	X	-	-	-	-	-	-	-	X
BRAIN	X	-	A	X	-	-	-	-	-	-	-	X	-	-	A	X	-	-	-	-	-	-	-	A
MINERALIZATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PITUITARY	X	X	I	X	X	I	X	X	A	I	X	I	X	X	X	M	X	X	X	A	I	I	X	A
ADRENALS	=	X	=	=	=	I	=	=	A	X	=	=	X	X	I	=	X	=	=	A	I	=	I	A
HYPERPLASIA.	=	=	P	P	=	P	=	P	=	=	=	P	=	=	=	P	=	=	=	=	=	=	=	=
AMYLOID.	3+	=	=	3+	3+	=	4+	=	=	=	3+	4+	=	=	4+	3+	=	=	=	=	3+	2+	3+	=
ADENOMA.	=	=	=	=	P	=	=	=	=	=	P	=	=	=	=	=	=	=	P	=	=	=	=	=
MEDULLARY CELL HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	1+	=	=	=	=	=	=
CARCINOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=
THYMUS	=	N	A	N	X	N	N	X	A	N	X	N	N	N	N	X	N	N	N	N	N	N	N	A
CYST(S).	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
EOSINOPHILIC MASS(ES).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
STOMACH	X	-	-	X	-	-	-	-	-	-	-	X	-	-	-	X	-	-	-	-	X	X	-	A
PIGMENT.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
DUODENUM	=	-	-	X	-	-	-	-	-	-	-	X	-	-	-	X	-	-	-	-	-	-	-	A
INFLAMMATION.	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
JEJUNUM	X	-	-	X	-	-	-	-	-	-	-	X	-	-	-	X	-	-	-	-	-	-	-	X
CECUM	X	=	-	X	-	-	-	-	-	-	-	X	-	-	-	X	-	-	-	-	-	-	A	A
CONGESTION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
INFLAMMATION.	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
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CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 9 MALES

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
	2	2	2	2	3	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4
	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9
COLON	X	-	-	X	-	-	-	-	-	-	-	X	-	-	-	X	-	-	-	-	-	-	A
AMYLOID.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
RECTUM	X	-	-	X	-	-	-	-	-	-	-	A	-	-	-	X	-	-	-	-	-	-	A
MESENTERIC LYMPH NODE	X	-	-	X	-	-	-	-	-	-	-	X	-	-	-	X	-	-	-	-	-	-	A
AMYLOID.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ILEUM	X	-	-	X	-	-	-	-	-	-	-	X	-	-	-	X	-	-	-	-	-	-	A
LARYNX	X	X	X	X	X	X	X	X	A	X	X	X	X	X	X	X	X	X	X	X	X	=	A
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=
TRACHEA	X	X	X	X	X	X	X	X	A	X	X	X	X	X	X	X	X	X	X	X	X	X	A
THYROID	X	X	A	=	=	X	=	X	=	I	=	=	=	X	=	=	=	X	=	A	=	=	=
HYPERPLASIA.	=	=	=	1+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
AMYLOID.	=	=	=	2+	=	=	3+	=	4+	=	2+	1+	=	=	3+	=	=	=	=	=	4+	=	=
CYST(S).	=	=	=	=	P	=	P	=	=	=	P	=	=	=	=	P	P	=	P	=	=	P	P
PAPILLARY ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=
PARATHYROID	X	X	N	X	X	X	=	X	A	N	X	X	X	X	X	X	=	X	A	X	X	X	A
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=
AMYLOID.	=	=	=	=	=	=	1+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ESOPHAGUS	X	X	X	X	X	X	X	X	A	X	X	X	X	X	X	X	X	X	X	X	X	X	A
LUNG	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	A
HISTIOCYTOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=
EOSINOPHILIC MASS(ES).	=	=	=	=	=	P	P	=	P	=	=	P	=	P	=	=	=	=	=	=	=	P	=
ALVEOLAR/BRONCHIOLAR CELL HYPERPLASIA.	3+	3+	2+	=	3+	4+	3+	2+	2+	3+	3+	4+	3+	3+	3+	3+	3+	3+	3+	3+	3+	3+	=
PIGMENT.	3+	2+	3+	=	3+	3+	3+	3+	3+	3+	3+	4+	3+	2+	3+	3+	2+	3+	3+	3+	3+	3+	3+
CONGESTION.	=	=	=	=	3+	3+	=	=	4+	=	=	=	=	=	=	4+	=	=	=	=	=	=	=
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=
PAPILLARY HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ATELECTASIS.	=	=	=	=	3+	=	2+	=	2+	=	=	3+	=	2+	=	=	=	=	3+	3+	3+	=	=
SARCOMA, METASTATIC.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
METAPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
FIBROSIS.	=	=	=	1+	=	=	=	1+	P	=	=	=	=	2+	=	=	=	1+	=	=	=	=	=

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CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 9 MALES

	19426	19427	19428	19429	19430	19431	19432	19433	19434	19435	19436	19437	19438	19439	19440	19441	19442	19443	19444	19445	19446	19447	19448	19449
LUNG (CONTINUED)																								
HEMORRHAGE.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
EMPHYSEMA.	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=
BRONCHIAL LYMPH NODES	N	=	=	X	N	N	N	X	A	=	X	=	X	M	X	=	=	=	N	N	N	=	N	A
ALVEOLAR/BRONCHIOLAR CELL HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PIGMENT.	=	3+	3+	=	=	=	=	=	=	4+	=	3+	=	=	=	2+	3+	=	=	=	=	3+	=	=
CONGESTION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ERYTHROPHAGOCYTOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=
MAINSTEM BRONCHI	X	X	X	X	X	X	X	X	A	X	X	X	X	X	X	X	X	X	X	X	X	X	X	A
LIVER	=	X	A	X	=	X	=	=	A	X	=	=	X	=	=	=	X	=	X	A	X	=	=	A
AMYLOID.	3+	=	=	=	3+	=	3+	=	=	=	3+	3+	=	=	4+	=	=	=	=	=	=	3+	3+	=
CYST(S).	P	=	=	=	P	=	=	=	=	=	=	P	=	=	=	P	=	=	=	=	=	=	=	=
PIGMENT.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CONGESTION.	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	4+	=
NECROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
EXTRAMEDULLARY HEMATOPOIESIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CLEAR CELL FOCUS/FOCI.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=
HEPATOCELLULAR VACUOLATION.	=	=	=	=	=	=	=	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CHOLANGIOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=
GALLBLADDER	X	-	-	X	-	-	-	-	-	-	-	X	-	-	-	I	-	-	-	-	-	-	-	A
SPLEEN	=	X	A	X	=	=	=	X	A	X	X	X	X	=	=	X	X	X	X	X	X	X	=	A
AMYLOID.	=	=	=	=	2+	=	4+	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=
CONGESTION.	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=
EXTRAMEDULLARY HEMATOPOIESIS.	4+	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	=
PANCREAS	=	X	A	X	X	X	X	X	A	X	X	=	X	X	A	X	X	X	X	A	A	X	A	A
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CONGESTION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
DUCTAL ECTASIA.	=	=	=	=	=	=	=	=	=	=	=	2+	=	=	=	=	=	=	=	=	=	=	=	=
ATROPHY.	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEART	=	-	-	X	-	-	-	-	-	-	-	=	-	-	-	X	-	-	-	-	-	-	-	A
THROMBOSIS.	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=
MYOCARDIOPATHY.	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
KIDNEYS	=	=	A	=	=	=	=	=	A	=	=	=	=	=	=	=	=	=	X	=	=	=	=	A
AMYLOID.	4+	2+	=	3+	2+	=	4+	=	4+	=	4+	4+	4+	=	=	4+	=	=	4+	=	=	3+	4+	=

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CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 9 MALES

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
	2	2	2	2	3	3	3	3	3	3	3	3	3	3	4	4	4	4	4	4	4	4	4	4
	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9
KIDNEYS (CONTINUED)																								
GLOMERULAR NEPHROSIS.	=	3+	=	=	=	1+	4+	2+	=	2+	2+	2+	4+	2+	2+	3+	2+	3+	3+	=	2+	=	2+	=
INFARCT.	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=
URINARY BLADDER	X	-	-	X	A	-	-	-	-	-	-	X	-	-	-	X	-	-	-	-	-	-	-	A
PROSTATE	M	-	-	M	-	-	-	-	-	-	-	X	-	-	-	X	-	-	-	-	-	-	-	A
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
TESTES	X	-	-	=	-	-	-	-	-	=	-	X	-	-	-	=	=	-	=	-	-	-	-	A
ATROPHY.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=
OLIGOSPERMIA.	=	=	=	P	=	=	=	=	=	P	=	=	=	=	=	P	=	P	=	=	=	=	=	=
SEMINAL VESICLES	X	-	-	M	-	-	-	-	-	-	-	X	-	-	-	X	-	-	-	-	-	-	-	A
STERNUM & RIB JUNCTION	X	-	-	X	-	-	-	-	-	-	-	X	-	-	-	X	-	-	-	-	-	-	-	A
HYPOPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
FEMUR & BONE MARROW	X	-	-	X	-	-	-	-	-	-	-	X	-	-	-	X	-	-	-	-	-	-	-	X
NASAL CAVITY	X	-	-	X	-	-	-	-	-	-	-	X	-	-	-	X	-	-	-	-	-	-	-	X
OTHER	-	-	-	-	-	-	-	-	-	-	-	-	-	-	=	-	-	-	-	-	-	-	-	-
(SMALL INTESTINE), NO SIGNIFICANT LESION RECOGNIZED.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
(MASS), FAT NECROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
(MASS), SARCOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
(VERTEBRAE), OSTEOGENIC SARCOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
(PERITONEUM), INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	=

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
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CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 10 MALES

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	2	2	2	2	2	2
	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4
SKIN	-	-	-	-	-	-	-	X	-	-	-	-	X	X	-	-	-	X	-	-	X	-	-	-	-
SKIN/MAMMARY	-	-	-	-	-	-	-	X	-	-	-	-	X	X	-	-	-	X	-	-	X	-	-	-	-
THIGH MUSCLE	-	-	-	-	-	-	-	X	-	-	-	-	X	X	-	-	-	X	-	-	X	-	-	-	-
SALIVARY GLAND	-	-	-	-	-	-	-	X	-	-	-	-	X	X	-	-	-	X	-	-	X	-	-	-	-
MANDIBULAR LYMPH NODE	-	-	-	-	-	-	-	X	-	-	-	-	X	X	-	-	-	X	-	-	X	-	-	-	-
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
SCIATIC NERVE	-	-	-	-	-	-	-	X	-	-	-	-	X	X	-	-	-	X	-	-	X	-	-	-	-
BRAIN	-	-	-	-	-	-	-	X	-	-	-	-	X	X	-	A	-	X	-	-	X	-	-	-	-
AMYLOID.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PITUITARY	A	I	X	X	I	X	I	=	M	X	=	I	X	X	I	I	X	X	X	X	I	M	X	I	X
HYPERPLASIA.	=	=	=	=	=	=	=	1+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
VACUOLATION.	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ADRENALS	A	X	=	=	=	X	=	=	X	=	=	=	X	=	I	=	X	=	=	=	=	X	=	=	=
CARCINOMA.	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ADENOMA.	=	=	=	P	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	P	=	=	P	=
HYPERPLASIA.	=	=	=	=	P	=	P	2+	=	P	P	P	=	=	=	=	=	P	3+	=	=	=	=	P	3+
AMYLOID.	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	3+	=	=	4+	4+	=	=	3+	4+	=
CYST(S).	=	=	=	=	=	=	=	=	=	=	P	=	=	P	=	=	=	=	=	=	=	=	=	=	=
CORTICAL CELL HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
THYMUS	X	M	M	M	X	X	M	=	X	=	M	=	I	M	N	N	M	M	X	X	M	M	M	M	M
EOSINOPHILIC MASS(ES).	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=
HEMORRHAGE.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ERYTHROPHAGOCYTOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
AMYLOID.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CYST(S).	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
STOMACH	A	-	=	-	-	-	-	X	X	-	-	-	X	X	-	-	-	X	-	-	X	-	-	-	-
CARCINOMA.	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
DUODENUM	-	-	-	-	-	-	-	X	-	-	-	-	X	X	-	-	-	X	-	-	X	-	-	-	-
JEJUNUM	A	-	-	-	-	-	-	X	-	-	-	-	X	X	-	-	-	X	-	-	X	-	-	-	-

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Reproduced from best available copy.

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FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 10 MALES

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	2	2	2	2	2
	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4
CECUM	A	-	-	-	=	-	-	X	=	-	-	-	X	X	-	A	-	X	-	-	X	-	-	-	-
INFLAMMATION.	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ERYTHROPHAGOCYTOSIS.	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
NECROSIS.	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
COLON	-	-	-	-	-	-	-	X	-	-	-	-	X	X	-	-	-	X	-	-	X	-	-	-	-
RECTUM	-	-	-	-	-	-	-	X	-	-	-	-	X	X	-	-	-	X	-	-	X	-	-	-	-
MESENTERIC LYMPH NODE	-	-	-	-	-	-	-	X	-	-	-	-	X	X	-	-	-	=	-	-	X	-	-	-	=
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
RETICULUM CELL HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=
LEUKEMIA/LYMPHOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P
ILEUM	-	-	-	-	-	-	-	X	-	=	-	-	X	X	-	-	-	X	-	-	X	-	-	-	-
HEMORRHAGE.	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
LARYNX	A	X	=	X	X	X	X	X	X	X	X	X	X	I	X	X	X	X	X	X	X	X	X	X	X
DYSKERATOSIS.	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ATYPICAL EPITHELIAL HYPERPLASIA.	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
TRACHEA	A	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
THYROID	A	X	X	X	X	X	=	X	X	=	X	X	=	X	X	=	X	X	=	=	=	X	=	=	X
ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
AMYLOID.	=	=	=	=	=	=	2+	=	=	2+	=	=	=	=	=	4+	=	=	2+	=	3+	=	3+	4+	=
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	P	P	=	=	P	=	=
NEOPLASM, N.O.S..	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	P	=	=
PARATHYROID	A	X	X	X	X	N	X	=	N	X	X	X	X	X	N	X	X	X	X	X	X	=	X	X	X
ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=
HYPERPLASIA.	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ESOPHAGUS	A	M	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
LUNG	A	X	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	X	=	=
CARCINOMA.	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ALVEOLAR/BRONCHIOLAR CELL HYPERPLASIA.	=	=	2+	3+	=	1+	=	=	2+	=	=	=	=	1+	1+	=	=	2+	=	=	=	=	=	=	=
EOSINOPHILIC MASS(ES).	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PIGMENT.	=	=	3+	3+	=	=	=	=	=	=	=	=	=	1+	=	=	=	=	=	=	=	=	=	=	=
HEMORRHAGE.	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=

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GROUP 10 MALES

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	2	2	2	2	2
	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4
LUNG (CONTINUED)																								
CONGESTION.	=	=	=	3+	=	=	4+	=	=	=	3+	4+	3+	=	=	=	=	3+	=	=	=	=	3+	=
ATELECTASIS.	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+
AMYLOID.	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=
FIBROSIS.	=	=	=	=	=	=	=	1+	=	=	=	=	=	=	1+	=	=	=	=	1+	2+	=	=	=
LEUKOSTASIS.	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ADENOMATOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	1+	=	=	=	=	=	=	=	=	=	=
HISTIOCYTOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	2+	=	4+	4+	=	=	=	=	=
MINERALIZATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	1+	=
LEUKEMIA/LYMPHOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
EMPHYSEMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PNEUMOLITHIASIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
BRONCHIAL LYMPH NODES	A	X	M	M	M	=	M	X	N	X	M	X	=	M	=	=	M	M	=	=	X	=	M	X	X
ALVEOLAR/BRONCHIOLAR CELL HYPERPLASIA.	=	=	=	=	=	1+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PIGMENT.	=	=	=	=	=	=	=	=	=	=	=	=	=	1+	=	=	=	=	=	=	2+	=	=	=
HEMORRHAGE.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CONGESTION.	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	4+	=	=	=	=
ERYTHROPHAGOCYTOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	2+	=	=	=	=	=
AMYLOID.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=
HISTIOCYTOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=
MAINSTEM BRONCHI	A	X	X	X	X	X	X	X	X	X	X	X	X	I	X	X	X	X	X	X	X	X	X	X
LIVER	A	X	=	=	=	X	=	=	X	=	=	X	=	=	X	=	X	X	=	=	X	=	=	=
HEPATOCELLULAR VACUOLATION.	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CONGESTION.	=	=	=	3+	=	=	3+	=	=	=	3+	=	3+	=	=	=	=	=	4+	4+	=	3+	=	3+
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+
NECROSIS.	=	=	=	=	3+	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=
AMYLOID.	=	=	=	=	1+	=	=	=	=	=	=	=	=	=	3+	=	=	2+	=	=	2+	3+	3+	=
CYST(S).	=	=	=	=	=	=	=	P	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=
LEUKEMIA/LYMPHOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P
GALLBLADDER	-	-	-	-	-	-	-	M	-	-	-	-	X	X	-	-	-	X	-	-	X	-	-	-
SPLEEN	A	M	X	X	X	X	X	M	=	=	X	X	X	X	I	=	=	X	=	=	=	A	=	=
CONGESTION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=
ERYTHROPHAGOCYTOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=
AMYLOID.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	3+	3+	=	=	2+	2+	=
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=

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GROUP 10 MALES

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
	0	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	2	2	2	2	2
	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4
SPLEEN (CONTINUED)																								
LYMPHOID HYPERPLASIA.	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
EXTRAMEDULLARY HEMATOPOIESIS.	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	2+
PANCREAS	A	X	=	X	X	X	X	X	X	X	X	X	X	X	A	X	X	=	X	X	A	X	A	X
DUCTAL ECTASIA.	=	=	1+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=
HEMORRHAGE.	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
AMYLOID.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEART	A	-	-	-	-	-	-	X	-	-	-	-	X	X	-	-	-	X	=	X	X	-	-	-	-
THROMBOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=
KIDNEYS	A	=	=	=	=	=	=	=	X	=	=	=	=	=	X	=	X	=	=	=	=	=	=	=
GLOMERULAR NEPHROSIS.	=	1+	3+	2+	1+	2+	2+	3+	=	=	3+	2+	3+	3+	=	=	=	3+	=	=	3+	3+	2+	2+	2+
AMYLOID.	=	=	=	=	=	=	=	=	=	4+	=	=	=	4+	=	4+	=	=	4+	4+	3+	=	=	3+	=
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
LEUKEMIA/LYMPHOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
URINARY BLADDER	-	-	-	-	-	-	-	X	-	-	-	-	X	X	-	-	-	X	-	-	X	-	-	-	-
PROSTATE	-	-	-	-	-	-	-	M	-	-	-	-	M	X	-	-	-	M	-	-	X	-	-	-	-
TESTES	A	-	-	-	-	=	-	X	-	-	-	=	X	=	-	-	-	X	-	-	X	-	-	-	=
OLIGOSPERMIA.	=	=	=	=	=	P	=	=	=	=	=	3+	=	P	=	=	=	=	=	=	=	=	=	=	P
DEGENERATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
SEMINAL VESICLES	-	-	-	-	-	-	-	X	-	-	-	-	M	X	-	-	-	X	-	-	X	-	-	-	-
STERNUM & RIB JUNCTION	-	-	-	-	-	-	-	X	-	-	-	-	X	X	-	-	-	X	-	-	X	-	-	-	-
FEMUR & BONE MARROW	-	-	-	-	-	-	-	X	-	-	-	-	X	X	-	-	-	X	-	-	X	-	-	-	-
NASAL CAVITY	-	-	-	-	-	-	-	X	-	-	-	-	X	X	-	-	-	X	-	-	X	-	-	-	-
OTHER	-	-	-	-	-	-	-	-	-	=	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(SMALL INTESTINE), HEMORRHAGE, INTRALUMINAL.	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
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CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 10 MALES

	1952	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
SKIN	-	-	-	-	-	-	-	-	X	-	X	-	X	-	-	X	-	-	-	X	-	-	-	-	-
SKIN/MAMMARY	-	-	-	-	-	-	-	-	X	-	X	-	X	-	-	X	-	-	-	X	-	-	-	-	-
THIGH MUSCLE	-	-	-	-	-	-	-	-	X	-	X	-	X	-	-	X	-	-	-	X	-	-	-	-	-
SALIVARY GLAND	-	-	-	-	-	-	-	-	X	-	X	-	X	-	-	X	-	-	-	X	-	-	-	-	-
MANDIBULAR LYMPH NODE	-	-	-	-	-	-	-	-	=	-	X	-	M	-	-	X	-	-	-	X	-	-	-	-	-
HYPERPLASIA.	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
SCIATIC NERVE	-	-	-	-	-	-	-	-	X	-	X	-	X	-	-	X	-	-	-	X	-	-	-	-	-
BRAIN	-	-	-	-	-	-	-	-	=	-	X	-	X	-	-	X	-	-	-	X	-	-	-	-	-
AMYLOID.	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PITUITARY	X	I	X	I	X	X	X	M	I	I	M	I	I	X	I	I	X	X	X	X	I	X	X	X	X
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
VACUOLATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ADRENALS	X	=	=	=	X	=	=	=	=	=	=	=	=	=	=	=	=	X	=	=	=	=	X	X	=
CARCINOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ADENOMA.	=	=	P	=	=	P	=	=	P	=	P	P	P	=	=	P	=	=	=	=	=	=	=	=	=
HYPERPLASIA.	=	P	=	2+	=	=	1+	=	P	P	P	P	=	2+	=	=	P	=	=	=	=	P	=	=	=
AMYLOID.	=	4+	=	4+	=	=	=	2+	=	4+	=	2+	2+	=	3+	=	=	=	4+	4+	3+	=	=	=	=
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CORTICAL CELL HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P
THYMUS	=	M	M	M	M	M	M	=	I	=	M	M	M	M	M	X	M	X	M	X	M	M	M	X	X
EOSINOPHILIC MASS(ES).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEMORRHAGE.	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ERYTHROPHAGOCYTOSIS.	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
AMYLOID.	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CYST(S).	P	=	=	A	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
STOMACH	-	-	-	-	-	-	-	-	X	-	X	-	A	-	-	X	-	-	-	X	-	-	-	-	-
CARCINOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
DUODENUM	-	-	-	-	-	-	-	-	X	-	X	-	A	-	-	X	-	-	-	X	-	-	-	-	-
JEJUNUM	-	-	-	-	-	-	-	-	X	-	X	-	X	-	-	X	-	-	-	X	-	-	-	-	-

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CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
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GROUP 10 MALES

	1952	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
CECUM	=	-	-	-	-	-	X	-	X	-	X	-	A	-	-	X	-	A	-	X	-	-	-	-	-
INFLAMMATION.	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ERYTHROPHAGOCYTOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
NECROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
COLON	-	-	-	-	-	-	-	-	X	-	X	-	A	-	-	X	-	-	-	X	-	-	-	-	-
RECTUM	-	-	-	-	-	-	-	-	X	-	X	-	A	-	-	X	-	-	-	X	-	-	-	-	-
MESENTERIC LYMPH NODE	-	-	-	=	-	-	-	-	M	-	X	-	=	-	-	X	-	-	-	X	-	-	-	-	-
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=
INFLAMMATION.	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
RETICULUM CELL HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
LEUKEMIA/LYMPHOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ILEUM	-	-	-	-	-	-	-	-	X	-	X	-	A	-	-	X	-	-	-	X	-	-	-	-	-
HEMORRHAGE.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
LARYNX	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
DYSKERATOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ATYPICAL EPITHELIAL HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
TRACHEA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
THYROID	N	=	X	=	X	=	X	X	=	=	=	X	X	=	X	=	=	=	X	=	=	=	X	X	X
ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=
AMYLOID.	=	4+	=	4+	=	=	=	=	2+	3+	=	=	=	=	=	=	=	=	4+	4+	=	=	=	=	=
CYST(S).	=	=	=	=	=	=	=	=	P	=	P	=	=	P	=	P	P	=	=	=	=	=	=	=	=
NEOPLASM, N.O.S..	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PARATHYROID	N	X	=	X	X	X	X	X	X	X	X	X	X	X	X	X	X	N	X	X	X	X	X	X	N
ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HYPERPLASIA.	=	=	1+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ESOPHAGUS	X	X	X	X	X	X	X	A	X	X	X	X	A	X	X	X	X	X	X	X	X	X	X	X	X
LUNG	X	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	X	=	=	=	=	=	X	X
CARCINOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ALVEOLAR/BRONCHIOLAR CELL HYPERPLASIA.	=	=	=	1+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	1+	=	=	=	=	=
EOSINOPHILIC MASS(ES).	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PIGMENT.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEMORRHAGE.	=	=	=	=	=	=	3+	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
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CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 10 MALES

	19522	19523	19524	19525	19526	19527	19528	19529	19530	19531	19532	19533	19534	19535	19536	19537	19538	19539	19540	19541	19542	19543	19544	19545	19546	19547	19548	19549
LUNG (CONTINUED)																												
CONGESTION.	=	3+	3+	=	3+	=	=	=	=	=	=	3+	=	=	=	=	3+	=	=	3+	=	=	=	=	=	=	=	=
ATELECTASIS.	=	=	=	=	=	=	=	=	=	=	2+	=	=	3+	=	1+	=	=	=	3+	=	1+	=	=	=	=	=	=
INFLAMMATION.	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=
AMYLOID.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
FIBROSIS.	=	=	=	1+	2+	1+	2+	=	=	2+	1+	2+	1+	1+	1+	1+	=	=	=	P	=	1+	=	=	=	=	=	=
LEUKOSTASIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ADENOMATOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HISTIOCYTOSIS.	=	=	=	=	=	2+	=	=	4+	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
MINERALIZATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
LEUKEMIA/LYMPHOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=
EMPHYSEMA.	=	=	=	1+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PNEUMOLITHIASIS.	=	=	=	=	=	=	=	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
BRONCHIAL LYMPH NODES	N	X	M	=	=	=	M	M	M	X	=	M	M	M	M	X	M	N	X	X	=	M	I	I	N			
ALVEOLAR/BRONCHIOLAR CELL HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=			
PIGMENT.	=	=	=	=	1+	=	=	=	=	=	1+	=	=	=	=	=	=	=	=	3+	=	=	=	=	=			
HEMORRHAGE.	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=			
CONGESTION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=			
ERYTHROPHAGOCYTOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=			
AMYLOID.	=	=	=	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=			
HISTIOCYTOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=			
MAINSTEM BRONCHI	X	X	X	X	X	X	X	X	X	M	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
LIVER	X	=	=	=	=	=	=	A	=	=	X	=	=	X	X	X	=	X	=	X	=	X	X	X	=			
HEPATOCELLULAR VACUOLATION.	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=			
CONGESTION.	=	=	=	=	3+	=	=	=	3+	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	=			
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=			
NECROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=			
AMYLOID.	=	4+	3+	4+	2+	2+	=	=	=	3+	=	=	3+	=	=	=	=	4+	=	3+	=	=	=	=	=			
CYST(S).	=	P	=	P	=	=	=	=	=	P	=	P	=	=	=	=	P	=	P	=	=	=	=	=	P			
LEUKEMIA/LYMPHOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=			
GALLBLADDER	-	-	-	-	-	-	-	-	A	-	X	-	A	-	-	I	-	-	-	X	-	-	-	-	-			
SPLEEN	X	=	=	=	X	X	X	A	X	=	X	X	=	=	X	=	X	X	X	=	=	X	X	X	X			
CONGESTION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=			
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=			
ERYTHROPHAGOCYTOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=			
AMYLOID.	=	4+	3+	4+	=	=	=	=	=	4+	=	=	2+	2+	=	=	=	=	3+	4+	=	=	=	=	=			
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=			

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 10 MALES

	19526	19527	19528	19529	19530	19531	19532	19533	19534	19535	19536	19537	19538	19539	19540	19541	19542	19543	19544	19545	19546	19547	19548	19549
SPLEEN (CONTINUED)																								
LYMPHOID HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
EXTRAMEDULLARY HEMATOPOIESIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PANCREAS	X	X	X	=	X	X	X	A	X	A	X	A	A	X	X	X	X	X	X	=	A	X	X	X
DUCTAL ECTASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEMORRHAGE.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
AMYLOID.	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=
HEART	-	-	-	-	-	-	-	-	X	-	X	-	X	-	-	X	-	-	-	X	-	-	-	-
THROMBOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
KIDNEYS	X	=	=	=	=	=	=	A	=	=	=	=	=	=	=	=	X	=	=	=	=	=	X	X
GLOMERULAR NEPHROSIS.	=	=	2+	=	2+	2+	1+	=	3+	=	2+	2+	3+	2+	4+	2+	3+	=	3+	4+	=	4+	2+	=
AMYLOID.	=	4+	4+	4+	=	=	=	=	=	4+	2+	=	=	=	=	2+	=	=	=	4+	4+	3+	=	=
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=
LEUKEMIA/LYMPHOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=
URINARY BLADDER	-	-	-	-	-	-	-	-	X	-	X	-	X	-	-	X	-	-	-	X	-	-	-	-
PROSTATE	-	-	-	-	-	-	-	-	X	-	X	-	M	-	-	X	-	-	-	X	-	-	-	-
TESTES	-	-	=	-	=	-	-	-	X	-	X	-	A	M	-	=	-	-	-	=	-	-	=	-
OLIGOSPERMIA.	=	=	P	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	P	=
DEGENERATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	2+	=	=	=	=	=	=	=	=
SEMINAL VESICLES	-	-	-	-	-	-	-	-	X	-	X	-	X	-	-	X	-	-	-	X	-	-	-	-
STERNUM & RIB JUNCTION	-	-	-	-	-	-	-	-	X	-	X	-	X	-	-	X	-	-	-	X	-	-	-	-
FEMUR & BONE MARROW	-	-	-	-	-	-	-	-	X	-	X	-	X	-	-	X	-	-	-	X	-	-	-	-
NASAL CAVITY	-	-	-	-	-	-	-	-	X	-	X	-	X	-	-	X	-	-	-	X	-	-	-	-
OTHER	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(SMALL INTESTINE), HEMORRHAGE, INTRALUMINAL.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
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CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 11 MALES

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2
	0	1	2	3	4	5	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5
SKIN	-	-	-	-	-	-	-	X	X	-	-	-	-	-	-	-	-	X	-	-	-	-	X	-	-
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
SKIN/MAMMARY	-	-	-	-	-	-	-	X	X	-	-	-	-	-	-	-	-	X	-	-	-	-	X	-	-
THIGH MUSCLE	-	-	-	-	-	-	-	X	X	-	-	-	-	-	-	-	-	X	-	-	-	-	X	-	-
SALIVARY GLAND	-	-	-	-	-	-	-	X	X	-	-	-	-	X	-	-	-	X	-	-	-	-	X	-	-
MANDIBULAR LYMPH NODE	-	X	-	-	-	-	-	=	M	-	-	-	-	-	-	-	-	=	-	-	-	-	M	-	-
HYPERPLASIA.	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CORPORA AMYLACIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=
SCIATIC NERVE	-	-	-	-	-	-	-	X	X	-	-	-	-	-	-	-	-	X	-	-	-	-	X	-	-
BRAIN	-	-	-	-	-	-	-	X	X	-	-	-	-	-	-	-	-	X	-	-	-	-	X	-	-
PITUITARY	X	A	X	X	A	A	A	I	I	X	A	X	M	X	A	I	A	I	X	X	X	X	X	X	X
ADRENALS	=	=	=	I	A	=	I	=	=	X	A	=	A	A	A	=	=	=	X	=	X	=	=	=	X
LIPIDOSIS.	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
AMYLOID.	=	4+	3+	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=
HYPERPLASIA.	=	=	P	=	=	=	P	=	P	=	=	P	=	=	=	P	=	=	=	=	=	P	P	=	=
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ADENOMA.	=	=	=	=	=	P	=	P	=	=	=	=	=	=	=	P	P	=	P	=	=	P	=	=	=
CORTICAL CELL HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=
THYMUS	X	M	X	X	A	A	M	X	M	M	A	X	M	M	A	M	M	X	M	X	X	M	M	X	X
AMYLOID.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
STOMACH	-	-	-	-	-	-	-	X	X	-	-	-	-	-	-	-	-	X	-	-	-	-	X	-	-
PIGMENT.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
DUODENUM	-	-	-	-	-	-	-	X	X	-	-	-	-	-	-	-	-	X	-	-	-	-	X	-	-
JEJUNUM	-	-	-	-	-	-	-	X	X	-	-	-	-	-	-	-	-	X	-	-	-	-	X	-	-
CECUM	-	-	-	-	-	-	-	X	X	-	-	-	-	-	-	-	-	X	-	-	-	-	X	-	-
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
COLON	-	-	-	-	-	-	-	M	X	-	-	-	-	-	-	-	-	X	-	-	-	-	X	-	=
NECROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
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CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 11 MALES

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	0	0	0	0	0	0	0	0	0	1	1	1	1	1	1	1	1	1	2	2	2	2	2	2
	0	1	2	3	4	5	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4
RECTUM	-	-	-	-	-	-	-	M	X	-	-	-	-	-	-	-	-	X	-	-	-	-	X	-
MESENTERIC LYMPH NODE	-	-	-	-	-	-	-	=	M	-	-	-	-	-	-	-	-	X	-	-	-	-	=	-
HYPERPLASIA.	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
RETICULUM CELL HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=
ILEUM	-	-	-	-	-	-	-	X	X	-	-	-	-	-	-	-	-	X	-	-	-	-	X	-
LARYNX	X	X	X	X	A	A	X	X	X	X	A	X	A	X	A	X	X	X	X	X	X	X	X	X
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
TRACHEA	X	X	X	X	A	A	X	X	X	X	A	X	A	X	A	X	X	X	X	X	X	X	X	X
THYROID	X	=	X	X	A	A	=	=	=	X	A	X	A	I	A	=	=	=	=	X	X	X	X	X
AMYLOID.	=	3+	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CYST(S).	=	=	=	=	=	=	=	P	P	=	=	=	=	=	=	P	P	P	P	=	=	=	=	=
ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PARATHYROID	X	M	X	X	A	A	X	X	X	X	A	M	A	M	N	=	X	X	X	X	N	X	=	X
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=
ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=
ESOPHAGUS	X	X	X	X	A	A	X	X	X	X	A	X	A	X	A	X	X	X	X	X	X	X	X	X
LUNG	=	=	=	=	=	X	=	=	=	=	A	=	A	=	X	=	=	=	=	=	=	=	=	=
ALVEOLAR/BRONCHIOLAR CELL HYPERPLASIA.	1+	=	1+	1+	=	=	2+	=	=	=	=	=	3+	=	2+	1+	=	=	1+	1+	=	1+	1+	=
CONGESTION.	=	3+	3+	=	=	=	=	=	=	4+	=	3+	=	=	=	=	=	=	3+	=	=	=	=	=
PIGMENT.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	1+	=	=	=	=	=	=	=
HISTIOCYTOSIS.	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	3+	=	=
FIBROSIS.	=	=	=	=	=	=	=	1+	1+	=	=	1+	=	2+	=	=	=	1+	=	=	=	=	1+	=
PNEUMOLITHIASIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	1+
EMPHYSEMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ATELECTASIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
BRONCHIAL LYMPH NODES	X	X	X	N	N	=	X	X	X	X	A	=	M	X	N	M	M	=	M	N	X	M	=	X
CONGESTION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	1+	=	=	=	=	=	=
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PIGMENT.	=	=	=	=	=	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	1+	=
HISTIOCYTOSIS.	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=
ERYTHROPHAGOCYTOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
MAINSTEM BRONCHI	X	X	X	X	A	A	X	X	X	X	A	X	A	X	A	M	X	X	X	X	X	X	X	X

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
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CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 11 MALES

	19600	19601	19602	19603	19604	19605	19607	19608	19609	19610	19611	19612	19613	19614	19615	19616	19617	19618	19619	19620	19621	19622	19623	19624	19625
LIVER	X	=	=	A	A	A	=	X	=	X	A	=	A	=	A	=	=	X	=	X	X	=	=	X	A
AMYLOID.	=	3+	=	=	=	=	3+	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	3+	=	=	=
CONGESTION.	=	=	3+	=	=	=	3+	=	=	=	=	3+	=	4+	=	4+	=	=	=	=	=	=	3+	=	=
CYST(S).	=	=	P	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=
HEPATOCELLULAR CYSTIC DEGENERATION.	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
FIBROSIS.	=	=	=	=	=	=	=	=	1+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
NECROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=
BILE DUCT HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=
CHOLECYSTITIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
GALLBLADDER	-	-	-	-	-	-	-	X	X	-	-	-	-	-	-	-	-	X	-	-	-	-	-	X	-
SPLEEN	X	=	X	A	A	A	=	=	X	X	A	X	M	X	A	=	=	X	A	=	=	=	=	X	X
AMYLOID.	=	4+	=	=	=	=	4+	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=
CONGESTION.	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=
EXTRAMEDULLARY HEMATOPOIESIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	4+	=	=	=
PANCREAS	X	X	X	A	A	A	A	=	X	X	A	X	M	A	A	X	=	X	M	X	X	X	X	X	A
AMYLOID.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	2+	=	=	=	=	=	=	=	=	=
DUCTAL ECTASIA.	=	=	=	=	=	=	=	1+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ATROPHY.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEMORRHAGE.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEPATOCELLULAR REGENERATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEART	-	-	-	A	A	A	-	X	X	-	A	-	-	-	A	=	-	X	-	-	A	-	X	-	A
THROMBOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=
KIDNEYS	=	=	=	A	A	A	=	=	=	=	A	=	A	=	A	=	=	=	=	=	A	=	=	X	A
MINERALIZATION.	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
AMYLOID.	=	4+	=	=	=	=	4+	=	4+	=	=	=	=	3+	=	=	4+	=	=	=	=	4+	=	=	=
GLOMERULAR NEPHROSIS.	=	=	3+	=	=	=	=	2+	2+	2+	=	3+	=	4+	=	2+	3+	3+	2+	=	=	3+	3+	=	=
NEPHROPATHY, CHRONIC.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	2+	=	=	=	=	=
URINARY BLADDER	-	-	-	-	-	-	-	X	X	-	-	-	-	-	-	-	-	X	-	-	-	-	-	X	-
PROSTATE	-	-	-	-	-	-	-	M	X	-	-	-	-	-	-	-	-	X	-	-	-	-	-	X	-
TESTES	-	-	X	-	-	-	-	X	X	-	-	=	-	-	-	-	-	=	-	-	-	-	-	X	-
AMYLOID.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
OLIGOSPERMIA.	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=
ATROPHY.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	=

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 11 MALES

	19600	19601	19602	19603	19604	19605	19607	19608	19609	19610	19611	19612	19613	19614	19615	19616	19617	19618	19619	19620	19621	19622	19623	19624	19625
TESTES (CONTINUED)																									
HYPERPLASIA, ARTERY,	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
SEMINAL VESICLES	-	-	-	-	-	-	-	X	X	-	-	-	-	-	-	-	-	X	-	-	-	-	X	-	-
STERNUM & RIB JUNCTION	-	-	-	-	-	-	-	X	X	-	-	-	-	-	-	-	-	X	-	-	-	-	X	-	-
FEMUR & BONE MARROW	-	-	-	-	-	-	-	X	X	-	-	-	-	-	-	-	-	X	-	-	-	-	X	-	-
NASAL CAVITY	-	-	-	-	-	-	-	X	X	-	-	-	-	-	-	-	-	X	-	-	-	-	X	-	-
OTHER	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 11 MALES

	1962	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1989
SKIN	-	-	-	-	-	-	-	-	-	X	X	-	-	-	X	-	=	X	-	X	-	X	-
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=
SKIN/MAMMARY	-	-	-	-	-	-	-	-	-	X	X	-	-	-	X	-	-	X	-	X	-	X	-
THIGH MUSCLE	-	-	-	-	-	-	-	-	-	X	X	-	-	-	X	-	-	X	-	X	-	X	-
SALIVARY GLAND	-	-	-	-	-	-	-	-	-	X	X	-	-	-	X	-	-	X	-	X	-	X	-
MANDIBULAR LYMPH NODE	-	-	-	-	-	-	-	-	-	X	M	-	-	-	M	-	-	=	-	X	-	X	-
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=
CORPORA AMYLACIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
SCIATIC NERVE	-	-	-	-	-	-	-	-	-	X	X	-	-	-	X	-	-	X	-	X	-	X	-
BRAIN	-	-	-	-	-	-	-	-	-	X	X	-	-	-	X	-	-	X	A	X	-	X	-
PITUITARY	X	A	M	I	X	X	X	I	I	X	X	M	X	X	M	M	X	X	X	X	X	I	X
ADRENALS	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
LIPIDOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
AMYLOID.	=	4+	4+	2+	=	1+	=	4+	=	=	4+	4+	4+	3+	=	=	4+	=	4+	=	=	=	4+
HYPERPLASIA.	=	=	P	P	=	P	=	=	P	P	P	P	=	P	=	=	=	=	=	P	P	=	=
CYST(S).	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	P	=	P	=	=	=	P	=
CORTICAL CELL HYPERPLASIA.	P	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
THYMUS	M	M	M	M	X	M	M	M	M	X	X	M	X	X	=	M	X	M	M	M	M	M	X
AMYLOID.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	2+	=	=	=	=	=	=	=	=
STOMACH	-	-	-	X	-	-	-	-	-	X	A	-	-	-	X	-	=	X	-	X	-	X	-
PIGMENT.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=
DUODENUM	-	-	-	-	-	-	-	-	-	X	A	-	-	-	X	-	-	X	-	X	-	X	-
JEJUNUM	-	-	-	-	-	-	-	-	-	X	X	-	-	-	X	-	-	X	-	X	-	X	-
CECUM	-	A	-	-	-	-	-	-	-	X	A	-	-	-	X	-	-	X	-	X	-	X	-
INFLAMMATION.	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
COLON	-	-	-	-	-	-	-	-	-	X	A	-	-	-	X	-	-	X	-	X	-	X	-
NECROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 11 MALES

	1962	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
RECTUM	-	-	-	-	-	-	-	-	-	X	A	-	-	-	X	-	-	X	-	X	-	X	-	-
MESENTERIC LYMPH NODE	-	-	-	-	-	-	-	-	-	X	M	-	-	-	M	-	-	M	-	X	-	X	-	-
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
RETICULUM CELL HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ILEUM	-	-	-	-	-	-	-	-	-	X	A	-	-	-	X	-	-	X	-	X	-	X	-	-
LARYNX	X	X	X	=	A	X	X	X	X	X	X	M	X	X	X	X	X	X	M	X	X	X	X	X
INFLAMMATION.	=	=	=	1+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
TRACHEA	X	X	X	X	A	X	X	X	X	M	X	X	X	X	X	X	X	X	X	X	X	X	X	X
THYROID	X	=	=	=	A	=	=	X	X	M	=	=	=	X	X	A	=	X	M	=	X	=	=	=
AMYLOID.	=	3+	=	=	=	=	=	=	=	=	2+	=	4+	=	=	=	4+	=	=	=	=	=	=	2+
CYST(S).	=	=	P	=	=	P	P	=	=	=	=	P	P	=	=	=	=	=	=	P	=	P	P	=
ADENOMA.	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PARATHYROID	X	X	X	X	A	X	X	X	X	M	X	X	X	=	=	A	X	M	M	X	X	=	X	=
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	P	P	=	=	=	=	=	=	=	=	P
ESOPHAGUS	X	X	X	X	A	X	X	X	X	X	A	X	X	X	X	X	X	X	X	X	A	X	X	X
LUNG	X	=	=	=	=	=	X	=	=	=	=	=	=	=	X	=	A	=	=	=	=	=	=	=
ALVEOLAR/BRONCHIOLAR CELL HYPERPLASIA.	=	=	=	=	=	=	=	=	=	2+	=	3+	1+	=	=	=	1+	=	1+	1+	3+	=	=	
CONGESTION.	=	=	4+	3+	=	1+	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	3+
PIGMENT.	=	=	=	=	1+	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=
HISTIOCYTOSIS.	=	3+	=	=	1+	=	=	4+	=	3+	4+	=	=	4+	=	=	1+	=	=	=	=	4+	=	=
FIBROSIS.	=	=	=	=	=	1+	=	=	=	=	1+	=	1+	1+	=	=	=	=	=	=	1+	=	=	1+
PNEUMOLITHIASIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=
EMPHYSEMA.	=	=	=	=	=	2+	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=
ATELECTASIS.	=	=	=	=	=	=	=	=	3+	=	=	=	3+	3+	=	=	4+	2+	=	1+	=	=	=	3+
BRONCHIAL LYMPH NODES	X	X	M	M	X	M	M	=	=	=	X	=	X	X	=	M	=	X	X	X	X	=	M	X
CONGESTION.	=	=	=	=	=	=	=	=	=	3+	3+	=	=	=	=	=	=	=	=	=	=	=	=	=
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=
PIGMENT.	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	4+	=	=	=	=	=	=	=	=	=
HISTIOCYTOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=
ERYTHROPHAGOCYTOSIS.	=	=	=	=	=	=	=	1+	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=
MAINSTEM BRONCHI	X	X	X	X	A	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 11 MALES

	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985
LIVER	X	=	=	=	A	=	X	=	X	=	=	=	=	=	=	=	X	=	X	A	=	=	=	
AMYLOID.	=	4+	4+	=	=	=	=	=	=	3+	3+	3+	=	=	=	4+	=	3+	=	=	=	4+	2+	
CONGESTION.	=	=	4+	3+	=	4+	=	4+	=	3+	4+	=	=	4+	=	4+	=	=	=	=	=	3+	=	
CYST(S).	=	=	=	=	=	=	=	=	=	=	P	P	=	=	P	=	P	=	P	=	=	=	=	
HEPATOCELLULAR CYSTIC DEGENERATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	
FIBROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	
NECROSIS.	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	
BILE DUCT HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	
CHOLECYSTITIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	1+	=	
GALLBLADDER	-	-	-	-	-	-	-	-	-	X	A	-	-	-	X	-	-	M	-	X	-	X	-	-
SPLEEN	M	=	X	X	A	X	X	=	X	=	=	X	=	=	=	X	=	X	=	X	X	X	X	=
AMYLOID.	=	=	=	=	=	=	=	=	=	=	2+	=	4+	=	=	=	4+	=	4+	=	=	=	=	2+
CONGESTION.	=	=	=	=	=	=	=	=	=	=	=	=	=	P	3+	=	=	=	=	=	=	=	=	=
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
EXTRAMEDULLARY HEMATOPOIESIS.	=	2+	=	=	=	=	=	4+	=	3+	2+	=	=	=	=	=	=	=	=	=	=	=	=	=
PANCREAS	X	A	A	X	X	X	X	=	X	X	=	X	A	X	X	A	A	X	A	X	A	X	X	=
AMYLOID.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
DUCTAL ECTASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P
ATROPHY.	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=
HEMORRHAGE.	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEPATOCELLULAR REGENERATION.	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=
HEART	-	-	-	-	-	-	-	-	-	=	=	-	-	=	=	=	-	-	X	-	X	-	=	-
THROMBOSIS.	=	=	=	=	=	=	=	=	=	P	P	=	=	P	P	=	=	=	=	=	=	P	=	=
KIDNEYS	X	=	=	=	X	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
MINERALIZATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
AMYLOID.	=	4+	=	=	=	=	=	4+	4+	2+	4+	=	4+	3+	=	2+	4+	=	4+	=	=	3+	=	2+
GLOMERULAR NEPHROSIS.	=	=	4+	4+	=	3+	4+	3+	=	2+	4+	4+	=	3+	3+	=	=	2+	=	3+	3+	4+	3+	4+
NEPHROPATHY, CHRONIC.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
URINARY BLADDER	-	-	-	-	-	-	M	-	-	X	X	-	-	-	X	-	-	X	-	X	-	X	-	-
PROSTATE	-	-	-	-	-	-	-	-	-	M	X	-	-	-	M	-	-	X	-	X	-	X	-	-
TESTES	-	-	-	=	-	-	-	-	-	X	X	-	=	-	X	-	-	X	-	X	=	=	-	-
AMYLOID.	=	=	=	=	=	=	=	=	=	=	=	=	2+	=	=	=	=	=	=	=	=	=	=	=
OLIGOSPERMIA.	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	P	P	=	=
ATROPHY.	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 11 MALES

	1962	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989
TESTES (CONTINUED)																								
HYPERPLASIA, ARTERY,	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
SEMINAL VESICLES	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-	X	-	X	X	-	X	X	X	-
STERNUM & RIB JUNCTION	-	-	-	-	-	-	-	-	-	-	X	A	-	-	-	X	-	-	X	-	X	-	X	-
FEMUR & BONE MARROW	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-	X	-	-	X	-	X	-	X	-
NASAL CAVITY	-	-	-	-	-	-	-	-	-	-	X	X	-	-	-	X	-	-	X	-	X	-	X	-
OTHER	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
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CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 1 FEMALES

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	5	5	5	5	5	5	5	5	5	5	6	6	6	6	6	6	6	6	6	6	7	7	7	7	7
	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4
SKIN	-	-	-	-	-	-	X	-	-	-	-	X	X	-	-	X	-	X	-	-	-	-	-	X	-
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
SKIN/MAMMARY	-	-	-	-	-	-	X	-	-	-	-	X	X	-	-	X	-	X	-	-	-	-	-	X	-
THIGH MUSCLE	-	-	-	-	-	-	X	-	-	-	-	X	X	-	-	X	-	X	-	-	-	-	-	X	-
SALIVARY GLAND	-	-	-	-	-	-	X	-	-	-	-	X	A	-	-	X	-	A	-	-	-	-	-	X	-
MANDIBULAR LYMPH NODE	-	-	-	-	-	-	X	-	-	-	-	X	A	-	-	X	-	A	-	-	-	-	-	X	-
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
RETICULUM CELL HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
LYMPHOID HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
SCIATIC NERVE	-	-	-	-	-	-	X	-	-	-	-	X	X	-	-	X	-	X	-	-	-	-	-	X	-
BRAIN	-	-	-	-	-	-	X	-	-	-	-	X	A	-	-	X	-	X	-	-	-	-	-	X	-
NEURONAL VACUOLATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PITUITARY	X	M	X	X	X	I	I	I	=	X	I	X	M	X	M	I	I	A	X	M	X	I	X	X	X
AMYLOID.	=	=	=	=	=	=	=	=	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CORTICAL ADENOMA.	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ADRENALS	=	=	=	=	X	=	=	=	X	=	=	=	M	=	=	=	=	=	=	A	=	=	=	=	=
AMYLOID.	4+	2+	1+	3+	=	2+	3+	4+	=	2+	3+	3+	=	4+	3+	4+	3+	4+	3+	=	3+	3+	4+	3+	2+
HYPERPLASIA.	=	=	P	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	P
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	P	=	=
CORTICAL ADENOMA.	=	=	=	=	=	=	P	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=
EXTRAMEDULLARY HEMATOPOIESIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CORTICAL CELL HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
THYMUS	X	M	M	M	M	M	N	X	X	I	X	N	M	=	X	X	M	M	M	A	M	M	X	M	X
INVOLUTED.	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=
HEMOSIDEROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
STOMACH	-	-	-	-	-	-	=	-	-	-	-	A	A	-	X	X	-	A	-	-	=	-	-	X	-
PAPILLOMA.	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PIGMENT.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=
DUODENUM	-	-	-	-	-	-	A	-	-	-	-	A	A	-	-	X	-	A	-	-	-	-	-	X	-
JEJUNUM	-	-	-	-	-	-	X	-	-	-	-	X	X	-	-	X	-	X	-	-	-	-	-	X	-

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 1 FEMALES

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	5	5	5	5	5	5	5	5	5	5	6	6	6	6	6	6	6	6	6	7	7	7	7	7
	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4
CECUM	-	-	-	-	-	-	A	-	-	-	-	A	A	-	=	X	-	A	-	-	-	-	-	X	=
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	4+
LYMPHOID HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
COLON	-	-	-	-	-	-	A	-	-	-	-	A	A	-	-	X	-	A	-	-	-	-	-	X	-
INTUSSUSCEPTION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CARCINOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
RECTUM	-	-	-	-	-	-	A	-	-	-	-	A	A	-	-	X	-	A	-	-	-	-	-	X	-
MESENTERIC LYMPH NODE	-	-	-	-	-	-	X	-	-	-	-	X	A	=	-	X	M	A	-	-	-	-	-	N	-
CONGESTION.	=	=	=	=	=	=	=	=	=	=	=	=	2+	=	=	=	=	=	=	=	=	=	=	=	=
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEMORRHAGE.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
LYMPHOID HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ILEUM	-	-	-	-	-	-	A	-	-	-	-	A	A	-	-	X	-	A	-	-	-	-	-	X	-
LARYNX	X	X	X	X	=	X	X	X	X	X	X	X	X	M	X	X	X	X	X	A	X	X	X	X	X
INFLAMMATION.	=	=	=	=	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
TRACHEA	X	X	X	X	=	X	X	X	X	X	X	X	X	M	X	X	X	X	X	A	X	X	X	X	X
INFLAMMATION.	=	=	=	=	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
THYROID	X	=	X	=	X	=	=	=	=	=	=	=	=	=	X	X	=	=	=	A	=	=	=	X	X
AMYLOID.	=	4+	=	4+	=	4+	2+	4+	2+	3+	3+	4+	2+	3+	=	=	2+	4+	1+	=	3+	2+	2+	=	=
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	P	=
ATROPHY.	=	=	=	=	=	=	=	=	=	=	1+	=	=	=	=	=	=	=	=	=	=	=	=	=	=
FOLLICULAR CELL ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PARATHYROID	X	N	X	X	N	=	X	X	N	X	X	X	=	X	N	=	N	=	X	A	N	X	X	=	X
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CYST(S).	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	P	=
ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	P	=	P	=	=	=	=	=	=
ESOPHAGUS	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	M	A	X	X	X	X	X
LUNG	=	X	X	=	=	=	=	=	=	=	=	=	X	=	X	X	=	X	=	A	X	=	X	X	=
CONGESTION.	3+	=	=	4+	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HISTIOCYTOSIS.	=	=	=	3+	=	=	=	3+	=	4+	3+	4+	=	=	=	=	=	=	=	=	=	=	=	=	3+
INFLAMMATION.	=	=	=	=	=	4+	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	4+	=	=	=	=
ALVEOLAR/BRONCHIOLAR CELL HYPERPLASIA.	=	=	=	=	=	=	=	=	1+	=	=	=	=	=	=	2+	=	2+	=	=	=	=	=	=	=

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 1 FEMALES

	18650	18651	18652	18653	18654	18655	18656	18657	18658	18659	18660	18661	18662	18663	18664	18665	18666	18667	18668	18669	18670	18671	18672	18673	18674
LUNG (CONTINUED)																									
ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ATELECTASIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=
FIBROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	1+
HEMOSIDEROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
LEUKOSTASIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PNEUMOLITHIASIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
EOSINOPHILIC MASS(ES).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
BRONCHIAL LYMPH NODES	M	M	N	M	M	X	I	X	M	=	M	=	M	M	M	=	=	M	=	A	M	M	M	M	X
AMYLOID.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	2+	=	=	=	=	=	=	=	=
CONGESTION.	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=
ALVEOLAR/BRONCHIOLAR CELL HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	2+	=	=	=	=	=	=
ERYTHROPHAGOCYTOSIS.	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=
ATELECTASIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=
HEMOSIDEROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEMORRHAGE.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
MAINSTEM BRONCHI	X	X	X	X	X	X	X	X	X	X	X	X	X	M	X	X	X	X	X	A	X	X	X	X	X
LIVER	=	=	=	X	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	A	=	=	=	=	=
AMYLOID.	3+	3+	2+	=	2+	3+	4+	3+	2+	3+	3+	4+	4+	3+	3+	4+	4+	4+	1+	=	3+	2+	4+	2+	2+
CONGESTION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
THROMBOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CYST(S).	=	=	=	=	=	=	=	=	=	=	P	=	P	=	=	P	=	P	=	=	P	=	P	P	=
EXTRAMEDULLARY HEMATOPOIESIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	2+
CLEAR CELL FOCUS/FOCI.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
GALLBLADDER	-	-	-	-	-	-	A	-	-	-	-	A	A	-	-	A	-	A	-	-	-	-	-	X	-
SPLEEN	=	=	X	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	A	=	=	=	X	=
AMYLOID.	3+	3+	=	2+	1+	4+	3+	4+	3+	4+	3+	4+	4+	4+	3+	4+	3+	4+	2+	=	3+	=	4+	=	=
THROMBOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
FOLLICULAR HYPERPLASIA.	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
RETICULUM CELL HYPERPLASIA.	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
EXTRAMEDULLARY HEMATOPOIESIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	3+
HEMOSIDEROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEMORRHAGE.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PANCREAS	X	A	X	X	X	X	A	X	X	=	X	X	X	A	X	A	X	A	X	A	X	X	X	X	X

(X) NO SIGNIFICANT LESION RECOGNIZED　　(M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION　　(A) AUTOLYZED
(N) NOT PRESENT IN SECTION　　(-) NOT REQUIRED
(P) PRESENT　　(1+) MINIMAL　　(2+) SLIGHT
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CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 1 FEMALES

	18650	18651	18652	18653	18654	18655	18656	18657	18658	18659	18660	18661	18662	18663	18664	18665	18666	18667	18668	18669	18670	18671	18672	18673	18674
PANCREAS (CONTINUED)																									
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ATROPHY.	=	=	=	=	=	=	=	=	=	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEART	-	-	-	=	-	=	=	=	-	=	M	=	X	=	-	=	=	X	M	-	=	=	-	X	=
THROMBOSIS.	=	=	=	P	=	P	=	P	=	P	=	P	=	P	=	P	=	=	=	=	=	P	=	=	P
MURAL THROMBOSIS.	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
MINERALIZATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=
MYOCARDIOPATHY.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	2+	=	=	=	2+	=	=	=	=
KIDNEYS	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	A	=	=	=	=	=
AMYLOID.	4+	4+	2+	4+	1+	4+	3+	4+	=	4+	4+	4+	4+	4+	4+	4+	4+	4+	2+	=	4+	4+	4+	3+	3+
GLOMERULAR NEPHROSIS.	=	=	=	=	=	3+	=	=	3+	4+	4+	=	=	=	=	=	4+	=	3+	=	=	=	2+	=	1+
MINERALIZATION.	=	=	=	=	=	=	=	=	=	=	=	=	2+	=	=	=	=	=	=	=	=	1+	=	=	=
CHRONIC INTERSTITIAL NEPHRITIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	2+	=	=	=	=	=	=	=	=	=
INFARCT.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
URINARY BLADDER	-	-	-	-	-	-	X	-	-	-	-	X	A	-	-	A	-	A	-	-	-	-	-	X	-
VACUOLATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
OVARIES	-	-	-	-	-	-	X	-	-	-	X	X	X	-	-	X	-	=	-	A	-	=	-	N	-
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=
THECA CELL TUMOR.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=
UTERUS	-	-	-	-	-	-	A	-	-	-	-	X	X	-	-	X	-	X	-	A	-	-	-	N	-
STERNUM & RIB JUNCTION	-	-	-	-	-	-	X	-	-	-	-	X	X	-	-	X	-	X	-	A	-	-	-	X	-
FEMUR & BONE MARROW	-	-	-	-	-	-	X	-	-	-	-	X	X	-	-	X	-	X	-	-	-	-	-	X	-
NASAL CAVITY	-	-	-	-	-	-	X	-	-	-	-	X	X	-	-	X	-	X	-	-	-	-	-	X	-
OTHER	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(CERVICAL LYMPH NODE), NO SIGNIFICANT LESIONS RECOGNIZED.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
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(P) PRESENT (1+) MINIMAL (2+) SLIGHT
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CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 1 FEMALES

	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8
	6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6
	7 7 7 7 7 8 8 8 8 8 8 8 8 9 9 9 9 9 9 9 9 9
	5 6 7 8 9 0 2 3 4 5 6 7 8 9 1 2 3 4 5 6 7 8 9
SKIN	- - - - - - - X - - X - - = - X - - - - X - -
INFLAMMATION.	= = = = = = = = = = = = = P = = = = = = = =
SKIN/MAMMARY	- - - - - - - X - - X - - M - X - - - - X - -
THIGH MUSCLE	- - - - - - - X - - X - - - - X - - - - X - -
SALIVARY GLAND	- - - - - - - X - - X - - - - X - - - - X - -
MANDIBULAR LYMPH NODE	- - - - - - - X - A = - - - - = - - - - A - -
HYPERPLASIA.	= = = = = = = = = 4+= = = = = = = = = = = =
RETICULUM CELL HYPERPLASIA.	= = = = = = = = = = 2+= = = = = = = = = = =
LYMPHOID HYPERPLASIA.	= = = = = = = = = = = = = = = 3+= = = = = = =
SCIATIC NERVE	- - - - - - - X - - X - - - - X - - - - X - -
BRAIN	- - - - - - - = - - X - - - - X - - - - X - -
NEURONAL VACUOLATION.	= = = = = = = 3+= = = = = = = = = = = = = =
PITUITARY	X X I X X X I I I M X M I X X X I I I A I I I
AMYLOID.	= = = = = = = = = = = = = = = = = = 2+= = = =
CORTICAL ADENOMA.	= =
ADRENALS	X = I = = = = = X = = = = = = = = = I A = = =
AMYLOID.	= 3+2+2+3+= 2+4+= 2+3+3+3+2+4+3+2+2+= = 4+1+3+
HYPERPLASIA.	= P = P = = = = = = = P = = = = = = = = = =
CYST(S).	= = = = = P = = = = P = = = = = = = = = =
CORTICAL ADENOMA.	= =
EXTRAMEDULLARY HEMATOPOIESIS.	= = = = = = = = = = = = = = = = 2+= = = = =
CORTICAL CELL HYPERPLASIA.	= = = = = = = = = = = = = = = 2+= = = = = = =
THYMUS	X X X M X M X = M M M X = I X X X M M A M N X
INVOLUTED.	= = = = = = = P = = = = = = = = = = = = = =
HEMOSIDEROSIS.	= = = = = = = = = = = = 1+= = = = = = = = =
STOMACH	- - - - = - - A - - X - - - - X - - - A X - -
PAPILLOMA.	= =
PIGMENT.	= = = = P = = = = = = = = = = = = = = = = =
DUODENUM	- - - - - - - A - - X - - - - X - - - - X - -
JEJUNUM	- - - - - - - X - - X - - - - X - - - - X - -

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 1 FEMALES

	18675	18676	18677	18678	18679	18680	18682	18683	18684	18685	18686	18687	18688	18689	18691	18692	18693	18694	18695	18696	18697	18698	18699
CECUM	-	-	-	-	-	-	-	A	-	-	X	-	-	-	-	=	-	-	-	A	X	-	-
INFLAMMATION,	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
LYMPHOID HYPERPLASIA,	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=
COLON	-	-	-	-	-	-	-	A	-	-	X	-	=	-	-	X	-	-	-	-	=	-	-
INTUSSUSCEPTION,	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=
CARCINOMA,	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=
RECTUM	-	-	-	-	-	-	-	A	-	-	X	-	-	-	-	X	-	-	-	-	X	-	-
MESENTERIC LYMPH NODE	-	-	-	-	-	-	-	X	-	-	X	-	-	=	-	=	-	-	-	A	I	-	-
CONGESTION,	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
INFLAMMATION,	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=
HEMORRHAGE,	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=
LYMPHOID HYPERPLASIA,	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=
ILEUM	-	-	-	-	-	-	-	A	-	-	X	-	-	-	-	X	-	-	-	-	X	-	-
LARYNX	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	A	X	X	X
INFLAMMATION,	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
TRACHEA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	A	X	X	X
INFLAMMATION,	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
THYROID	X	X	=	=	=	X	=	=	=	=	X	=	=	=	X	=	=	=	X	A	=	M	=
AMYLOID,	=	=	=	2+	=	=	3+	4+	2+	3+	=	1+	4+	2+	=	2+	=	4+	=	3+	4+	=	4+
CYST(S),	=	=	P	=	P	=	=	=	=	=	=	=	=	=	=	P	P	P	=	=	=	=	=
ATROPHY,	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
FOLLICULAR CELL ADENOMA,	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=
PARATHYROID	X	=	X	X	=	X	N	N	X	I	X	X	X	X	X	=	X	X	N	A	=	M	=
HYPERPLASIA,	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CYST(S),	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ADENOMA,	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	P	=	P
ESOPHAGUS	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	A	X	X	X
LUNG	X	=	=	=	=	=	X	X	X	=	X	X	=	=	=	=	=	=	=	A	X	X	=
CONGESTION,	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	2+	=	=	=	=	=	=
HISTIOCYTOSIS,	=	=	=	=	3+	=	=	=	=	=	=	=	=	3+	3+	=	=	=	=	=	=	=	2+
INFLAMMATION,	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ALVEOLAR/BRONCHIOLAR CELL HYPERPLASIA,	=	1+	=	1+	=	=	=	=	=	1+	=	=	=	1+	=	P	=	=	2+	=	=	=	=

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 1 FEMALES

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	7	7	7	7	7	8	8	8	8	8	8	8	8	9	9	9	9	9	9	9	9	9
	5	6	7	8	9	0	2	3	4	5	6	7	8	9	1	2	3	4	5	6	7	8	9
LUNG (CONTINUED)																						
ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P
ATELECTASIS.	=	=	=	2+	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
FIBROSIS.	=	1+	1+	=	=	=	=	=	=	=	=	=	=	=	=	=	2+	=	=	=	=	=
HEMOSIDEROSIS.	=	=	=	=	=	=	=	=	=	1+	=	=	=	=	=	=	=	=	=	=	=	=
LEUKOSTASIS.	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=
PNEUMOLITHIASIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	1+	=	=	=	=
EOSINOPHILIC MASS(ES).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=
BRONCHIAL LYMPH NODES	=	X	X	M	=	M	X	M	M	=	M	X	X	=	X	X	X	M	M	A	M	M	M
AMYLOID.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CONGESTION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ALVEOLAR/BRONCHIOLAR CELL HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ERYTHROPHAGOCYTOSIS.	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ATELECTASIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEMOSIDEROSIS.	3+	=	=	=	=	=	=	=	=	1+	=	=	=	=	=	=	=	=	=	=	=	=
HEMORRHAGE.	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=
MAINSTEM BRONCHI	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	A	X	X	X
LIVER	X	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	A	=	=	=
AMYLOID.	=	1+	2+	3+	2+	=	3+	3+	2+	2+	3+	=	3+	2+	3+	3+	1+	1+	2+	=	3+	3+	2+
CONGESTION.	=	=	=	=	=	2+	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=
THROMBOSIS.	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CYST(S).	=	P	=	=	P	=	=	P	=	=	P	P	=	=	P	P	=	=	=	=	P	=
EXTRAMEDULLARY HEMATOPOIESIS.	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	1+	=	=	=	=	=	=	=
CLEAR CELL FOCUS/FOCI.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	2+	=	=	=	=	=	=
GALLBLADDER	-	-	-	-	-	-	-	A	-	-	X	-	-	-	-	X	-	-	-	-	A	-	-
SPLEEN	X	X	=	=	=	X	=	=	X	=	=	=	=	X	=	=	X	=	I	A	=	=	=
AMYLOID.	=	=	=	4+	=	=	4+	4+	=	3+	3+	=	4+	=	=	2+	=	=	=	=	4+	4+	4+
THROMBOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=
FOLLICULAR HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
RETICULUM CELL HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=
EXTRAMEDULLARY HEMATOPOIESIS.	=	=	4+	=	3+	=	=	=	=	=	=	4+	=	=	2+	4+	=	1+	=	=	=	=	=
HEMOSIDEROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	1+	=	=	=	=	=	=	=	=	=	=
HEMORRHAGE.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=
PANCREAS	X	X	X	X	X	A	A	X	A	X	X	X	X	X	X	X	X	X	A	A	=	A	A

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
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CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 1 FEMALES

	18675	18676	18677	18678	18679	18680	18682	18683	18684	18685	18686	18687	18688	18689	18691	18692	18693	18694	18695	18696	18697	18698	18699
PANCREAS (CONTINUED)																							
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=
ATROPHY.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEART	-	-	-	-	=	-	-	=	-	-	=	-	-	=	=	X	-	-	-	A	X	-	-
THROMBOSIS.	=	=	=	=	P	=	=	=	=	=	=	=	=	P	P	=	=	=	=	=	=	=	=
MURAL THROMBOSIS.	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
MINERALIZATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
MYOCARDIOPATHY.	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	=
KIDNEYS	X	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	A	=	=	=
AMYLOID.	=	2+	3+	4+	3+	=	4+	4+	=	3+	=	4+	4+	3+	3+	4+	1+	4+	=	=	4+	4+	4+
GLOMERULAR NEPHROSIS.	=	=	=	4+	=	2+	3+	=	1+	3+	4+	2+	3+	=	=	=	2+	=	=	=	=	=	4+
MINERALIZATION.	=	1+	2+	=	=	=	=	=	=	1+	=	=	P	=	=	=	=	P	3+	=	=	=	=
CHRONIC INTERSTITIAL NEPHRITIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
INFARCT.	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=
URINARY BLADDER	-	-	-	-	-	-	-	A	-	-	=	-	-	-	-	X	-	-	-	-	A	-	-
VACUOLATION.	=	=	=	=	=	=	=	=	=	=	1+	=	=	=	=	=	=	=	=	=	=	=	=
OVARIES	-	=	=	-	-	-	-	X	-	-	X	=	-	-	-	X	-	-	-	-	X	-	-
CYST(S).	=	P	P	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=
THECA CELL TUMOR.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
UTERUS	-	-	-	-	-	-	-	X	-	-	X	-	-	-	-	X	-	-	-	-	X	-	-
STERNUM & RIB JUNCTION	-	-	-	-	-	-	-	X	-	-	X	-	-	-	-	X	-	-	-	-	X	-	-
FEMUR & BONE MARROW	-	-	-	-	-	-	-	X	-	-	X	-	-	-	-	X	-	-	-	-	X	-	-
NASAL CAVITY	-	-	-	-	-	-	-	X	-	-	X	-	-	-	-	X	-	-	-	-	X	-	-
OTHER	-	-	-	-	-	-	-	-	-	-	-	-	-	=	-	-	-	-	-	-	-	-	-
(CERVICAL LYMPH NODE); NO SIGNIFICANT LESIONS RECOGNIZED.	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 2 FEMALES

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
	5	5	5	5	5	5	5	5	5	5	6	6	6	6	6	6	6	6	6	6	7	7	7	7	7
	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4
SKIN	-	-	-	-	X	-	X	-	-	-	-	-	-	X	X	-	-	-	-	-	-	-	-	X	-
SKIN/MAMMARY	-	-	-	-	X	-	X	-	-	-	-	-	-	X	X	-	-	-	-	-	-	-	-	X	-
THIGH MUSCLE	-	-	-	-	X	-	X	-	-	-	-	-	-	X	X	-	-	-	-	-	-	-	-	X	-
SALIVARY GLAND	-	-	-	-	X	-	X	-	-	-	-	-	-	X	X	-	-	-	-	-	-	-	-	X	-
MANDIBULAR LYMPH NODE	-	-	-	-	A	-	A	-	-	-	-	-	=		X	-	-	-	-	-	-	-	-	=	-
NECROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	2+	=	=	=	=	=	=	=	=	=	=	=	=
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=
SCIATIC NERVE	-	-	-	-	X	-	X	-	-	-	-	-	-	X	X	-	-	-	-	-	-	-	-	X	-
BRAIN	-	-	-	-	A	-	X	-	-	-	-	-	-	X	=	-	-	-	-	-	-	-	-	X	-
AMYLOID.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
MINERALIZATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	1+	=	=	=	=	=	=	=	=	=	=	=
PITUITARY	I	A	I	I	M	X	I	X	I	X	X	X	X	X	I	X	M	X	X	I	X	X	X	X	
ADRENALS	=	A	=	=	=	=	=	=	=	X	=	=	=	=	X	X	=	=	=	=	=	=	=	=	=
AMYLOID.	3+	=	3+	2+	3+	4+	3+	3+	4+	=	2+	2+	3+	4+	3+	=	=	3+	4+	3+	4+	4+	2+	4+	2+
HYPERPLASIA.	=	=	=	=	P	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CORTICAL ADENOMA.	=	=	=	=	=	=	P	P	=	=	=	=	P	=	=	=	=	P	=	=	=	=	=	=	=
ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=
CORTICAL CELL HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
THYMUS	X	A	M	M	M	X	I	X	M	X	X	M	X	M	M	X	X	M	M	M	X	X	M	M	X
PLASMACYTOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
STOMACH	-	-	-	-	A	-	A	-	-	-	-	-	-	X	X	-	-	-	=	-	-	-	-	X	-
PIGMENT.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=
DUODENUM	-	-	-	-	A	-	A	-	-	-	-	-	-	X	X	-	-	-	-	-	-	-	-	X	-
JEJUNUM	-	-	-	-	X	-	X	-	-	-	-	-	-	X	X	-	-	-	-	-	-	-	-	X	-
CECUM	=	-	-	=	A	-	A	-	-	=	-	-	-	=	X	-	-	-	-	-	-	-	-	=	-
AMYLOID.	=	=	=	=	=	=	=	=	=	=	=	=	=	2+	=	=	=	=	=	=	=	=	=	=	=
INFLAMMATION.	P	=	=	3+	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=
NECROSIS.	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
COLON	-	-	=	-	A	-	A	-	-	-	-	-	-	X	=	-	-	-	-	-	-	-	-	X	-

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 2 FEMALES

	18750	18751	18752	18753	18754	18755	18756	18757	18758	18759	18760	18761	18762	18763	18764	18765	18766	18767	18768	18769	18770	18771	18772	18773	18774
COLON (CONTINUED)																									
AMYLOID.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	2+	=	=	=	=	=	=	=	=	=	=
INFLAMMATION.	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
RECTUM	-	-	-	-	A	-	A	-	-	-	-	-	-	X	X	-	-	-	-	-	-	-	-	X	-
MESENTERIC LYMPH NODE	=	-	-	-	=	A	A	-	X	-	-	-	-	A	=	-	-	-	-	-	-	-	-	X	-
INFLAMMATION.	4+	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HISTIOCYTOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	1+	=	=	=	=	=	=	=	=	=	=
RETICULUM CELL HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PLASMACYTOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ILEUM	-	-	-	-	A	-	X	-	-	-	-	-	-	X	X	-	-	-	-	-	-	-	-	X	-
LARYNX	X	A	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
TRACHEA	X	A	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
THYROID	=	A	=	=	=	=	=	=	=	=	X	=	=	=	=	X	=	I	=	=	=	=	=	=	=
AMYLOID.	4+	=	3+	3+	3+	3+	2+	3+	3+	=	=	1+	3+	4+	3+	=	=	=	3+	4+	4+	3+	3+	1+	4+
CYST(S).	=	=	=	=	=	=	=	=	=	P	=	=	P	=	=	=	P	=	=	=	=	=	=	P	=
PARATHYROID	A	N	X	X	X	X	=	X	N	X	N	X	X	X	X	X	X	N	X	X	X	X	X	X	X
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ADENOMA.	=	=	=	=	=	=	F	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ESOPHAGUS	X	A	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
LUNG	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
AMYLOID.	=	=	=	=	=	=	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=
ATELECTASIS.	3+	=	3+	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HISTIOCYTOSIS.	F	=	3+	=	=	=	=	4+	=	=	=	=	4+	3+	=	=	=	=	=	=	=	4+	=	=	=
PIGMENT.	2+	1+	2+	2+	2+	2+	2+	2+	2+	2+	3+	1+	2+	1+	2+	1+	1+	1+	1+	1+	1+	2+	1+	2+	3+
ALVEOLAR/BRONCHIOLAR CELL HYPERPLASIA.	=	=	2+	=	2+	2+	=	1+	=	2+	=	1+	=	2+	2+	=	1+	1+	1+	1+	1+	2+	=	2+	2+
CARCINOMA.	=	=	=	=	=	=	=	=	=	=	F	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ADENOMATOSIS.	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=
FIBROSIS.	=	=	=	=	=	=	=	=	=	=	=	1+	=	=	=	=	=	=	=	=	=	=	=	=	=
HEMORRHAGE.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PLASMACYTOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

Reproduced from best available copy.

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 2 FEMALES

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
	5	5	5	5	5	5	5	5	5	5	6	6	6	6	6	6	6	6	6	7	7	7	7	7
	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4
BRONCHIAL LYMPH NODES	=	M	=	=	=	X	M	=	=	=	X	M	X	=	=	=	=	=	=	M	=	=	M	=	M
PIGMENT.	2+	=	3+	2+	4+	=	=	1+	2+	4+	=	=	=	1+	3+	3+	3+	2+	1+	=	3+	2+	=	3+	=
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PLASMACYTOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=
ERYTHROPHAGOCYTOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PLASMACYTOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
MAINSTEM BRONCHI	X	A	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
LIVER	=	A	=	=	=	=	=	=	=	X	=	=	=	=	=	A	=	=	=	A	A	=	=	=	=
AMYLOID.	3+	=	3+	3+	4+	3+	3+	3+	3+	=	2+	2+	=	3+	1+	=	3+	3+	3+	=	=	3+	2+	2+	3+
NECROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=
CYST(S).	P	=	=	=	P	P	P	P	P	=	=	=	=	P	=	=	=	P	P	P	=	=	P	P	P
EXTRAMEDULLARY HEMATOPOIESIS.	=	=	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CONGESTION.	=	=	=	=	=	=	=	=	=	=	3+	=	4+	=	=	=	=	=	=	=	=	P	=	=	=
HEPATOCELLULAR VACUOLATION.	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CLEAR CELL FOCUS/FOCI.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	1+	=	=	=	=	=	=	=	=	1+	=
CHOLANGIOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
GALLBLADDER	-	-	-	-	A	-	A	-	-	-	-	-	-	X	X	-	-	-	-	-	-	-	-	X	-
SPLEEN	A	M	=	=	A	=	=	=	=	X	X	=	=	=	=	X	=	=	=	=	=	=	=	=	=
AMYLOID.	=	=	3+	3+	=	3+	4+	4+	4+	=	=	2+	3+	3+	3+	=	2+	3+	3+	3+	3+	3+	4+	2+	3+
EXTRAMEDULLARY HEMATOPOIESIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PANCREAS	A	A	X	X	A	A	=	X	X	X	X	X	X	=	X	X	X	X	X	X	A	X	A	X	=
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=
PAPILLARY HYPERPLASIA.	=	=	=	=	=	=	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
DUCTAL ECTASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	1+
HEART	=	A	=	-	=	-	=	=	-	-	-	-	-	=	X	-	-	-	-	-	-	-	-	X	-
INFLAMMATION.	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
THROMBOSIS.	P	=	P	=	=	=	P	P	=	=	=	=	P	=	=	=	=	=	=	=	=	P	=	=	=
MYOCARDIOPATHY.	=	=	2+	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
MURAL THROMBOSIS.	=	=	=	=	=	=	P	=	=	=	P	=	=	P	=	=	=	=	=	=	=	=	=	=	=
KIDNEYS	=	A	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
AMYLOID.	4+	=	4+	4+	4+	4+	3+	4+	4+	=	=	2+	4+	4+	4+	=	3+	4+	4+	4+	4+	4+	4+	3+	4+
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CHRONIC INTERSTITIAL NEPHRITIS.	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PYELONEPHRITIS.	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
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CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 2 FEMALES

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
	5	5	5	5	5	5	5	5	5	5	6	6	6	6	6	6	6	6	6	6	7	7	7	7
	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4
KIDNEYS (CONTINUED)																									
GLOMERULAR NEPHROSIS.	=	=	=	=	=	=	=	4+	=	2+	2+	2+	=	=	=	1+	=	=	=	=	=	=	=	=	=
URINARY BLADDER	-	-	-	-	A	-	A	-	-	-	-	-	-	X	X	-	-	-	-	-	-	-	A	X	-
OVARIES	-	-	-	-	X	-	X	-	-	-	-	=	-	X	X	-	-	-	X	-	-	-	-	=	-
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=
PLASMACYTOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
UTERUS	-	-	-	-	A	-	=	-	-	-	-	-	-	X	X	-	-	-	=	-	-	-	-	=	-
HYPERPLASIA.	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=
FIBROMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=
STERNUM & RIB JUNCTION	-	-	-	-	X	-	X	-	-	-	-	-	-	X	X	-	-	-	-	-	-	-	-	X	-
FEMUR & BONE MARROW	-	-	-	-	X	-	X	-	-	-	-	-	-	X	X	-	-	-	-	-	-	-	-	X	-
NASAL CAVITY	-	-	-	-	X	-	X	-	-	-	-	-	-	X	X	-	-	-	-	-	-	-	-	X	-
OTHER	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(RENAL LYMPH NODE), PLASMACYTOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
(LARGE INTESTINE), PLASMACYTOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
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CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 2 FEMALES

	1877	1877	1877	1877	1878	1878	1878	1878	1878	1878	1878	1878	1878	1878	1878	1879	1879	1879	1879	1879	1879	1879	1879	1879
	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9
SKIN	-	-	-	-	-	-	X	-	-	X	-	X	-	-	-	-	X	X	-	-	-	-	-	-	-
SKIN/MAMMARY	-	-	-	-	-	-	X	-	-	X	-	X	-	-	-	-	X	X	-	-	-	-	-	-	-
THIGH MUSCLE	-	-	-	-	-	-	X	-	-	X	-	X	-	-	-	-	X	X	-	-	-	-	-	-	-
SALIVARY GLAND	-	-	-	-	-	-	X	-	-	X	-	X	-	-	-	-	X	X	-	-	-	-	-	-	-
MANDIBULAR LYMPH NODE	-	-	-	-	-	-	X	-	-	X	-	X	-	-	-	A	I	X	-	-	-	-	-	-	-
NECROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
SCIATIC NERVE	-	-	-	-	-	-	X	-	-	X	-	X	-	-	-	-	X	X	-	-	-	-	-	-	-
BRAIN	-	-	-	-	-	-	=	-	-	X	-	X	A	-	-	-	X	=	-	-	-	-	-	-	-
AMYLOID.	=	=	=	=	=	=	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
MINERALIZATION.	=	=	=	=	=	=	1+	=	=	=	=	=	=	=	=	=	=	1+	=	=	=	=	=	=	=
PITUITARY	X	I	A	I	X	X	X	X	I	I	X	X	-	I	X	A	X	I	X	X	A	X	X	I	I
ADRENALS	X	=	A	=	=	=	=	X	=	=	X	=	X	=	X	A	=	=	X	=	A	A	=	=	=
AMYLOID.	=	3+	=	=	2+	4+	4+	=	4+	3+	=	4+	=	3+	=	=	3+	3+	=	2+	=	=	3+	3+	4+
HYPERPLASIA.	=	=	=	P	P	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=
CORTICAL ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=
ADENOMA.	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=
CORTICAL CELL HYPERPLASIA.	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
THYMUS	X	M	A	M	X	M	M	X	M	M	X	M	I	X	X	A	M	M	X	=	A	M	M	M	M
PLASMACYTOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=
STOMACH	-	-	-	-	-	-	A	-	-	X	-	X	-	-	-	A	X	X	-	-	A	-	-	-	-
PIGMENT.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
DUODENUM	-	-	-	-	-	-	A	-	-	X	-	X	-	-	-	A	X	X	-	-	A	-	-	-	-
JEJUNUM	-	-	-	-	-	-	X	-	-	X	-	X	-	-	-	A	X	X	-	-	-	-	-	-	-
CECUM	-	-	-	-	-	-	A	-	-	X	-	X	-	-	-	A	X	X	-	-	-	-	-	-	-
AMYLOID.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
NECROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
COLON	-	-	-	-	-	-	A	-	-	X	-	X	-	A	-	A	=	X	-	-	-	-	-	-	-

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 2 FEMALES

	1875	1876	1877	1878	1879	1880	1881	1882	1883	1884	1885	1886	1887	1888	1889	1890	1891	1892	1893	1894	1895	1896	1897	1898	1899
COLON (CONTINUED)																									
AMYLOID.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=
RECTUM	-	-	-	-	-	-	A	-	-	X	-	X	-	-	-	-	X	X	-	-	A	-	-	-	-
MESENTERIC LYMPH NODE	-	-	-	-	-	-	X	-	-	X	-	X	-	-	=	A	X	M	-	=	A	-	-	-	-
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HISTIOCYTOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
RETICULUM CELL HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=
PLASMACYTOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=
ILEUM	-	-	-	-	-	-	A	-	-	X	-	X	-	-	-	-	X	X	-	-	A	-	-	-	-
LARYNX	X	X	A	X	X	X	X	X	X	X	X	X	X	X	X	A	X	X	X	X	A	X	X	X	A
TRACHEA	X	X	A	X	X	X	X	X	X	X	X	X	X	X	X	A	X	X	X	X	A	X	X	X	A
THYROID	X	=	A	A	X	=	=	X	=	=	=	=	X	=	X	A	=	=	X	=	=	=	=	X	=
AMYLOID.	=	3+	=	1+	=	4+	3+	=	4+	3+	=	3+	=	3+	=	=	P	3+	=	=	4+	2+	3+	=	4+
CYST(S).	=	P	=	P	=	=	=	=	=	=	P	=	=	=	=	=	P	P	=	P	=	=	=	=	=
PARATHYROID	M	=	A	=	X	X	X	X	X	X	N	X	X	X	X	A	=	I	I	=	A	X	N	X	A
CYST(S).	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HYPERPLASIA.	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	2+	=	=	2+	=	=	=	=	=
ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ESOPHAGUS	X	X	A	X	X	X	X	X	X	X	X	X	X	X	X	=	X	X	X	X	A	X	X	X	X
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	=
LUNG	=	=	A	=	=	=	=	X	=	=	=	=	=	=	=	=	=	=	=	=	A	=	=	=	=
AMYLOID.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=
INFLAMMATION.	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ATELECTASIS.	=	=	=	=	=	2+	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HISTIOCYTOSIS.	=	4+	=	=	=	=	=	=	=	2+	=	=	=	3+	=	=	3+	=	=	=	=	=	3+	4+	=
PIGMENT.	3+	2+	=	2+	2+	1+	3+	=	3+	2+	2+	3+	2+	2+	2+	2+	=	=	2+	2+	=	2+	2+	2+	2+
ALVEOLAR/BRONCHIOLAR CELL HYPERPLASIA.	3+	1+	=	1+	2+	P	=	=	2+	=	1+	2+	2+	2+	1+	=	=	1+	1+	P	=	1+	=	3+	=
CARCINOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ADENOMATOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
FIBROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	1+	=	=	=	=	=
HEMORRHAGE.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=
PLASMACYTOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 2 FEMALES

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
	7	7	7	7	7	8	8	8	8	8	8	8	8	8	8	9	9	9	9	9	9	9	9	9
	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9
BRONCHIAL LYMPH NODES	=	=	A	M	=	M	M	X	M	=	=	=	M	=	=	A	=	X	X	=	A	N	=	=	M
PIGMENT.	3+	3+	=	=	4+	=	=	=	=	3+	3+	3+	=	3+	3+	=	2+	=	=	2+	=	=	2+	2+	=
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=
PLASMACYTOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ERYTHROPHAGOCYTOSIS.	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PLASMACYTOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=
MAINSTEM BRONCHI	X	X	A	X	X	X	X	X	X	X	X	X	X	X	X	A	X	X	X	X	A	X	X	X	A
LIVER	X	=	A	X	=	=	=	X	=	=	X	X	A	=	=	A	=	=	X	=	A	=	=	=	A
AMYLOID.	=	3+	=	=	2+	4+	3+	=	3+	=	=	=	=	3+	3+	=	3+	4+	=	2+	=	2+	2+	3+	4+
NECROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=
CYST(S).	=	P	=	=	=	=	=	=	=	=	=	=	P	=	=	=	P	=	=	=	P	P	=	P	
EXTRAMEDULLARY HEMATOPOIESIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CONGESTION.	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=
HEPATOCELLULAR VACUOLATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CLEAR CELL FOCUS/FOCI.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CHOLANGIOMA.	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=
GALLBLADDER	-	-	A	-	-	-	A	-	-	M	-	X	-	-	-	-	M	X	-	-	A	-	-	-	-
SPLEEN	X	=	A	=	=	=	X	X	A	=	X	=	X	=	X	A	=	=	M	=	A	=	=	=	=
AMYLOID.	=	3+	=	1+	2+	4+	=	=	=	3+	=	3+	=	=	=	=	3+	3+	=	2+	=	2+	3+	3+	4+
EXTRAMEDULLARY HEMATOPOIESIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=
PANCREAS	X	X	A	X	X	X	X	X	A	X	X	X	X	A	X	A	X	X	A	N	A	A	X	X	A
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PAPILLARY HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
DUCTAL ECTASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEART	-	-	A	-	-	=	=	-	-	=	-	X	-	-	-	A	=	=	-	-	A	-	-	-	-
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
THROMBOSIS.	=	=	=	=	=	=	P	=	=	P	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=
MYOCARDIOPATHY.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=
MURAL THROMBOSIS.	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=
KIDNEYS	X	=	A	=	=	=	=	X	=	=	X	=	=	=	X	A	=	=	X	=	A	=	=	=	=
AMYLOID.	=	4+	=	1+	2+	4+	4+	=	4+	4+	=	3+	=	4+	=	=	4+	4+	=	2+	=	3+	4+	4+	4+
INFLAMMATION.	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CHRONIC INTERSTITIAL NEPHRITIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PYELONEPHRITIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 2 FEMALES

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7	7
	7	7	7	7	7	8	8	8	8	8	8	8	8	8	8	9	9	9	9	9	9	9	9	9
	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9
KIDNEYS (CONTINUED)																								
GLOMERULAR NEPHROSIS.	=	=	=	1+	=	=	=	=	=	=	=	=	1+	3+	=	=	=	=	=	=	=	=	=	2+	=
URINARY BLADDER	-	-	-	-	-	-	X	-	-	X	-	X	-	-	-	-	X	X	-	-	-	-	-	-	-
OVARIES	-	-	-	-	-	-	X	-	-	X	-	X	-	-	-	-	X	X	-	=	-	-	-	-	-
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PLASMACYTOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=
UTERUS	-	-	-	-	-	-	X	-	-	X	-	X	-	A	-	A	X	X	-	-	-	-	-	-	-
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
FIBROMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
STERNUM & RIB JUNCTION	-	-	-	-	-	-	X	-	-	X	-	X	-	-	-	-	X	X	-	-	-	-	-	-	-
FEMUR & BONE MARROW	-	-	-	-	-	-	X	-	-	X	-	X	-	-	-	-	X	X	-	-	-	-	-	-	-
NASAL CAVITY	-	-	-	-	-	-	X	-	-	X	-	X	-	-	-	-	X	X	-	-	-	-	-	-	-
OTHER	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	=	-	-	-	-	-
(RENAL LYMPH NODE), PLASMACYTOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=
(LARGE INTESTINE), PLASMACYTOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
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CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 3 FEMALES

	1850	1851	1852	1853	1854	1855	1856	1857	1858	1859	1860	1861	1862	1863	1864	1865	1866	1867	1868	1869	1870	1871	1872	1873	1874
SKIN	X	-	X	-	-	-	X	-	-	-	X	=	-	-	-	-	-	-	-	-	-	-	X	-	X
THROMBOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=
SKIN/MAMMARY	X	-	X	-	-	-	X	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	X	-	X
THIGH MUSCLE	X	-	X	-	-	-	X	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	X	-	X
SALIVARY GLAND	X	-	X	-	-	-	X	-	-	-	A	-	-	-	-	-	-	-	-	-	-	-	X	-	X
MANDIBULAR LYMPH NODE	X	-	X	-	-	-	X	-	-	-	A	-	-	-	-	-	-	-	-	-	-	-	A	-	X
PLASMACYTOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
MALIGNANT LYMPHOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
SCIATIC NERVE	X	-	X	-	-	-	X	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	X	-	X
BRAIN	X	-	X	-	-	-	X	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	A	-	X
PITUITARY	X	X	X	X	X	I	I	X	X	I	I	I	X	X	I	X	I	X	X	=	I	I	I	X	X
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=
ADRENALS	=	=	=	I	=	I	=	X	X	X	=	X	X	X	X	X	X	X	=	=	=	X	=	X	I
AMYLOID.	3+	=	3+	=	=	=	3+	=	=	=	3+	=	=	=	=	=	=	=	3+	3+	=	=	3+	=	=
HYPERPLASIA.	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CYST(S).	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	P	=	=	=	=
CORTICAL CELL HYPERPLASIA.	=	1+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CORTICAL ADENOMA.	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=
THYMUS	M	X	M	M	X	N	X	X	X	I	M	N	X	X	N	M	I	=	X	X	X	M	M	X	N
LEUKEMIA/LYMPHOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=
MEDULLARY CELL HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
STOMACH	A	-	=	-	-	-	A	-	-	-	A	-	-	-	-	-	-	-	A	-	-	-	A	-	=
PIGMENT.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PAPILLOMA.	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P
DUODENUM	A	-	A	-	-	-	A	-	-	A	A	-	-	-	-	-	-	-	-	-	-	-	A	-	X
NECROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEMORRHAGE.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
JEJUNUM	X	-	X	-	-	-	X	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	X	-	X
CECUM	A	-	A	-	-	-	A	-	-	-	A	-	-	-	-	-	-	-	-	-	=	-	A	-	X

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
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CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 3 FEMALES

	188850	188851	188852	188853	188854	188855	188856	188857	188858	188859	188860	188861	188862	188863	188864	188865	188866	188867	188868	188869	188870	188871	188872	188873	188874
CECUM (CONTINUED)																									
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=
COLON	A	-	A	-	-	-	A	-	-	-	A	-	-	-	-	-	-	-	-	-	-	-	A	-	X
RECTUM	A	-	A	-	-	-	A	-	-	-	A	-	-	-	-	-	-	-	-	-	-	-	A	-	X
MESENTERIC LYMPH NODE	X	-	=	-	-	-	X	-	-	-	A	-	-	A	-	-	-	-	-	-	-	-	X	-	X
FOLLICULAR HYPERPLASIA.	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEMOSIDEROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
MALIGNANT LYMPHOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ILEUM	A	-	A	-	-	-	A	-	-	-	A	-	-	-	-	-	-	-	-	-	-	-	A	-	X
LARYNX	X	=	=	X	X	X	X	X	X	X	I	X	X	X	X	=	X	X	X	X	X	X	=	X	X
HYPERPLASIA.	=	2+	3+	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	3+	=	=
CARCINOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ATYPICAL EPITHELIAL HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
TRACHEA	X	X	=	X	=	X	X	X	X	=	=	X	X	=	X	=	X	X	X	X	X	X	X	=	X
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CARCINOMA.	=	=	P	=	P	=	=	=	=	=	=	=	=	P	=	P	=	=	=	=	=	=	=	P	=
FIBROSIS.	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
THYROID	=	X	X	N	X	=	=	X	N	A	X	=	=	=	X	X	X	X	A	A	X	=	=	X	=
AMYLOID.	3+	=	=	=	=	=	2+	=	=	=	=	2+	=	=	=	=	=	=	=	=	=	=	3+	=	=
CYST(S).	=	=	=	=	=	P	=	=	=	=	=	P	P	P	=	=	=	=	=	=	=	P	=	=	P
CARCINOMA, METASTATIC.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PARATHYROID	=	X	=	N	X	X	X	X	N	A	=	=	X	X	N	X	X	X	X	A	X	N	X	X	X
HYPERPLASIA.	2+	=	P	=	=	=	=	=	=	=	P	2+	=	=	=	=	=	=	=	=	=	=	=	=	=
ESOPHAGUS	X	X	X	X	X	X	X	X	X	X	X	X	X	X	=	=	X	X	X	X	X	X	X	X	X
AMYLOID.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	2+	=	=	=	=	=	=	=	=	=	=
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CARCINOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=
LUNG	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
AMYLOID.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	2+	=	=	=	=	=	=	=
CARCINOMA.	P	P	=	=	P	=	P	=	=	=	=	P	P	P	=	P	=	=	P	P	=	=	P	=	=
ALVEOLAR/BRONCHIOLAR CELL HYPERPLASIA.	2+	=	=	2+	=	2+	=	=	2+	P	2+	2+	=	2+	2+	=	=	=	=	3+	=	3+	2+	2+	P
PIGMENT.	1+	2+	3+	2+	2+	2+	2+	2+	2+	2+	2+	3+	1+	2+	2+	=	3+	2+	3+	3+	2+	3+	=	2+	2+

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CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 3 FEMALES

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
	5	5	5	5	5	5	5	5	5	5	6	6	6	6	6	6	6	6	6	7	7	7	7
	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4
LUNG (CONTINUED)																									
ALVEOLAR/BRONCHIOLAR CELL CARCINOMA.	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	P
ADENOMATOSIS.	=	=	=	=	=	=	P	2+	=	=	=	=	=	=	=	=	=	=	=	2+	=	=	=	=
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=
HISTIOCYTOSIS.	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	4+	=	=	P
ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=
PNEUMONITIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	3+	=	=	=	=	=	=	=
BRONCHIAL PNEUMONIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=
ALVEOLAR/BRONCHIOLAR CELL ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	P
ATELECTASIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	2+	=
PNEUMONIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
BRONCHIOL EPITHELIAL HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
BRONCHOPNEUMONIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
NECROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
MALIGNANT LYMPHOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
BRONCHIAL LYMPH NODES	=	=	M	=	=	=	=	=	N	N	M	=	X	=	=	=	=	=	=	M	=	=	M	=	=
AMYLOID.	=	=	=	=	=	=	=	=	=	=	=	2+	=	=	=	=	=	=	=	=	=	=	=	=
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CARCINOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ALVEOLAR/BRONCHIOLAR CELL HYPERPLASIA.	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PIGMENT.	1+	3+	=	3+	2+	3+	3+	=	=	=	=	=	P	4+	P	4+	2+	2+	=	4+	3+	=	3+	2+
LEUKEMIA/LYMPHOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=
LYMPHOID HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ERYTHROPHAGOCYTOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
MALIGNANT LYMPHOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
MAINSTEM BRONCHI	=	X	X	X	=	X	M	X	X	X	M	X	X	X	X	X	X	X	X	=	X	=	X	X
AMYLOID.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=
HYPERPLASIA.	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CARCINOMA.	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=
LIVER	=	X	=	X	=	X	=	X	X	A	=	=	X	=	=	=	X	=	=	=	=	X	=	A	=
AMYLOID.	3+	=	3+	=	1+	=	3+	=	=	=	3+	2+	=	=	2+	=	=	=	3+	2+	3+	=	3+	=	=
CYST(S).	P	=	=	=	P	=	=	=	=	=	=	=	=	P	=	=	=	P	=	=	=	=	P	=	P
CLEAR CELL FOCUS/FOCI.	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	1+	=	=	=	=	=	=	=	=	=
THROMBOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CONGESTION.	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+
BILE DUCT HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	2+	=	=	=	=	=	=	=	=	=	=	=	=	=
EXTRAMEDULLARY HEMATOPOIESIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=
HEPATOCELLULAR CYSTIC DEGENERATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=
PLASMACYTOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=

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CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 3 FEMALES

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
	5	5	5	5	5	5	5	5	5	5	6	6	6	6	6	6	6	6	6	7	7	7	7	7	7
	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4
LIVER (CONTINUED)																									
KARYOMEGALY.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
MALIGNANT LYMPHOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEPATOCELLULAR VACUOLATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
GALLBLADDER	X	-	M	-	-	-	A	-	-	-	A	-	-	=	-	-	-	-	-	-	-	-	A	-	A
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=
SPLEEN	=	X	X	X	X	X	=	X	X	A	=	=	=	=	X	X	X	X	=	=	=	X	=	A	=
AMYLOID.	3+	=	=	=	=	=	4+	=	=	=	3+	2+	=	=	=	=	=	=	3+	3+	4+	=	3+	=	2+
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	3+	3+	=	=	=	=	=	=	=	=	=	=	=
EXTRAMEDULLARY HEMATOPOIESIS.	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=
HEMANGIECTASIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PLASMACYTOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
MALIGNANT LYMPHOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PANCREAS	X	X	X	X	X	M	X	X	X	A	A	X	X	X	X	X	X	X	A	X	X	X	X	A	X
HEART	=	-	X	-	-	-	X	-	-	A	X	-	-	-	-	=	-	-	=	-	-	=	X	-	=
CARCINOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=
THROMBOSIS.	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	P	=	=	=	P
NEOPLASM, (N.O.S.).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
KIDNEYS	=	X	=	X	=	=	=	=	X	A	=	X	X	X	=	=	X	X	=	=	=	X	=	=	=
AMYLOID.	4+	=	=	2+	=	4+	=	=	=	=	4+	=	=	=	=	=	=	=	3+	2+	4+	=	4+	=	3+
GLOMERULAR NEPHROSIS.	=	=	3+	=	3+	2+	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	2+
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	=
CARCINOMA, METASTATIC.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=
INFARCT.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
MALIGNANT LYMPHOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
URINARY BLADDER	X	-	X	-	-	-	A	-	-	-	A	-	-	-	=	-	-	-	-	-	-	-	X	-	X
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=
OVARIES	X	-	X	-	-	-	X	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	X	-	X
UTERUS	=	-	X	-	-	-	X	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	X	-	X
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PAPILLARY HYPERPLASIA.	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
STERNUM & RIB JUNCTION	X	-	X	-	-	-	X	-	-	-	X	-	-	-	-	-	-	-	-	-	-	-	X	-	X

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CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 3 FEMALES

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
	5	5	5	5	5	5	5	5	5	5	6	6	6	6	6	6	6	6	7	7	7	7	7
	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4
FEMUR & BONE MARROW	X	-	X	-	-	-	X	-	-	-	X	-	-	-	-	-	-	-	-	-	-	X	-	X
NASAL CAVITY	X	-	X	-	-	-	X	-	-	-	X	-	-	-	-	-	-	-	-	-	-	X	-	X
OTHER	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(LARGE INTESTINE), NO SIGNIFICANT LESION RECOGNIZED.	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=
(SMALL INTESTINE), NO SIGNIFICANT LESION RECOGNIZED.	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=
(MEDIASTINUM), CARCINOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=
(RENAL LYMPH NODE), MALIGNANT LYMPHOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
(SUBLUMBAR LYMPH NODE), MALIGNANT LYMPHOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=

(X) NO SIGNIFICANT LESION RECOGNIZED
(I) INSUFFICIENT TISSUE PRESENT IN SECTION
(N) NOT PRESENT IN SECTION
(M) MISSING
(A) AUTOLYZED
(-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 3 FEMALES

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
	7	7	7	7	7	8	8	8	8	8	8	8	8	8	8	9	9	9	9	9	9	9	9	9
	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9
SKIN	-	X	-	-	-	-	X	-	=	-	-	-	-	X	-	-	-	-	-	X	-	-	-	-
THROMBOSIS.	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
SKIN/MAMMARY	-	X	-	-	-	-	X	-	-	-	-	-	-	X	-	-	-	-	-	X	-	-	-	-
THIGH MUSCLE	-	X	-	-	-	-	X	-	-	-	-	-	-	X	-	-	-	-	-	X	-	-	-	-
SALIVARY GLAND	-	X	-	-	-	-	X	-	-	-	-	-	-	X	-	-	-	-	-	X	-	-	-	-
MANDIBULAR LYMPH NODE	-	X	-	-	-	-	=	-	-	-	-	-	-	X	-	-	-	-	-	X	-	=	-	-
PLASMACYTOMA.	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
MALIGNANT LYMPHOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=
SCIATIC NERVE	-	X	-	-	-	-	X	-	-	-	-	-	-	X	-	-	-	-	-	X	-	-	-	-
BRAIN	-	X	-	-	-	-	A	-	-	-	-	-	-	X	-	-	-	-	-	X	-	-	-	-
PITUITARY	X	X	X	X	X	X	A	X	X	N	X	X	X	I	X	A	X	X	I	X	I	X	X	X
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ADRENALS	=	=	=	X	X	X	A	X	I	X	=	X	X	=	=	A	=	X	=	X	=	X	=	X
AMYLOID.	=	=	2+	=	=	=	=	=	2+	=	2+	=	=	3+	2+	=	3+	=	2+	=	2+	=	3+	=
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CORTICAL CELL HYPERPLASIA.	=	P	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	P
CORTICAL ADENOMA.	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
THYMUS	X	X	N	X	X	X	M	X	X	X	X	M	=	X	M	A	X	X	X	X	M	N	I	X	X
LEUKEMIA/LYMPHOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
MEDULLARY CELL HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=
STOMACH	=	X	-	-	-	-	X	-	-	-	-	-	A	X	-	-	-	-	X	X	-	-	-	-
PIGMENT.	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PAPILLOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
DUODENUM	-	X	-	-	-	-	A	-	-	-	-	-	-	X	-	-	-	-	-	X	=	-	-	-
NECROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=
HEMORRHAGE.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	2+	=	=	=
JEJUNUM	-	X	-	-	-	-	X	-	-	-	-	-	-	X	-	-	-	-	-	X	-	-	-	-
CECUM	-	X	-	-	-	-	A	-	-	-	-	-	-	X	-	-	-	-	-	X	-	-	-	-

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 3 FEMALES

	18875	18876	18877	18878	18879	18880	18881	18882	18883	18884	18885	18886	18887	18888	18889	18890	18891	18892	18893	18894	18895	18896	18897	18898	18899
CECUM (CONTINUED)																									
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
COLON	-	X	-	-	-	-	A	-	-	-	-	-	-	-	X	-	-	-	-	-	X	-	-	-	-
RECTUM	-	X	-	-	-	-	A	-	-	-	-	-	-	-	X	-	-	-	-	-	X	-	-	-	-
MESENTERIC LYMPH NODE	-	X	-	-	-	-	=	-	-	-	-	-	-	-	M	-	-	-	-	-	M	-	=	-	-
FOLLICULAR HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEMOSIDEROSIS.	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
MALIGNANT LYMPHOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=
ILEUM	-	X	-	-	-	-	A	-	-	-	-	-	-	-	X	-	-	-	-	-	X	-	-	-	-
LARYNX	=	X	=	X	X	=	X	=	X	=	X	=	=	X	X	A	X	X	=	X	=	=	X	X	X
HYPERPLASIA.	=	=	=	=	=	3+	=	=	=	3+	=	3+	2+	=	=	=	=	=	P	=	=	=	=	=	=
CARCINOMA.	P	=	P	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=
ATYPICAL EPITHELIAL HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=
TRACHEA	=	=	X	=	=	=	X	X	X	X	X	=	=	X	X	A	=	X	X	=	=	=	X	=	X
HYPERPLASIA.	3+	=	=	=	=	3+	=	=	=	=	=	3+	=	=	=	=	2+	=	=	=	=	=	=	=	=
CARCINOMA.	=	P	=	P	P	=	=	=	=	=	=	=	P	=	=	=	=	=	=	P	P	P	=	P	=
FIBROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
THYROID	X	X	X	X	X	X	M	X	=	=	=	X	X	X	=	A	=	X	X	X	=	X	=	X	=
AMYLOID.	=	=	=	=	=	=	=	=	2+	2+	=	=	=	=	3+	=	2+	=	=	=	=	=	2+	=	2+
CYST(S).	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CARCINOMA, METASTATIC.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	P	=	=	=	=
PARATHYROID	X	X	X	X	X	N	M	=	X	I	X	X	X	X	X	A	N	X	X	X	X	N	X	M	X
HYPERPLASIA.	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ESOPHAGUS	X	X	X	X	X	X	X	X	X	X	X	=	X	X	X	A	X	X	X	X	X	X	X	X	X
AMYLOID.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=
CARCINOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
LUNG	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	A	=	=	=	=	=	=	=	=	=
AMYLOID.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CARCINOMA.	P	=	P	P	=	=	=	=	P	P	=	=	P	=	P	=	P	P	P	=	P	P	=	P	P
ALVEOLAR/BRONCHIOLAR CELL HYPERPLASIA.	=	P	=	=	3+	2+	=	2+	2+	=	=	P	3+	4+	=	=	2+	=	=	2+	=	1+	=	3+	3+
PIGMENT.	=	2+	2+	2+	3+	2+	=	2+	2+	3+	2+	1+	4+	2+	2+	=	3+	2+	2+	2+	2+	1+	2+	3+	2+

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 3 FEMALES

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
	7	7	7	7	7	8	8	8	8	8	8	8	8	8	8	9	9	9	9	9	9	9	9	9
	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9
LUNG (CONTINUED)																								
ALVEOLAR/BRONCHIOLAR CELL CARCINOMA.	=	P	=	=	=	=	P	P	=	P	=	=	=	P	=	=	=	=	P	=	=	=	=	=
ADENOMATOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HISTIOCYTOSIS.	=	=	=	=	=	=	=	=	4+	=	=	=	=	4+	=	=	3+	=	=	=	=	=	=	=
ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PNEUMONITIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
BRONCHIAL PNEUMONIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ALVEOLAR/BRONCHIOLAR CELL ADENOMA.	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ATELECTASIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PNEUMONIA.	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
BRONCHIOL EPITHELIAL HYPERPLASIA.	=	=	=	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
BRONCHOPNEUMONIA.	=	=	=	=	=	3+	=	=	=	=	=	=	=	4+	=	=	=	=	=	3+	=	=	=	=
NECROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+
MALIGNANT LYMPHOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=
BRONCHIAL LYMPH NODES	=	=	=	=	A	=	M	=	=	=	=	=	=	=	A	=	=	=	=	M	=	=	M	=
AMYLOID.	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HYPERPLASIA.	=	=	=	P	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CARCINOMA.	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ALVEOLAR/BRONCHIOLAR CELL HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PIGMENT.	3+	2+	3+	=	3+	3+	=	3+	3+	2+	3+	3+	2+	2+	2+	=	2+	1+	2+	3+	=	3+	2+	=	3+
LEUKEMIA/LYMPHOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
LYMPHOID HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=
ERYTHROPHAGOCYTOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=
MALIGNANT LYMPHOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=
MAINSTEM BRONCHI	=	X	X	X	X	=	=	=	X	X	X	=	N	X	M	A	X	X	X	X	=	=	X	X	X
AMYLOID.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HYPERPLASIA.	3+	=	=	=	=	3+	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=
CARCINOMA.	=	=	=	=	=	=	P	P	=	=	=	=	=	=	=	=	=	=	=	P	P	=	=	=
LIVER	X	A	=	=	A	=	=	X	=	=	A	X	=	=	=	A	=	=	=	=	=	X	=	=	=
AMYLOID.	=	=	2+	2+	=	3+	=	=	2+	2+	=	=	=	3+	3+	=	2+	=	=	2+	1+	=	=	=	2+
CYST(S).	=	=	=	=	=	=	=	=	P	=	=	=	=	P	P	=	P	=	P	=	=	=	=	=	=
CLEAR CELL FOCUS/FOCI.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
THROMBOSIS.	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CONGESTION.	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	4+	=	=	=	=	=	=
BILE DUCT HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
EXTRAMEDULLARY HEMATOPOIESIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEPATOCELLULAR CYSTIC DEGENERATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PLASMACYTOMA.	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 3 FEMALES

	1875	1876	1877	1878	1879	1880	1881	1882	1883	1884	1885	1886	1887	1888	1889	1890	1891	1892	1893	1894	1895	1896	1897	1898	1899
LIVER (CONTINUED)																									
KARYOMEGALY.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	2+	=	=	=	=	=	=
MALIGNANT LYMPHOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=
HEPATOCELLULAR VACUOLATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=
GALLBLADDER	-	A	-	-	-	-	A	-	-	-	-	=	-	-	A	-	-	-	-	-	A	-	-	-	-
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	2+	=	=	=	=	=	=	=	=	=	=	=	=	=
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
SPLEEN	X	X	=	X	M	=	=	X	=	X	=	X	X	=	X	A	=	X	X	X	X	X	=	X	=
AMYLOID.	=	=	2+	=	=	2+	=	=	2+	=	1+	=	=	3+	=	=	2+	=	=	=	=	=	3+	=	2+
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+
EXTRAMEDULLARY HEMATOPOIESIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEMANGIECTASIS.	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PLASMACYTOMA.	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
MALIGNANT LYMPHOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=
PANCREAS	X	X	X	X	A	A	X	A	X	X	A	X	X	X	X	A	X	X	X	X	X	X	X	X	X
HEART	-	X	-	-	-	-	X	-	=	-	-	-	-	-	X	-	-	-	=	-	X	-	-	-	-
CARCINOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
THROMBOSIS.	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
NEOPLASM, (N.O.S.).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=
KIDNEYS	X	=	=	=	X	X	=	X	=	=	=	=	X	=	=	A	=	X	=	X	=	X	=	X	=
AMYLOID.	=	3+	4+	2+	=	=	4+	=	4+	2+	3+	=	=	4+	3+	=	4+	=	=	=	2+	=	4+	=	3+
GLOMERULAR NEPHROSIS.	=	=	=	1+	=	=	=	=	=	=	=	2+	=	=	=	=	=	=	=	=	=	=	=	=	=
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CARCINOMA, METASTATIC.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
INFARCT.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=
MALIGNANT LYMPHOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=
URINARY BLADDER	-	X	-	-	-	-	X	-	-	-	-	-	-	-	X	A	-	-	-	-	X	-	-	-	-
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
OVARIES	-	X	-	-	-	-	X	-	-	-	-	-	-	-	X	-	-	-	-	-	X	-	-	-	-
UTERUS	-	X	-	-	-	-	=	-	-	-	-	-	-	-	X	-	-	-	-	-	X	-	-	-	-
HYPERPLASIA.	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PAPILLARY HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
STERNUM & RIB JUNCTION	-	X	-	-	-	-	X	-	-	-	-	-	-	-	X	-	-	-	-	-	X	-	-	-	-

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 3 FEMALES

	1887	1888	1889	1890	1891	1892	1893	1894	1895	1896	1897	1898	1899	1900	1901	1902	1903	1904	1905	1906	1907	1908	1909
FEMUR & BONE MARROW	-	X	-	-	-	-	X	-	-	-	-	-	-	X	-	-	-	-	-	X	-	-	-
NASAL CAVITY	-	X	-	-	-	-	X	-	-	-	-	-	-	X	-	-	-	-	-	X	-	-	-
OTHER	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(LARGE INTESTINE), NO SIGNIFICANT LESION RECOGNIZED.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
(SMALL INTESTINE), NO SIGNIFICANT LESION RECOGNIZED.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
(MEDIASTINUM), CARCINOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
(RENAL LYMPH NODE), MALIGNANT LYMPHOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=
(SUBLUMBAR LYMPH NODE), MALIGNANT LYMPHOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
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CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 4 FEMALES

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	5	5	5	5	5	5	5	5	6	6	6	6	6	6	6	6	6	7	7	7	7	7	7
	0	1	2	3	4	5	6	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5
SKIN	-	X	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	X	-	X	-	-	-	-	-
SKIN/MAMMARY	-	X	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	X	-	X	-	-	-	-	-
THIGH MUSCLE	-	X	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	X	-	X	-	-	-	-	-
SALIVARY GLAND	-	X	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	X	-	X	-	-	-	-	-
MANDIBULAR LYMPH NODE	-	X	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	I	-	=	-	-	-	-	-
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=
CONGESTION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
SCIATIC NERVE	-	X	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	X	-	X	-	-	-	-	-
BRAIN	-	X	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	X	-	X	A	-	-	-	-
PITUITARY	X	I	X	X	I	X	I	X	X	X	X	M	X	X	I	X	I	X	X	I	M	X	X	X	I
ADRENALS	X	=	=	X	=	=	=	=	=	=	=	I	=	=	=	X	=	=	=	=	=	=	=	=	X
AMYLOID.	=	3+	1+	=	3+	2+	3+	3+	2+	2+	2+	P	3+	3+	2+	=	2+	3+	2+	3+	=	2+	3+	3+	=
CYST(S).	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=
HYPERPLASIA.	=	=	=	=	=	=	=	=	P	P	=	=	=	=	=	=	P	=	=	P	=	P	P	=	=
CORTICAL ADENOMA.	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=
ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEMORRHAGE.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CORTICAL CELL HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
THYMUS	X	M	X	=	M	X	M	M	X	M	X	M	X	=	M	X	M	X	X	M	M	M	I	=	X
HYPERPLASIA.	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
INVOLUTED.	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	P	=
STOMACH	-	X	-	-	-	-	-	X	-	-	-	-	A	-	-	-	-	X	-	X	-	-	-	-	-
PIGMENT.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
DUODENUM	=	X	=	-	-	-	-	X	-	-	-	-	-	-	-	-	-	X	-	X	-	-	-	-	-
INFLAMMATION.	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
INTUSSUSCEPTION.	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
JEJUNUM	-	X	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	X	-	X	-	-	-	-	-
CECUM	A	X	-	-	-	-	-	X	-	-	-	-	A	-	-	-	-	X	-	=	-	-	-	-	-
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	2+	=	=	=	=	=

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
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CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 4 FEMALES

	18950	18951	18952	18953	18954	18955	18956	18958	18959	18960	18961	18962	18963	18964	18965	18966	18967	18968	18969	18970	18971	18972	18973	18974	18975
COLON	-	X	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	X	-	X	-	-	-	-	-
INTUSSUSCEPTION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
RECTUM	-	X	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	X	-	X	-	-	-	-	-
MESENTERIC LYMPH NODE	=	X	-	-	-	-	-	X	-	-	-	-	A	-	-	-	-	X	-	=	-	-	-	-	-
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	2+	=	=	=	=	=
RETICULUM CELL HYPERPLASIA.	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ATYPICAL EPITHELIAL HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
LYMPHOID HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ILEUM	=	X	=	-	-	-	-	X	-	-	-	-	-	-	-	-	-	X	-	X	-	-	-	-	-
INFLAMMATION.	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
INTUSSUSCEPTION.	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
LARYNX	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
TRACHEA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
THYROID	X	X	=	X	=	=	=	X	=	=	=	=	=	=	=	=	=	X	=	=	=	=	=	=	N
AMYLOID.	=	=	3+	=	2+	2+	2+	=	1+	2+	=	3+	4+	3+	2+	=	2+	=	=	2+	3+	1+	2+	2+	=
CYST(S).	=	=	=	=	=	=	=	=	=	=	P	=	=	P	=	P	=	=	P	=	=	=	=	=	=
FOLLICULAR CELL ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PARATHYROID	X	N	X	X	X	X	A	X	X	X	X	N	I	N	X	X	X	N	X	X	X	=	X	X	N
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	1+	=	=	=
ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ESOPHAGUS	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
LUNG	=	=	=	=	=	=	=	=	X	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
INFLAMMATION.	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ALVEOLAR/BRONCHIOLAR CELL HYPERPLASIA.	2+	2+	2+	1+	1+	2+	=	1+	=	=	2+	2+	1+	1+	1+	2+	1+	1+	2+	1+	=	=	=	=	2+
FIBROSIS.	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PIGMENT.	2+	2+	2+	3+	3+	2+	1+	2+	=	2+	3+	2+	2+	1+	2+	2+	2+	2+	2+	2+	2+	3+	1+	2+	1+
AMYLOID.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HISTIOCYTOSIS.	=	=	=	=	=	4+	3+	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	3+	4+	=	=
ADENOMATOSIS.	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ATELECTASIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=
HEMORRHAGE.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	2+	=	=	3+	=	=	=
BRONCHIAL LYMPH NODES	=	M	X	X	M	=	=	=	M	M	X	N	=	=	N	N	M	=	=	=	=	M	I	=	X

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 4 FEMALES

	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8
	9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9
	5 5 5 5 5 5 5 5 5 6 6 6 6 6 6 6 6 6 7 7 7 7 7 7 7
	0 1 2 3 4 5 6 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5
BRONCHIAL LYMPH NODES (CONTINUED)	
ALVEOLAR/BRONCHIOLAR CELL HYPERPLASIA.	= 2+
PIGMENT.	1+= = = = 2+2+2+= = = = 1+3+= = = 4+3+2+2+= = 4+=
HYPERPLASIA.	= = = = = = = P = = = = = = = = = 4+= = = = = = =
MAINSTEM BRONCHI	X X X X X X X X X X X X X X X X X X X X X X X X X
LIVER	= = = X = = = = = = = = = = = = = = = = A = = = X
LEUKOSTASIS.	2+= =
AMYLOID.	= 2+4+= 3+= 2+2+1+= 2+2+3+3+2+2+3+2+3+2+= = 3+3+=
EXTRAMEDULLARY HEMATOPOIESIS.	= =
CLEAR CELL FOCUS/FOCI.	= 2+= = P = = P = = = = = = = = = = = = = = = =
CYST(S).	= P P = = P = = P = = = = = P = = P = = = = P = =
CONGESTION.	= = = = = 3+4+= = = = 4+= = = = = = = = = 4+= = =
BILE DUCT ADENOMA.	= = = = = = = = = P = = = = = = = = = = = = = =
KARYOMEGALY.	= = = = = = = = = = = = = 1+= = = = = = = = = =
LYMPHOCYTOSIS.	= = = = = = = = = = = = = = = = = = 2+= = = = =
NECROSIS.	= 4+= = =
HEPATOCELLULAR CYSTIC DEGENERATION.	= =
CHOLANGIOMA.	= =
GALLBLADDER	- X - - - - - X - - - - - - - - - X - X - - - - -
SPLEEN	= = = X = = = = = X = = = = = = = = = = = = = X
AMYLOID.	2+3+3+= 2+2+3+2+1+= = 2+3+3+2+2+3+= 3+3+4+= 3+3+=
EXTRAMEDULLARY HEMATOPOIESIS.	4+= = = = 3+= = = = = = = = = = = = = = 4+= = =
HYPERPLASIA.	= = = = = = = = = = 2+= = = = = = = = = = = = =
CONGESTION.	= = = = = = = = = = = = = = = = = 4+= = = = = = =
PANCREAS	X X A X X X A X = = A X A X X A X = A X A X X X X
ADENOMA.	= = = = = = = = P P = = = = = = = = = = = = = =
DUCTAL ECTASIA.	= = = = = = = = = = = = = = = = = P = = = = = = =
HEART	- X - - - = = = - = = - - - - - - X - X - = = - -
THROMBOSIS.	= = = = = P 4+= = = = P = = = = = = = = = P P = =
MURAL THROMBOSIS.	= = = = = = = P = = = = = = = = = = = = = = = =
MYOCARDIOPATHY.	= = = = = = = = = P = = = = = = = = = = = = = =
KIDNEYS	= = = X = = = = = = = = = = = = = = = = = = = X
INFLAMMATION.	= =
AMYLOID.	= 3+4+= 4+4+4+4+3+3+3+3+4+4+4+2+4+3+3+4+4+2+4+4+=
GLOMERULAR NEPHROSIS.	2+3+= = = = = = = = = = = = = 3+= 2+= = = 2+= = =

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
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CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 4 FEMALES

	18950	18951	18952	18953	18954	18955	18956	18958	18959	18960	18961	18962	18963	18964	18965	18966	18967	18968	18969	18970	18971	18972	18973	18974	18975
KIDNEYS (CONTINUED)																									
MINERALIZATION.	3+	=	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=
URINARY BLADDER	-	X	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	X	-	X	-	-	-	-	-
OVARIES	-	X	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	X	-	X	-	-	-	-	-
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEMORRHAGE.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
UTERUS	-	=	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	X	-	X	-	-	-	-	-
HYPERPLASIA.	=	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
FOLLICULAR HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CARCINOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
STERNUM & RIB JUNCTION	=	X	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	X	-	X	-	-	-	-	-
INFLAMMATION.	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
FEMUR & BONE MARROW	-	X	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	X	-	X	-	-	-	-	-
NASAL CAVITY	-	X	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	X	-	X	-	-	-	-	-
OTHER	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

Reproduced from best available copy.

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 4 FEMALES

	18976	18977	18978	18979	18980	18981	18982	18983	18984	18985	18986	18987	18988	18989	18990	18991	18992	18993	18994	18995	18996	18997	18998	18999
SKIN	-	-	-	-	-	-	X	-	-	-	X	X	-	X	-	-	X	-	-	-	-	X	-	-
SKIN/MAMMARY	-	-	-	-	-	-	X	-	-	-	X	X	-	X	-	-	X	-	-	-	-	X	-	-
THIGH MUSCLE	-	-	-	-	-	-	X	-	-	-	X	X	-	X	-	-	X	-	-	-	-	X	-	-
SALIVARY GLAND	-	-	-	-	-	-	A	-	-	-	X	X	-	X	-	-	X	-	-	-	-	X	-	-
MANDIBULAR LYMPH NODE	-	-	-	-	-	-	A	-	-	-	=	X	-	X	-	-	X	-	-	=	-	X	-	-
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=
CONGESTION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=
SCIATIC NERVE	-	-	-	-	-	-	X	-	-	-	X	X	-	X	-	-	X	-	-	-	-	X	-	-
BRAIN	-	-	-	-	-	-	X	-	-	-	X	X	-	X	-	-	X	-	-	-	-	X	-	-
PITUITARY	X	X	I	X	X	X	M	X	X	I	X	X	X	X	X	X	M	M	X	X	I	I	X	M
ADRENALS	=	=	=	=	=	=	=	=	=	=	X	=	X	=	I	=	=	=	=	=	=	=	X	=
AMYLOID.	=	3+	2+	3+	3+	3+	=	3+	2+	=	=	2+	=	=	3+	=	3+	3+	2+	1+	3+	2+	=	3+
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=
CORTICAL ADENOMA.	P	=	=	=	=	=	P	P	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=
ADENOMA.	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEMORRHAGE.	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CORTICAL CELL HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	P	=	=	=	=	=	=	=	=
THYMUS	X	X	N	X	M	X	M	M	X	X	M	X	X	I	X	X	M	M	X	X	M	X	X	M
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
INVOLUTED.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
STOMACH	-	-	-	-	-	A	A	=	-	A	X	X	-	X	-	-	X	-	-	-	-	X	-	-
PIGMENT.	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
DUODENUM	-	-	-	-	-	A	A	-	-	-	X	X	-	X	-	-	X	-	-	-	-	X	-	-
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
INTUSSUSCEPTION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
JEJUNUM	-	-	-	-	-	-	X	-	-	-	X	X	-	X	-	-	X	-	-	-	-	X	-	-
CECUM	-	-	-	-	-	A	A	-	-	A	X	X	=	X	-	-	X	=	-	-	-	X	-	-
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	P	=	=	=	=	=	=

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
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CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
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GROUP 4 FEMALES

	18976	18977	18978	18979	18980	18981	18982	18983	18984	18985	18986	18987	18988	18989	18990	18991	18992	18993	18994	18995	18996	18997	18998	18999
COLON	-	-	-	-	-	A	A	-	=	-	X	X	-	X	-	-	X	-	-	-	-	X	-	-
INTUSSUSCEPTION.	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
RECTUM	-	-	-	-	-	A	A	-	-	-	X	X	-	X	-	-	X	-	-	-	-	X	-	-
MESENTERIC LYMPH NODE	-	-	-	-	-	-	A	-	-	A	X	X	-	=	=	-	X	-	-	-	-	=	-	-
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
RETICULUM CELL HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=
ATYPICAL EPITHELIAL HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=
LYMPHOID HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=
ILEUM	-	-	-	-	-	A	A	-	-	-	X	X	-	X	-	-	X	-	-	-	-	X	-	-
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
INTUSSUSCEPTION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
LARYNX	X	X	X	X	A	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
TRACHEA	X	X	X	X	A	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
THYROID	=	=	=	X	=	=	A	=	=	=	M	=	=	X	=	=	X	=	=	X	=	=	=	=
AMYLOID.	2+	2+	3+	=	4+	2+	=	2+	2+	3+	=	=	=	=	=	=	=	2+	2+	=	=	=	=	3+
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	P	=	P	P	=	=	=	=	P	P	P	=
FOLLICULAR CELL ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=
PARATHYROID	=	N	X	X	A	A	A	X	N	X	M	X	N	X	X	X	=	X	X	N	X	X	X	X
HYPERPLASIA.	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=
ESOPHAGUS	X	X	X	X	A	X	A	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	A
LUNG	=	=	=	=	A	=	A	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ALVEOLAR/BRONCHIOLAR CELL HYPERPLASIA.	2+	3+	2+	2+	=	2+	=	3+	2+	=	=	1+	2+	1+	2+	2+	1+	2+	=	2+	2+	2+	2+	2+
FIBROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PIGMENT.	2+	2+	2+	2+	=	2+	2+	3+	2+	2+	2+	2+	2+	2+	2+	2+	2+	2+	2+	2+	=	2+	4+	=
AMYLOID.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	2+	=	2+	=	=	2+
HISTIOCYTOSIS.	=	4+	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ADENOMATOSIS.	=	=	=	=	=	=	=	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ATELECTASIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEMORRHAGE.	=	=	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=
BRONCHIAL LYMPH NODES	X	=	=	X	M	=	A	M	=	N	M	X	=	M	=	=	=	=	X	=	M	=	=	M

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
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CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 4 FEMALES

	1876	1877	1878	1879	1880	1881	1882	1883	1884	1885	1886	1887	1888	1889	1890	1891	1892	1893	1894	1895	1896	1897	1898	1899
BRONCHIAL LYMPH NODES (CONTINUED)																								
ALVEOLAR/BRONCHIOLAR CELL HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	2+	=
PIGMENT.	=	3+	3+	=	=	3+	=	=	2+	=	=	=	1+	=	3+	2+	3+	3+	=	2+	=	2+	4+	=
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
MAINSTEM BRONCHI	X	X	X	X	A	X	X	X	X	X	M	X	X	X	X	X	X	X	X	X	X	X	X	X
LIVER	=	=	=	=	=	=	=	=	A	A	X	X	=	=	=	X	=	=	=	=	=	=	X	=
LEUKOSTASIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
AMYLOID.	2+	3+	3+	3+	3+	2+	=	2+	=	=	=	=	3+	=	=	=	2+	3+	2+	3+	4+	3+	=	3+
EXTRAMEDULLARY HEMATOPOIESIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	1+	=	=	=	=	=	=	=	=	=	=
CLEAR CELL FOCUS/FOCI.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	1+	=	=	=	=	=	=	3+	=	=
CYST(S).	=	=	P	P	P	P	=	P	=	=	=	=	=	=	=	=	=	=	=	P	P	P	=	=
CONGESTION.	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
BILE DUCT ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
KARYOMEGALY.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
LYMPHOCYTOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
NECROSIS.	=	=	=	=	=	3+	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEPATOCELLULAR CYSTIC DEGENERATION.	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CHOLANGIOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=
GALLBLADDER	-	-	-	-	-	-	A	-	-	-	X	X	-	X	-	-	X	-	-	-	-	X	-	-
SPLEEN	=	=	=	=	=	A	A	=	A	A	X	X	=	X	=	X	X	=	=	X	=	=	X	=
AMYLOID.	2+	=	3+	2+	3+	=	=	4+	=	=	=	=	3+	=	=	=	=	2+	4+	=	2+	3+	=	3+
EXTRAMEDULLARY HEMATOPOIESIS.	=	4+	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	=
CONGESTION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PANCREAS	X	X	X	X	X	A	A	X	A	A	X	X	X	X	X	X	X	X	A	X	X	X	X	A
ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
DUCTAL ECTASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEART	-	=	-	=	-	-	=	=	-	-	X	X	-	X	-	-	X	-	-	-	-	X	-	-
THROMBOSIS.	=	P	=	P	=	=	P	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
MURAL THROMBOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
MYOCARDIOPATHY.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
KIDNEYS	=	=	=	=	=	=	A	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	X	=
INFLAMMATION.	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
AMYLOID.	2+	4+	3+	3+	4+	4+	=	4+	4+	4+	=	3+	3+	=	2+	=	3+	2+	4+	3+	2+	4+	=	4+
GLOMERULAR NEPHROSIS.	2+	3+	=	=	=	=	=	=	=	=	2+	=	=	2+	=	2+	=	=	=	=	=	3+	=	=

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
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CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
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GROUP 4 FEMALES

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8	8
	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	7	7	7	7	8	8	8	8	8	8	8	8	8	8	9	9	9	9	9	9	9	9	9	9
	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9
KIDNEYS (CONTINUED)																								
MINERALIZATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
URINARY BLADDER	-	-	-	-	-	-	A	-	-	-	X	X	-	X	-	-	X	-	-	-	-	X	-	-
OVARIES	-	-	-	-	-	-	A	-	-	-	X	X	-	X	=	-	X	-	-	-	-	=	-	-
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=
HEMORRHAGE.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=
UTERUS	-	-	-	-	-	-	A	-	-	-	X	X	-	X	-	-	=	-	=	-	-	X	-	-
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
FOLLICULAR HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=
CARCINOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=
STERNUM & RIB JUNCTION	-	-	-	-	-	A	A	-	-	-	X	X	-	X	-	-	X	-	-	-	-	X	-	-
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
FEMUR & BONE MARROW	-	-	-	-	-	-	X	-	-	-	X	X	-	X	-	-	X	-	-	-	-	X	-	-
NASAL CAVITY	-	-	-	-	-	-	X	-	-	-	X	X	-	X	-	-	X	-	-	-	-	X	-	-
OTHER	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
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CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 5 FEMALES

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5	5	5	5	5	5	5	5	5	5	6	6	6	6	6	6	6	6	6	7	7	7	7	7
	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4
SKIN	X	-	-	X	-	-	-	-	-	-	-	X	-	-	X	-	-	X	-	-	-	X	-	-	-
SKIN/MAMMARY	X	-	-	X	-	-	-	-	-	-	-	X	-	-	X	-	-	X	-	-	-	X	-	-	-
THIGH MUSCLE	X	-	-	X	-	-	-	-	-	-	-	X	-	-	X	-	-	X	-	-	-	X	-	-	-
SALIVARY GLAND	X	-	-	X	-	-	-	-	-	-	-	X	-	-	X	-	-	X	-	-	-	X	-	-	-
MANDIBULAR LYMPH NODE	X	-	-	X	-	-	-	-	-	-	-	=	-	-	X	-	-	X	-	-	-	=	-	-	-
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=
FOLLICULAR HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
LYMPHOID HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=
PLASMACYTOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
SCIATIC NERVE	X	-	-	X	-	-	-	-	-	-	-	X	-	-	X	-	-	X	-	-	-	X	-	-	-
BRAIN	X	-	-	X	-	-	-	-	-	-	-	X	-	-	X	-	-	X	-	-	-	=	-	-	-
MINERALIZATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	1+	=	=	=
PITUITARY	X	X	A	I	A	A	I	I	X	X	I	I	N	X	X	X	X	X	N	X	X	X	I	X	I
ADRENALS	=	=	A	=	A	A	I	=	X	I	=	=	I	X	=	X	=	=	X	A	=	=	=	A	=
AMYLOID.	3+	3+	=	=	=	=	=	3+	=	=	2+	4+	3+	=	4+	=	=	3+	=	=	4+	3+	3+	=	3+
CORTICAL CELL HYPERPLASIA.	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CYST(S).	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PIGMENT.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	2+	=
HYPERPLASIA.	=	P	=	=	=	=	=	=	=	=	2+	=	=	=	P	=	P	=	=	=	P	=	=	=	P
CORTICAL ADENOMA.	=	=	=	P	=	=	P	=	=	=	=	P	=	=	=	=	=	P	=	=	=	=	=	=	=
THYMUS	M	M	A	X	M	A	X	X	X	X	X	N	M	X	M	M	M	X	X	A	X	I	N	=	X
INVOLUTED.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=
ERYTHROPHAGOCYTOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
STOMACH	X	X	-	X	-	-	-	-	-	A	-	A	-	=	X	-	-	X	-	-	-	X	-	A	-
PIGMENT.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
NECROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=
DUODENUM	X	-	-	X	-	-	-	-	-	-	-	A	-	-	X	-	-	X	-	-	-	X	-	-	-
JEJUNUM	X	-	-	X	-	-	-	-	-	-	-	X	-	-	X	-	-	X	-	-	-	X	-	-	-
CECUM	X	-	-	X	-	-	-	-	-	-	-	A	-	=	X	-	-	X	-	-	-	X	-	-	-

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
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CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 5 FEMALES

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5	5	5	5	5	5	5	5	5	5	6	6	6	6	6	6	6	6	7	7	7	7	7	7
	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4
CECUM (CONTINUED)																								
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=
COLON	X	-	-	X	-	-	-	-	-	-	-	A	-	-	X	-	-	X	-	-	-	X	-	-
RECTUM	X	-	-	X	-	-	-	-	-	-	-	A	-	-	X	-	-	X	-	-	-	X	-	-
MESENTERIC LYMPH NODE	X	-	-	X	-	-	-	-	-	-	-	A	-	-	=	-	-	X	-	-	-	=	-	-
FOLLICULAR HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=
MINERALIZATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	1+	=	=
PLASMACYTOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	=
ILEUM	X	-	-	X	-	-	-	-	-	-	-	A	-	-	X	-	-	X	-	-	-	X	-	-
LARYNX	X	X	A	X	A	A	X	X	X	X	X	X	X	X	X	X	X	X	A	X	X	X	=	X
PIGMENT.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	2+	=
HEMORRHAGE.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=
TRACHEA	X	X	A	X	A	A	X	X	X	X	X	X	X	X	X	X	X	X	=	A	X	X	X	X
HEMORRHAGE.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=
THYROID	=	=	A	=	=	A	=	=	X	=	=	=	=	X	=	X	=	=	X	A	=	=	=	A	=
AMYLOID.	=	2+	=	2+	4+	=	2+	3+	=	4+	=	4+	2+	=	2+	=	2+	3+	=	=	4+	2+	4+	=	2+
CYST(S).	P	=	=	P	=	=	=	=	=	=	P	=	=	=	P	=	=	P	=	=	=	P	=	=	=
FOLLICULAR HYPERPLASIA.	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
FOLLICULAR CELL ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=
PARATHYROID	=	X	A	=	M	A	X	=	X	X	=	=	X	X	=	X	X	X	X	A	=	X	X	M	X
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=
ADENOMA.	P	=	=	=	=	=	=	P	=	=	P	P	=	=	=	=	=	=	=	=	=	=	=	=
HYPERPLASIA.	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=
ESOPHAGUS	X	X	A	X	A	A	X	X	X	X	X	X	X	X	X	X	X	X	=	X	X	X	X	X
HEMORRHAGE.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=
LUNG	=	=	A	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ALVEOLAR/BRONCHIOLAR CELL HYPERPLASIA.	2+	2+	=	1+	2+	=	1+	=	2+	2+	=	1+	1+	1+	1+	1+	=	1+	2+	2+	2+	3+	3+	=	2+
PIGMENT.	2+	2+	=	1+	2+	2+	2+	3+	2+	2+	2+	3+	2+	2+	3+	2+	=	2+	2+	3+	3+	2+	=	2+	2+
INFLAMMATION.	=	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=
HISTIOCYTOSIS.	=	=	=	=	=	=	=	4+	=	=	3+	=	=	=	=	=	4+	=	=	=	2+	=	=	=

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GROUP 5 FEMALES

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5	5	5	5	5	5	5	5	5	5	6	6	6	6	6	6	6	6	6	7	7	7	7
	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4
LUNG (CONTINUED)																							
HEMORRHAGE.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	2+	=	4+	=	=	=	=	=
FIBROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	1+	=	=	=	3+	=	=
ATELECTASIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ADENOMATOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
EOSINOPHILIC MASS(ES).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
BRONCHIAL LYMPH NODES	=	M	A	M	N	A	N	M	X	=	=	M	=	=	=	=	X	M	=	M	=	=	I
PIGMENT.	2+	=	=	=	=	=	=	=	3+	1+	=	2+	2+	3+	3+	=	=	3+	=	1+	2+	=	4+
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
MAINSTEM BRONCHI	X	X	A	X	A	A	X	X	X	X	X	X	X	X	X	X	X	=	A	X	X	X	X
HEMORRHAGE.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=
LIVER	=	=	A	=	A	A	A	=	X	=	=	=	=	X	=	=	=	=	=	A	=	=	=
AMYLOID.	3+	3+	=	3+	=	=	2+	=	=	2+	=	3+	2+	=	2+	2+	3+	=	=	=	3+	=	3+
CYST(S).	=	=	=	=	=	=	=	=	=	=	P	=	=	=	P	=	=	P	=	=	=	=	=
PIGMENT.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CLEAR CELL FOCUS/FOCI.	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	P	=	=	=	=	=
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	2+	=	=	=	2+	=	=	=	=
CONGESTION.	=	3+	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=
HEMOSIDEROSIS.	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
NECROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=
BILE DUCT HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	2+	=
PLASMACYTOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEPATOCELLULAR VACUOLATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
GALLBLADDER	X	-	-	A	-	-	-	-	-	-	A	-	-	X	-	-	X	-	-	-	X	-	-
SPLEEN	=	=	A	=	A	A	=	=	X	=	=	=	=	X	X	=	=	=	X	A	=	=	=
AMYLOID.	2+	3+	=	3+	=	=	2+	4+	=	3+	3+	4+	2+	=	=	3+	3+	3+	=	=	4+	3+	4+
THROMBOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEMOSIDEROSIS.	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
EXTRAMEDULLARY HEMATOPOIESIS.	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	3+	=	=	=	=	=	=
PLASMACYTOMA.	=	=	A	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PANCREAS	X	X	A	X	A	A	X	A	X	A	X	A	X	X	X	X	X	X	X	A	X	X	X
CARCINOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
DUCTAL ECTASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEART	X	-	A	=	-	A	-	=	-	-	=	X	-	-	X	-	=	X	-	-	=	=	-
THROMBOSIS.	=	=	=	P	=	=	=	P	=	=	P	=	=	=	=	=	P	=	=	=	P	P	=

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GROUP 5 FEMALES

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	5	5	5	5	5	5	5	5	5	5	6	6	6	6	6	6	6	6	6	6	7	7	7	7
	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4
HEART (CONTINUED)																								
ENDOCARDITIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
MYOCARDIOPATHY.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
KIDNEYS	=	=	A	=	A	A	=	=	X	=	=	=	=	X	=	=	=	=	X	A	=	=	=	A	=
AMYLOID.	4+	4+	=	4+	=	=	3+	4+	=	4+	4+	4+	4+	=	4+	=	4+	4+	=	=	4+	3+	4+	=	4+
CYST(S).	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
GLOMERULAR NEPHROSIS.	3+	3+	=	=	=	=	2+	=	=	=	=	=	=	=	4+	3+	=	=	=	=	=	4+	=	=	2+
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	4+	=	=	=
MINERALIZATION.	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
NECROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CHRONIC INTERSTITIAL NEPHRITIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	2+	=	=	=	=	=	=	=	=	=	=
PYELONEPHRITIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=
INFARCT.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=
PLASMACYTOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
URINARY BLADDER	X	-	-	X	-	-	-	-	-	-	-	A	-	-	X	-	-	X	-	-	-	X	-	-	-
OVARIES	=	-	-	X	-	-	-	-	-	-	-	X	-	-	X	-	=	=	-	-	-	X	-	-	-
CYST(S).	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=
PAPILLARY HYPERPLASIA.	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=
UTERUS	=	-	-	X	-	-	-	-	-	-	-	X	-	-	X	-	-	X	-	-	-	X	-	-	-
PAPILLARY HYPERPLASIA.	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
LEIOMYOMA.	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
STERNUM & RIB JUNCTION	X	-	-	X	-	-	-	-	-	-	-	X	-	-	X	-	-	X	-	-	-	X	-	-	-
FEMUR & BONE MARROW	X	-	-	X	-	-	-	-	-	-	-	X	-	-	X	-	-	X	-	-	-	X	-	-	-
NASAL CAVITY	X	-	-	X	-	-	-	-	-	-	-	X	-	-	X	-	-	X	-	-	-	X	-	-	-
OTHER	-	=	-	-	-	-	-	-	-	=	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(SMALL INTESTINE); NO SIGNIFICANT LESION RECOGNIZED.	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
(LARGE INTESTINE); AUTOLYZED.	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
(SMALL INTESTINE); AUTOLYZED.	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 5 FEMALES

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7	7	7	7	7	8	8	8	8	8	8	8	8	8	8	9	9	9	9	9	9	9	9	9
	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9
SKIN	-	-	X	-	-	-	-	-	X	X	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-
SKIN/MAMMARY	-	-	X	-	-	-	-	-	X	X	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-
THIGH MUSCLE	-	-	X	-	-	-	-	-	X	X	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-
SALIVARY GLAND	-	-	X	-	-	-	-	-	X	X	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-
MANDIBULAR LYMPH NODE	-	-	X	-	-	-	-	-	X	=	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
FOLLICULAR HYPERPLASIA.	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
LYMPHOID HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PLASMACYTOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=
SCIATIC NERVE	-	-	X	-	-	-	-	-	X	X	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-
BRAIN	-	-	X	-	-	-	-	-	X	X	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-
MINERALIZATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PITUITARY	X	I	X	A	I	I	I	X	X	X	I	I	I	I	X	M	X	I	X	X	I	X	I	I	X
ADRENALS	I	I	=	A	I	X	=	=	=	=	=	=	A	=	X	=	=	I	=	=	X	X	X	=	X
AMYLOID.	3+	3+	4+	=	3+	=	2+	2+	4+	3+	3+	3+	=	2+	=	3+	4+	=	2+	2+	=	=	=	3+	=
CORTICAL CELL HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PIGMENT.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CORTICAL ADENOMA.	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=
THYMUS	X	M	M	A	M	X	M	=	X	M	M	A	N	X	X	M	=	I	X	N	X	X	X	X	X
INVOLUTED.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=
ERYTHROPHAGOCYTOSIS.	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
STOMACH	-	-	X	-	-	-	X	-	X	A	-	-	-	-	-	X	-	-	-	-	-	-	-	=	-
PIGMENT.	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
NECROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=
DUODENUM	-	-	X	-	-	-	-	-	X	A	-	-	A	-	-	X	-	-	-	-	-	-	-	-	-
JEJUNUM	-	-	X	-	-	-	-	-	X	X	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-
CECUM	-	-	X	-	-	-	-	-	X	A	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
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CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 5 FEMALES

	19075	19076	19077	19078	19079	19080	19081	19082	19083	19084	19085	19086	19087	19088	19089	19090	19091	19092	19093	19094	19095	19096	19097	19098	19099
CECUM (CONTINUED)																									
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
COLON	-	-	X	-	-	-	-	-	X	A	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-
RECTUM	-	-	X	-	-	-	-	-	X	A	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-
MESENTERIC LYMPH NODE	-	-	X	-	-	-	-	-	X	=	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-
FOLLICULAR HYPERPLASIA.	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
MINERALIZATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PLASMACYTOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ILEUM	-	-	X	-	-	-	-	-	X	A	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-
LARYNX	X	=	X	A	A	X	X	X	I	X	X	X	A	X	X	X	X	A	X	X	X	X	X	X	X
PIGMENT.	=	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEMORRHAGE.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
TRACHEA	X	X	X	A	A	X	X	X	X	X	X	X	A	X	X	X	X	A	X	X	X	X	X	X	X
HEMORRHAGE.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
THYROID	=	=	=	A	=	=	=	X	=	=	=	=	A	=	X	=	=	N	X	=	X	X	X	=	X
AMYLOID.	2+	1+	2+	=	4+	=	2+	=	3+	3+	2+	2+	=	2+	=	3+	3+	=	=	3+	=	=	=	=	=
CYST(S).	=	=	=	=	=	P	=	=	P	P	=	=	=	P	=	P	=	=	=	=	=	=	=	P	=
FOLLICULAR HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
FOLLICULAR CELL ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PARATHYROID	X	=	X	A	N	N	X	X	X	X	=	N	N	N	X	=	X	N	X	X	X	X	X	X	X
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ADENOMA.	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	2+	=	=	=	=	P	=	=	=	=	=	=	=	=	=
ESOPHAGUS	X	X	X	A	A	X	X	X	X	X	X	X	A	X	X	X	X	A	X	X	X	X	X	X	X
HEMORRHAGE.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
LUNG	=	=	=	=	=	=	=	=	=	=	=	=	A	=	=	=	=	=	=	=	=	=	=	=	=
ALVEOLAR/BRONCHIOLAR CELL HYPERPLASIA.	=	3+	2+	=	=	1+	1+	2+	2+	2+	1+	P	=	2+	=	2+	1+	2+	2+	2+	3+	2+	=	1+	3+
PIGMENT.	2+	2+	2+	3+	2+	2+	2+	3+	2+	2+	3+	2+	3+	2+	1+	2+	2+	3+	3+	3+	2+	2+	3+	2+	4+
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	4+	=	=	3+	=	4+	=	4+	4+	=	=
HISTIOCYTOSIS.	4+	=	=	=	=	=	=	3+	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
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CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 5 FEMALES

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7	7	7	7	7	8	8	8	8	8	8	8	8	8	8	9	9	9	9	9	9	9	9	9
	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9
LUNG (CONTINUED)																								
HEMORRHAGE.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
FIBROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ATELECTASIS.	=	=	=	=	=	=	=	=	=	2+	=	=	=	=	=	2+	=	=	=	=	=	=	=	P
ADENOMATOSIS.	=	=	=	=	=	=	=	=	=	=	1+	=	=	=	=	=	=	=	=	=	=	=	=	=
EOSINOPHILIC MASS(ES).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=
BRONCHIAL LYMPH NODES	I	=	=	A	M	I	M	=	=	M	=	=	=	=	=	M	N	=	=	X	X	=	=	=
PIGMENT.	=	3+	2+	=	=	=	3+	3+	=	3+	3+	3+	3+	1+	3+	=	=	2+	3+	=	=	1+	3+	1+
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+
MAINSTEM BRONCHI	X	X	X	A	A	X	X	X	X	X	X	X	A	X	X	X	X	A	X	X	X	X	X	X
HEMORRHAGE.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
LIVER	=	=	=	A	=	=	=	=	=	=	=	=	A	=	X	=	=	A	=	=	X	X	=	=
AMYLOID.	3+	3+	3+	=	3+	3+	=	2+	=	3+	3+	4+	=	=	=	3+	4+	=	3+	4+	=	=	=	3+
CYST(S).	P	=	P	=	=	=	=	P	P	=	=	=	=	=	P	=	=	=	P	=	=	=	=	=
PIGMENT.	=	=	=	=	=	=	1+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CLEAR CELL FOCUS/FOCI.	=	=	=	=	=	=	=	P	=	P	=	=	=	=	P	=	=	=	=	=	=	=	=	=
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CONGESTION.	=	=	=	=	=	=	=	4+	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEMOSIDEROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
NECROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
BILE DUCT HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PLASMACYTOMA.	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=
HEPATOCELLULAR VACUOLATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	2+	=	2+
GALLBLADDER	-	-	A	-	-	-	-	-	A	A	-	-	-	-	-	X	-	-	-	-	-	-	-	-
SPLEEN	=	=	=	A	A	X	=	=	=	X	=	=	A	=	X	=	=	A	=	=	X	X	X	X
AMYLOID.	2+	2+	4+	=	=	=	2+	3+	4+	=	2+	2+	=	=	=	3+	3+	=	3+	3+	=	=	=	=
THROMBOSIS.	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEMOSIDEROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
EXTRAMEDULLARY HEMATOPOIESIS.	=	=	=	=	=	=	=	3+	=	=	2+	=	=	=	=	=	=	=	=	=	=	=	=	=
PLASMACYTOMA.	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=
PANCREAS	X	X	X	A	A	X	X	X	X	X	X	X	A	A	X	=	X	A	X	=	X	X	X	X
CARCINOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=
DUCTAL ECTASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	2+	=	=	=	=	=
HEART	=	-	=	=	-	I	-	=	=	X	=	-	-	-	-	X	-	A	-	-	-	-	-	-
THROMBOSIS.	P	=	P	=	=	=	=	P	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
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(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
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CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 5 FEMALES

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	7	7	7	7	7	8	8	8	8	8	8	8	8	8	9	9	9	9	9	9	9	9	9	9	9
	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9
HEART (CONTINUED)																									
ENDOCARDITIS.	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
MYOCARDIOPATHY.	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
KIDNEYS	=	=	=	A	A	=	=	=	=	=	=	=	A	=	X	=	=	A	=	=	X	X	=	X	=
AMYLOID.	4+	4+	4+	=	=	3+	4+	4+	4+	4+	4+	4+	=	=	=	4+	4+	=	4+	4+	=	=	=	=	=
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
GLOMERULAR NEPHROSIS.	=	=	4+	=	=	=	2+	=	2+	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	3+
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
MINERALIZATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
NECROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=
CHRONIC INTERSTITIAL NEPHRITIS.	=	=	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PYELONEPHRITIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
INFARCT.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PLASMACYTOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=
URINARY BLADDER	-	-	X	-	-	-	-	-	X	X	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-
OVARIES	-	-	X	-	-	-	-	-	X	=	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-
CYST(S).	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PAPILLARY HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
UTERUS	-	-	=	-	-	-	-	-	X	X	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-
PAPILLARY HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
LEIOMYOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HYPERPLASIA.	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
INFLAMMATION.	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
STERNUM & RIB JUNCTION	-	-	X	-	-	-	-	-	X	X	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-
FEMUR & BONE MARROW	-	-	X	-	-	-	-	-	X	X	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-
NASAL CAVITY	-	-	X	-	-	-	-	-	X	X	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-
OTHER	-	-	=	-	-	-	-	-	-	-	-	-	=	-	-	-	-	-	-	-	-	-	-	-	-
(SMALL INTESTINE); NO SIGNIFICANT LESION RECOGNIZED.	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
(LARGE INTESTINE); AUTOLYZED.	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=
(SMALL INTESTINE); AUTOLYZED.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 6 FEMALES

	19501	19512	19523	19534	19545	19556	19588	19599	19601	19612	19623	19634	19645	19656	19667	19678	19689	19701	19713	19734	19745	19756
SKIN	-	X	-	-	-	-	X	-	-	-	-	-	X	X	-	-	-	-	X	-	-	-
SKIN/MAMMARY	-	X	-	-	-	-	X	-	-	-	-	-	X	X	-	-	-	-	X	-	-	-
THIGH MUSCLE	-	X	-	-	-	-	X	-	-	-	-	-	X	X	-	-	-	-	X	-	-	-
SALIVARY GLAND	-	X	-	-	-	-	X	-	-	-	-	-	X	X	-	-	-	-	X	-	-	-
MANDIBULAR LYMPH NODE	-	X	-	-	-	-	A	-	-	-	-	-	X	M	-	-	-	-	-	-	-	-
AMYLOID.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	2+	=
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=
SCIATIC NERVE	-	X	-	-	-	-	X	-	-	-	-	-	X	X	-	-	-	-	X	-	-	-
BRAIN	-	X	-	-	-	-	X	-	-	-	-	-	X	X	-	-	-	-	X	-	-	-
PITUITARY	X	I	X	X	A	X	I	I	I	I	I	X	I	X	X	I	X	I	X	A	A	A	X	X	X
ADRENALS	=	=	=	=	=	X	=	I	=	I	=	=	=	A	=	=	=	=	=	A	A	=	=	=
AMYLOID.	3+	3+	2+	3+	2+	=	3+	4+	2+	=	3+	2+	3+	3+	=	=	2+	2+	3+	3+	=	=	3+	3+	2+
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HYPERPLASIA.	=	=	=	=	P	=	=	=	=	=	=	P	=	=	=	P	=	=	P	=	=	=	2+	P
ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=
CORTICAL CELL HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	P	=	=
THYMUS	N	M	M	M	M	M	I	N	X	N	N	M	=	M	X	M	M	A	M	M	A	M	M	M	N
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
STOMACH	-	X	-	-	-	-	A	-	-	-	-	-	X	A	-	-	-	-	A	-	-	-	X	-
DUODENUM	-	X	-	-	-	-	A	-	-	-	-	-	X	A	-	-	-	-	A	-	-	-	X	A
JEJUNUM	-	X	-	-	-	-	X	-	-	-	-	-	X	X	-	-	-	-	X	-	-	-	X	-
CECUM	-	X	-	-	-	-	=	-	-	-	-	=	X	A	-	-	-	-	A	-	-	-	X	-
INFLAMMATION.	=	=	=	=	=	=	3+	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=
COLON	-	X	-	-	-	-	A	-	-	-	-	-	X	A	-	-	-	-	A	-	-	-	X	-
RECTUM	-	X	-	-	-	-	A	-	-	-	-	-	X	A	-	-	-	-	A	-	-	-	X	-
MESENTERIC LYMPH NODE	-	X	-	-	-	-	A	-	-	-	-	-	X	A	-	-	-	-	A	-	-	-	X	-

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
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CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 6 FEMALES

	19150	19151	19152	19153	19154	19155	19156	19158	19159	19160	19161	19162	19163	19164	19165	19166	19167	19168	19169	19170	19171	19173	19174	19175	19176
MESENTERIC LYMPH NODE (CONTINUED)																									
ERYTHROPHAGOCYTOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
LEUKEMIA/LYMPHOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ILEUM	-	X	-	-	-	-	A	-	-	-	-	-	X	A	-	-	-	-	A	-	-	-	-	X	-
LARYNX	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	A	A	X	X	X	X
TRACHEA	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	A	X	X	X	X
THYROID	=	=	=	=	=	X	=	=	=	X	=	=	=	=	A	=	=	=	=	=	A	N	=	=	=
AMYLOID.	3+	3+	2+	2+	3+	=	2+	3+	2+	=	3+	2+	2+	2+	=	=	2+	3+	2+	3+	=	=	2+	1+	3+
CYST(S).	=	P	=	=	=	=	P	=	=	=	=	=	P	=	=	P	=	=	=	=	=	=	=	P	=
ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
C-CELL ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
FOLLICULAR CELL ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PARATHYROID	X	=	X	X	X	X	=	N	X	N	N	X	=	X	A	=	X	A	=	A	A	N	X	=	X
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=
HYPERPLASIA.	=	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	2+	=
ADENOMA.	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=
ESOPHAGUS	X	X	X	X	X	X	X	X	X	X	X	X	X	A	X	X	X	X	X	A	A	X	X	X	X
LUNG	=	X	=	X	X	X	=	X	=	X	X	=	X	=	=	=	=	=	X	A	A	X	=	=	=
HISTIOCYTOSIS.	4+	=	=	=	=	=	4+	=	4+	=	=	=	=	4+	=	4+	4+	4+	=	=	=	=	4+	=	3+
CONGESTION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ALVEOLAR/BRONCHIOLAR CELL HYPERPLASIA.	=	=	P	=	=	=	3+	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	2+	=
FIBROSIS.	=	=	=	=	=	=	=	=	=	=	=	1+	=	=	=	=	=	=	=	=	=	=	=	=	=
ATELECTASIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=
HEMOSIDEROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PNEUMOLITHIASIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEMORRHAGE.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
BRONCHIAL LYMPH NODES	X	M	M	M	M	X	M	X	M	M	N	N	=	M	X	M	M	M	M	M	A	M	M	M	N
CONGESTION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PIGMENT.	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	=
ERYTHROPHAGOCYTOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
MAINSTEM BRONCHI	X	X	X	X	X	X	M	X	X	X	X	X	X	X	X	X	X	X	X	X	A	X	X	X	X
LIVER	=	=	=	=	=	X	=	=	=	X	=	=	=	=	=	=	=	A	=	A	A	A	=	=	=

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
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CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 6 FEMALES

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	5	5	5	5	5	5	5	5	5	6	6	6	6	6	6	6	6	6	7	7	7	7	7	7	7
	0	1	2	3	4	5	6	8	9	0	1	2	3	4	5	6	7	8	9	0	1	3	4	5	6
LIVER (CONTINUED)																									
AMYLOID.	3+	=	2+	3+	3+	=	3+	3+	3+	=	3+	4+	3+	3+	3+	=	3+	=	3+	=	=	=	3+	3+	4+
CONGESTION.	3+	4+	=	=	=	=	3+	=	4+	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	=
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	P	P	=	P	=	=	=	P	=	=	=	=	=	=
KARYOMEGALY.	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CLEAR CELL FOCUS/FOCI.	=	=	=	=	=	=	P	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	P
GALLBLADDER	-	A	-	-	-	-	A	-	-	-	-	-	X	A	-	-	-	-	A	-	A	-	-	X	-
PAPILLARY HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
SPLEEN	=	=	M	=	X	X	A	=	=	X	=	=	X	=	A	X	=	=	=	A	A	A	=	=	=
AMYLOID.	3+	3+	=	3+	=	=	=	4+	2+	=	3+	3+	=	4+	=	=	2+	3+	4+	=	=	=	3+	2+	2+
EXTRAMEDULLARY HEMATOPOIESIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	3+	=	3+
PANCREAS	X	X	A	X	A	X	X	A	X	X	X	=	X	A	A	X	X	A	=	A	A	A	X	=	X
ATROPHY.	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	3+	=	=	=	=	=	=
HEPATOCELLULAR DIFFERENTIATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	3+	=
HEART	=	=	-	-	-	-	=	=	=	-	X	-	X	=	-	-	=	=	=	=	A	A	=	=	=
AMYLOID.	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
THROMBOSIS.	P	P	=	=	=	=	P	=	P	=	=	=	=	P	=	=	P	P	P	=	=	=	P	=	P
MINERALIZATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+
MYOCARDIOPATHY.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=
MURAL THROMBOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
KIDNEYS	=	=	=	=	=	X	=	X	=	=	=	=	=	=	=	=	=	=	=	=	A	A	=	=	=
AMYLOID.	4+	4+	4+	4+	4+	4+	=	3+	=	4+	=	4+	4+	4+	4+	4+	3+	4+	4+	4+	4+	=	=	4+	2+	4+
MINERALIZATION.	=	=	=	=	=	=	=	=	=	P	=	=	=	2+	=	=	=	=	=	=	=	=	=	=	=
GLOMERULAR NEPHROSIS.	=	=	=	=	=	=	=	=	=	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+
PLASMACYTOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	2+	=	=	=	=	=	=
URINARY BLADDER	-	X	-	-	-	-	A	-	-	-	-	-	X	A	-	-	-	-	X	-	-	-	-	X	-
OVARIES	-	X	-	-	-	-	X	-	-	-	-	-	X	A	-	-	-	-	X	-	-	-	-	X	-
UTERUS	-	X	-	-	-	-	X	-	-	-	-	-	X	A	-	-	-	-	X	-	-	-	-	X	-
STERNUM & RIB JUNCTION	-	X	-	-	-	-	X	-	-	-	-	-	X	X	-	-	-	-	X	-	-	-	-	X	-
FEMUR & BONE MARROW	-	X	-	-	-	-	X	-	-	-	-	-	X	X	-	-	-	-	X	-	-	-	-	X	-
NASAL CAVITY	-	X	-	-	-	-	X	-	-	-	-	-	X	X	-	-	-	-	X	-	-	-	-	X	-

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
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(P) PRESENT (1+) MINIMAL (2+) SLIGHT
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CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 6 FEMALES

	1950	1951	1952	1953	1954	1955	1956	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1973	1974	1975	1976
OTHER (ABDOMINAL CAVITY), MESOTHELIOMA, GENERALIZED.	-	=	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=

(X) NO SIGNIFICANT LESION RECOGNIZED
(I) INSUFFICIENT TISSUE PRESENT IN SECTION
(N) NOT PRESENT IN SECTION
(M) MISSING
(A) AUTOLYZED
(-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 6 FEMALES

	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
SKIN	-	-	X	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	X	X	-	-	-
SKIN/MAMMARY	-	-	X	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	X	X	-	-	-
THIGH MUSCLE	-	-	X	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	X	X	-	-	-
SALIVARY GLAND	-	-	X	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	X	X	-	-	-
MANDIBULAR LYMPH NODE	-	-	X	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	A	X	-	-	-
AMYLOID.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
SCIATIC NERVE	-	-	X	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	X	X	-	-	-
BRAIN	-	-	X	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	X	X	-	-	-
PITUITARY	X	X	X	X	A	A	I	M	I	I	I	X	I	X	N	I	I	I	X	X	X	I	M
ADRENALS	=	=	=	=	A	A	X	=	=	I	I	X	=	X	I	=	I	I	=	=	X	=	=
AMYLOID.	3+	3+	3+	3+	=	=	=	2+	2+	4+	4+	=	3+	=	=	3+	4+	3+	2+	3+	=	3+	=
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=
HYPERPLASIA.	P	P	P	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P
ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=
CORTICAL CELL HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
THYMUS	X	X	X	M	A	M	M	N	X	=	X	M	M	M	N	M	I	N	I	M	M	I	M
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
INFLAMMATION.	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=
STOMACH	-	-	X	-	-	-	-	-	A	-	-	-	-	A	-	-	-	-	X	X	-	-	-
DUODENUM	-	-	X	-	-	-	-	-	A	-	-	-	-	A	-	-	-	-	X	X	-	-	-
JEJUNUM	-	-	X	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	X	X	-	-	-
CECUM	-	-	=	-	-	-	-	-	A	-	-	-	-	A	-	-	-	-	X	=	-	-	-
INFLAMMATION.	=	=	P	=	=	P	=	=	=	=	=	=	=	=	=	P	=	=	3+	=	=	=	=
COLON	-	-	X	-	-	-	-	-	A	-	-	-	-	A	-	-	-	-	X	X	-	-	-
RECTUM	-	-	X	-	-	-	-	-	A	-	-	-	-	A	-	-	-	-	X	X	-	-	-
MESENTERIC LYMPH NODE	-	-	X	-	-	-	-	-	A	-	-	-	-	-	-	-	-	-	=	X	=	-	-

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 6 FEMALES

	19171	19172	19173	19174	19175	19176	19177	19178	19179	19180	19181	19182	19183	19184	19185	19186	19187	19188	19189	19190
MESENTERIC LYMPH NODE (CONTINUED)																				
ERYTHROPHAGOCYTOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=
LEUKEMIA/LYMPHOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=
ILEUM	-	-	X	-	-	-	-	-	A	-	-	-	-	A	-	-	-	-	X	X
LARYNX	X	X	X	X	A	X	X	X	X	X	X	X	X	X	X	X	A	X	X	X
TRACHEA	X	X	X	X	A	X	X	X	X	X	X	X	X	X	X	X	A	X	X	X
THYROID	X	=	M	=	=	=	X	=	=	=	=	X	=	=	X	=	=	=	=	=
AMYLOID.	=	3+	=	3+	3+	2+	=	2+	2+	=	3+	=	=	4+	=	2+	4+	4+	3+	1+
CYST(S).	=	=	=	=	=	=	=	=	P	=	P	=	=	P	=	P	=	=	=	=
ADENOMA.	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=
C-CELL ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=
FOLLICULAR CELL ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=
PARATHYROID	X	X	M	A	A	I	X	X	X	X	X	M	I	A	M	X	M	X	M	X
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ESOPHAGUS	X	X	X	A	A	X	X	X	A	X	X	X	X	X	X	X	X	X	X	X
LUNG	X	=	=	=	A	=	X	X	A	=	=	X	=	X	=	=	=	=	X	=
HISTIOCYTOSIS.	=	2+	=	=	=	=	=	=	=	=	3+	=	2+	=	=	4+	=	=	=	2+
CONGESTION.	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ALVEOLAR/BRONCHIOLAR CELL HYPERPLASIA.	=	=	2+	=	=	=	=	=	=	=	=	1+	=	=	=	=	=	1+	=	2+
FIBROSIS.	=	=	1+	1+	=	2+	=	=	=	1+	=	=	=	=	=	=	2+	=	=	=
ATELECTASIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=
HEMOSIDEROSIS.	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PNEUMOLITHIASIS.	=	=	=	=	=	=	=	=	=	=	=	=	1+	=	=	=	=	=	=	=
HEMORRHAGE.	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	=
BRONCHIAL LYMPH NODES	X	M	M	X	=	X	M	=	M	M	=	M	X	M	=	=	=	M	=	X
CONGESTION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=
PIGMENT.	=	=	=	=	2+	=	=	1+	=	=	2+	=	=	=	=	1+	=	=	=	=
ERYTHROPHAGOCYTOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	3+	=	=
MAINSTEM BRONCHI	X	X	X	X	A	X	X	X	X	X	X	X	X	X	X	X	A	X	X	X
LIVER	=	=	=	A	A	=	X	=	A	=	=	X	=	=	=	=	=	=	=	X

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 6 FEMALES

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	7	7	7	8	8	8	8	8	8	8	8	8	8	9	9	9	9	9	9	9	9	9
	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9
LIVER (CONTINUED)																						
AMYLOID.	2+	3+	3+	=	=	3+	=	3+	=	4+	3+	=	=	3+	2+	2+	4+	4+	3+	2+	2+	2+	=
CONGESTION.	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	=
CYST(S).	=	P	P	=	=	P	=	=	=	P	=	=	=	=	=	=	=	=	=	=	P	P	=
KARYOMEGALY.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CLEAR CELL FOCUS/FOCI.	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=
GALLBLADDER	-	-	X	-	-	-	-	-	A	-	-	-	-	-	-	-	-	-	X	=	-	-	-
PAPILLARY HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	2+	=	=	=
SPLEEN	=	=	=	A	A	=	X	=	=	=	=	X	X	=	=	=	=	=	=	=	=	=	X
AMYLOID.	1+	3+	2+	=	=	3+	=	4+	2+	3+	3+	=	=	4+	3+	3+	3+	3+	2+	2+	3+	4+	=
EXTRAMEDULLARY HEMATOPOIESIS.	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=
PANCREAS	X	X	X	A	A	X	X	A	A	X	X	X	X	A	X	X	M	X	X	=	X	X	X
ATROPHY.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEPATOCELLULAR DIFFERENTIATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=
HEART	-	-	X	A	-	-	-	-	=	-	-	-	-	-	=	-	-	-	=	X	-	=	-
AMYLOID.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
THROMBOSIS.	=	=	=	=	=	=	=	=	P	=	=	=	=	P	=	=	=	=	=	=	P	=	
MINERALIZATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
MYOCARDIOPATHY.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=
MURAL THROMBOSIS.	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=
KIDNEYS	=	=	=	A	A	=	X	=	=	=	=	X	=	=	=	=	=	=	=	=	=	=	X
AMYLOID.	3+	4+	3+	=	=	4+	=	4+	4+	4+	4+	=	3+	4+	4+	4+	4+	4+	4+	2+	4+	4+	=
MINERALIZATION.	1+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
GLOMERULAR NEPHROSIS.	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	3+	=	=	=
PLASMACYTOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
URINARY BLADDER	-	-	X	-	-	-	-	-	A	-	-	-	-	-	-	-	-	-	X	X	-	-	-
OVARIES	-	-	X	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	X	X	-	-	-
UTERUS	-	-	X	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	X	X	-	-	-
STERNUM & RIB JUNCTION	-	-	X	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	X	X	-	-	-
FEMUR & BONE MARROW	-	-	X	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	X	X	-	-	-
NASAL CAVITY	-	-	X	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-	X	X	-	-	-

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 6 FEMALES

	19717	19718	19719	19720	19721	19722	19723	19724	19725	19726	19727	19728	19729	19730	19731	19732	19733	19734	19735	19736	19737	19738	19739
OTHER (ABDOMINAL CAVITY), MESOTHELIOMA, GENERALIZED.	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 7 FEMALES

	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974
SKIN	-	-	-	-	-	X	-	-	X	-	-	-	-	-	-	-	X	-	X	-	X	X	-	X	-
SKIN/MAMMARY	-	-	-	-	-	X	-	-	X	-	-	-	-	-	-	-	X	-	X	-	X	X	-	X	-
THIGH MUSCLE	-	-	-	-	-	X	-	-	X	-	-	-	-	-	-	-	X	-	X	-	X	X	-	X	-
SALIVARY GLAND	-	-	-	-	-	X	-	-	X	-	-	-	-	-	-	-	X	-	X	-	X	X	-	X	-
MANDIBULAR LYMPH NODE	A	-	A	-	-	X	-	-	X	-	-	-	-	-	-	-	X	-	X	-	X	=	-	X	-
CONGESTION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
LYMPHOID HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
FOLLICULAR HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=
SCIATIC NERVE	-	-	-	-	-	X	-	-	X	-	-	-	-	-	-	-	X	-	X	-	X	X	-	X	-
BRAIN	A	-	A	-	-	X	-	-	X	-	-	-	-	-	-	-	X	-	X	-	X	X	-	X	-
PITUITARY	A	X	A	X	X	X	=	A	M	M	X	I	I	A	X	I	X	X	X	I	I	X	X	X	A
ADENOMA.	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ADRENALS	A	X	A	=	=	=	=	A	X	X	X	=	=	A	=	=	=	=	=	=	=	I	=	=	A
AMYLOID.	=	=	=	2+	3+	2+	1+	=	=	=	=	3+	3+	=	2+	3+	=	2+	2+	3+	2+	4+	=	3+	=
ADENOMA.	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=
HYPERPLASIA.	=	=	=	=	P	P	P	=	=	=	=	=	P	=	P	=	P	=	P	=	=	=	=	=	=
CYST(S).	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=
MEDULLARY CELL HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	P	=	=	=	=	=
THYMUS	A	X	A	N	M	M	X	M	=	X	M	M	M	A	M	N	I	X	X	M	X	M	=	X	A
CYST(S).	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PIGMENT.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEMOSIDEROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=
STOMACH	A	-	A	-	-	X	-	X	X	=	-	-	-	-	-	-	X	-	A	-	X	X	-	X	-
PIGMENT.	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
DUODENUM	A	-	A	-	-	X	-	-	X	-	-	-	-	-	-	-	X	-	A	-	X	X	-	X	-
JEJUNUM	-	-	-	-	-	X	-	-	X	-	-	-	-	-	-	-	X	-	X	-	X	X	-	X	-
CECUM	A	-	A	-	-	X	-	-	X	-	-	-	-	-	-	-	X	-	A	-	X	X	-	X	-
NECROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
COLON	A	-	A	-	-	X	-	-	X	-	-	-	-	-	-	-	X	-	A	-	X	X	-	X	-

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 7 FEMALES

	1950	1952	1955	1957	1959	1962	1965	1967	1969	1972	1976	1977	1979	1982	1984	1986	1987	1989	1990	1992	1993	1994
RECTUM	A	-	A	-	-	X	-	-	X	-	-	-	-	-	-	X	-	A	-	X	X	-
MESENTERIC LYMPH NODE	A	-	A	-	-	X	-	-	X	-	-	-	-	-	-	M	-	X	-	X	=	-
CONGESTION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
FOLLICULAR HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=
PLASMACYTOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ILEUM	A	-	A	-	-	X	-	-	X	-	-	-	-	-	-	X	-	A	-	X	X	-
LARYNX	A	X	A	X	X	X	X	X	X	X	X	X	A	X	X	X	X	X	X	X	X	A
TRACHEA	A	X	A	X	X	X	X	X	X	X	X	X	A	X	X	X	X	X	X	X	X	A
THYROID	A	=	A	=	X	X	X	=	=	=	X	=	=	A	=	=	=	X	=	X	=	=	A
AMYLOID.	=	2+	=	2+	=	=	=	3+	=	=	=	3+	2+	=	2+	3+	=	=	3+	=	=	=	3+	2+	=
ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=
CYST(S).	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	P	=	=	=	=	P	=	=	=	=
FOLLICULAR CELL ADENOMA.	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	P	=	=	=	P	=	=	=	=
FOLLICULAR HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PAPILLOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PAPILLARY ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PARATHYROID	A	X	A	X	X	=	X	X	X	X	X	X	N	A	X	X	=	X	X	X	X	I	A	N	A
ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=
HYPERPLASIA.	=	=	=	=	=	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ESOPHAGUS	A	X	A	X	X	X	X	X	X	X	X	X	A	X	X	X	X	X	X	X	X	X	A
LUNG	A	=	A	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	X	=	X	A
AMYLOID.	=	=	=	=	=	=	=	=	=	=	=	=	2+	=	=	=	=	=	=	=	=	=	=	=
HISTIOCYTOSIS.	=	4+	=	4+	=	3+	4+	=	=	=	=	=	=	4+	=	=	4+	3+	4+	=	=	=	=	=
ALVEOLAR/BRONCHIOLAR CELL HYPERPLASIA.	=	=	=	=	2+	1+	=	2+	2+	2+	2+	2+	=	=	=	2+	2+	=	2+	=	1+	=	=	=
PIGMENT.	=	=	=	=	=	1+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
EMPHYSEMA.	=	=	=	=	=	=	=	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEMOSIDEROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	2+	=
FIBROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	2+	=	=	=	=	=	=	=	=	=	=	=
CONGESTION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ADENOMATOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PNEUMOLITHIASIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
BRONCHIAL LYMPH NODES	A	X	A	N	M	=	N	M	X	=	M	M	N	A	M	N	X	X	=	=	N	M	N	X	A

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 7 FEMALES

	19250	19251	19252	19253	19254	19255	19256	19257	19258	19259	19260	19261	19262	19263	19264	19265	19266	19267	19268	19269	19270	19271	19272	19273	19274
BRONCHIAL LYMPH NODES (CONTINUED)																									
AMYLOID.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	1+	=	=	=	=	=	=	=
PIGMENT.	=	=	=	=	=	1+	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEMOSIDEROSIS.	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CONGESTION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
LYMPHOID HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=
MAINSTEM BRONCHI	A	X	A	X	X	X	X	X	X	X	X	X	A	X	X	X	X	X	X	X	X	X	X	X	A
LIVER	A	=	A	=	=	=	A	A	X	X	A	=	=	=	=	=	=	=	=	=	X	=	=	A	A
AMYLOID.	=	3+	=	3+	2+	=	=	3+	=	=	=	3+	2+	3+	3+	3+	2+	2+	2+	2+	=	3+	2+	=	=
CYST(S).	=	=	=	=	P	P	=	=	=	=	=	=	P	=	=	P	=	=	=	=	=	=	P	=	=
CLEAR CELL FOCUS/FOCI.	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=
HEMOSIDEROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=
CONGESTION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	4+	=	=	=	=	=	P	=
NECROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=
CHOLANGIOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEPATOCELLULAR CYSTIC DEGENERATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
GALLBLADDER	A	-	-	-	-	X	-	-	X	-	-	-	-	-	-	X	-	A	-	X	X	-	A	-	
SPLEEN	A	=	A	=	=	X	=	=	X	X	X	=	=	A	=	=	M	=	=	=	X	X	=	=	A
AMYLOID.	=	3+	=	3+	3+	=	=	3+	=	=	=	4+	3+	=	3+	4+	=	=	3+	4+	=	=	4+	2+	=
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
EXTRAMEDULLARY HEMATOPOIESIS.	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=
PANCREAS	A	X	A	X	X	X	X	A	X	X	X	X	A	X	=	X	X	X	X	=	X	A	X	A	
AMYLOID.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	
HEPATOCELLULAR DIFFERENTIATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=		
HEART	A	=	A	-	-	=	=	-	X	-	-	-	-	A	=	-	X	=	=	-	X	X	=	=	-
THROMBOSIS.	=	P	=	=	=	P	P	=	=	=	=	=	=	P	=	=	P	P	=	=	=	P	P	=	
MYOCARDIOPATHY.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	2+	=	=	=	=	=		
MURAL THROMBOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	
KIDNEYS	A	=	A	=	=	=	=	=	=	=	=	=	A	=	=	=	=	=	=	=	=	=	=	=	A
AMYLOID.	=	4+	=	4+	4+	4+	3+	4+	=	2+	=	4+	3+	=	3+	4+	2+	3+	3+	4+	=	4+	4+	4+	=
GLOMERULAR NEPHROSIS.	=	=	=	=	=	=	=	=	2+	2+	2+	=	=	=	=	=	2+	=	3+	=	2+	=	=	=	=
NEPHROPATHY, CHRONIC.	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=
INFARCT.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 7 FEMALES

	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974
URINARY BLADDER	-	-	-	-	-	X	-	-	X	-	-	-	-	-	-	-	X	-	X	-	X	X	-	X	-
OVARIES	-	-	-	-	-	X	-	-	X	-	-	-	-	-	-	-	X	-	X	-	X	X	-	X	-
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
UTERUS	-	-	-	-	-	X	-	-	X	-	-	-	-	-	-	-	X	-	=	-	X	X	-	=	-
PAPILLARY HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	P	=
STERNUM & RIB JUNCTION	-	-	-	-	-	X	-	-	X	-	-	-	-	-	-	-	X	-	X	-	X	X	-	X	-
FEMUR & BONE MARROW	-	-	-	-	-	X	-	-	X	-	-	-	-	-	-	-	X	-	X	-	X	X	-	X	-
NASAL CAVITY	-	-	-	-	-	X	-	-	X	-	-	-	-	-	-	-	X	-	X	-	X	X	-	X	-
OTHER	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

(X) NO SIGNIFICANT LESION RECOGNIZED
(I) INSUFFICIENT TISSUE PRESENT IN SECTION
(N) NOT PRESENT IN SECTION
(M) MISSING
(A) AUTOLYZED
(-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 7 FEMALES

	19275	19276	19277	19278	19279	19280	19281	19282	19283	19284	19285	19286	19287	19288	19289	19290	19291	19292	19293	19294	19295	19296	19297	19298	19299
SKIN	X	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-
SKIN/MAMMARY	X	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-
THIGH MUSCLE	X	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-
SALIVARY GLAND	X	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-
MANDIBULAR LYMPH NODE	A	-	-	=	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	=	-	-	-	-	-
CONGESTION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=
LYMPHOID HYPERPLASIA.	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
FOLLICULAR HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
SCIATIC NERVE	X	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-
BRAIN	X	A	-	X	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-
PITUITARY	M	I	X	X	I	X	N	X	X	A	X	X	X	M	X	X	M	A	X	I	X	X	I	X	X
ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ADRENALS	=	=	X	=	A	X	A	X	=	A	=	=	X	M	=	=	=	A	=	=	=	X	=	X	=
AMYLOID.	=	2+	=	3+	=	=	=	=	3+	=	2+	2+	=	=	3+	3+	=	=	=	3+	3+	=	3+	=	3+
ADENOMA.	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=
HYPERPLASIA.	P	=	=	P	=	=	=	=	P	=	P	=	=	=	P	=	=	=	P	=	P	=	=	=	=
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=
MEDULLARY CELL HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
THYMUS	X	M	N	M	A	X	N	X	X	A	X	X	M	M	X	X	M	=	N	X	X	I	X	X	M
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PIGMENT.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	2+	=	=	=	=	=	=	=
HEMOSIDEROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=
STOMACH	X	-	-	A	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-
PIGMENT.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
DUODENUM	X	-	-	A	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	A	-	-	-	-
JEJUNUM	X	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-
CECUM	X	A	-	A	-	-	-	-	A	-	-	-	-	-	=	-	X	-	-	-	A	-	-	-	-
NECROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	=
COLON	X	-	-	A	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	A	-	-	-	-

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 7 FEMALES

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
	7	7	7	7	7	8	8	8	8	8	8	8	8	8	8	9	9	9	9	9	9	9	9	9	9
	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9
RECTUM	X	-	-	A	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	A	-	-	-	-
MESENTERIC LYMPH NODE	X	-	-	X	A	-	-	A	-	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CONGESTION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	
FOLLICULAR HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	
PLASMACYTOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=		
ILEUM	X	-	-	A	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	A	-	-	-	-
LARYNX	X	X	X	X	A	X	N	X	X	X	X	X	X	X	X	X	A	X	X	X	X	X	X	X	
TRACHEA	X	X	X	X	A	X	N	X	X	X	X	X	X	X	X	X	A	X	X	X	X	X	X	X	
THYROID	=	=	X	=	A	=	N	X	=	A	=	=	X	=	X	=	=	=	X	=	=	X	=	N	=
AMYLOID.	3+	3+	=	=	=	2+	=	=	2+	=	2+	4+	=	3+	=	3+	=	3+	=	=	2+	=	2+	=	3+
ADENOMA.	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CYST(S).	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=
FOLLICULAR CELL ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=
FOLLICULAR HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=
PAPILLOMA.	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PAPILLARY ADENOMA.	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PARATHYROID	=	X	X	X	A	=	N	X	X	X	X	X	X	X	X	=	A	X	X	X	N	X	N	X	
ADENOMA.	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=
HYPERPLASIA.	=	=	=	=	=	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ESOPHAGUS	X	X	X	X	A	X	A	X	X	A	X	X	X	X	X	X	A	X	X	X	X	X	X	X	
LUNG	=	X	=	=	X	=	A	=	X	A	=	=	=	=	X	X	=	A	=	=	=	X	X	=	=
AMYLOID.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HISTIOCYTOSIS.	=	=	=	4+	=	3+	=	=	=	=	4+	4+	=	=	=	=	3+	=	=	3+	=	=	=	=	=
ALVEOLAR/BRONCHIOLAR CELL HYPERPLASIA.	=	=	=	=	=	=	=	2+	=	=	=	=	1+	=	=	=	=	P	2+	2+	=	=	1+	2+	
PIGMENT.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	2+	=	=	1+	=
EMPHYSEMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEMOSIDEROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
FIBROSIS.	=	=	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	1+
CONGESTION.	3+	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=
INFLAMMATION.	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	2+	=	=	=	=	=
ADENOMATOSIS.	=	=	=	=	=	=	=	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PNEUMOLITHIASIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	1+	=	=	=	=	=	=	=
BRONCHIAL LYMPH NODES	X	X	N	X	A	X	A	=	=	N	N	N	M	X	X	N	X	X	N	N	N	X	X	N	I

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 7 FEMALES

	19272	19273	19274	19275	19276	19278	19279	19280	19281	19282	19283	19284	19285	19286	19287	19288	19289	19290	19291	19292	19293	19294	19295	19296	19297	19298	19299
BRONCHIAL LYMPH NODES (CONTINUED)																											
AMYLOID.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PIGMENT.	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEMOSIDEROSIS.	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CONGESTION.	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
LYMPHOID HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
MAINSTEM BRONCHI	X	X	X	X	A	X	N	X	X	X	X	X	X	X	X	X	X	A	X	X	X	X	X	X	X	X	X
LIVER	=	X	X	=	A	=	A	X	=	=	=	=	X	=	=	=	=	X	=	=	=	A	=	X	=		
AMYLOID.	3+	=	=	3+	=	3+	=	=	3+	3+	2+	2+	=	3+	2+	3+	2+	=	=	=	3+	=	3+	=	3+		
CYST(S).	=	=	=	P	=	=	=	=	P	=	P	=	=	=	P	=	=	=	P	=	P	=	=	=	P		
CLEAR CELL FOCUS/FOCI.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=		
HEMOSIDEROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=		
CONGESTION.	4+	=	=	4+	=	3+	=	=	=	=	3+	3+	=	=	=	=	=	=	=	4+	=	=	=	=	=		
NECROSIS.	=	=	=	3+	=	=	=	=	=	=	3+	3+	=	=	=	=	=	=	=	P	=	=	=	=	=		
CHOLANGIOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=		
HEPATOCELLULAR CYSTIC DEGENERATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=		
GALLBLADDER	A	-	-	A	-	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-		
SPLEEN	=	A	X	=	A	=	A	X	=	A	=	=	X	=	X	=	X	A	=	=	=	=	=	X	=		
AMYLOID.	4+	=	=	4+	=	2+	=	=	3+	=	2+	3+	=	4+	=	2+	=	=	1+	3+	3+	=	1+	=	3+		
CYST(S).	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=		
EXTRAMEDULLARY HEMATOPOIESIS.	=	=	=	3+	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	4+	=	=	=		
PANCREAS	X	A	X	X	A	X	A	X	X	A	X	X	X	X	X	X	=	A	X	X	X	A	X	X	X		
AMYLOID.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=		
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	1+	=	=	=	=	=	=	=	=		
HEPATOCELLULAR DIFFERENTIATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=		
HEART	=	-	-	=	-	-	-	-	-	-	-	-	-	-	-	-	=	-	-	=	-	-	-	-	-		
THROMBOSIS.	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	P	=	=	=	=	=		
MYOCARDIOPATHY.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=		
MURAL THROMBOSIS.	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=		
KIDNEYS	=	=	X	=	A	=	A	X	=	A	=	=	X	=	=	=	=	A	=	=	=	=	=	X	=		
AMYLOID.	4+	4+	=	4+	=	4+	=	=	4+	=	4+	4+	=	4+	=	4+	4+	=	=	4+	4+	3+	2+	=	4+		
GLOMERULAR NEPHROSIS.	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	3+	=	=	=	=	=	=		
NEPHROPATHY, CHRONIC.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=		
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=		
INFARCT.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=		

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 7 FEMALES

	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
URINARY BLADDER	M	-	-	X	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-
OVARIES	X	-	-	X	-	-	-	A	-	A	-	-	-	-	-	X	X	-	-	-	-	-	-	-	-
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	P	=	=	=	=
UTERUS	X	-	-	X	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-
PAPILLARY HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
STERNUM & RIB JUNCTION	X	-	-	X	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-
FEMUR & BONE MARROW	X	-	-	X	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-
NASAL CAVITY	X	-	-	X	-	-	-	-	-	-	-	-	-	-	-	X	-	-	-	-	-	-	-	-	-
OTHER	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP B FEMALES

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	5	5	5	5	5	5	5	5	5	6	6	6	6	6	6	6	6	6	7	7	7	7	7	7
	0	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5
SKIN	-	-	X	-	-	X	-	-	-	-	-	X	-	-	-	-	-	-	X	-	-	X	-	-	-
SKIN/MAMMARY	-	-	X	-	-	X	-	-	-	-	-	X	-	-	-	-	-	-	X	-	-	X	-	-	-
THIGH MUSCLE	-	-	X	-	-	X	-	-	-	-	-	X	-	-	-	-	-	-	X	-	-	X	-	-	-
SALIVARY GLAND	-	-	X	-	-	X	-	-	-	-	-	X	-	-	-	-	-	-	X	-	-	A	-	-	-
MANDIBULAR LYMPH NODE	-	-	=	-	-	X	-	-	-	-	-	X	-	A	-	-	-	A	A	-	-	A	-	-	-
LYMPHOID HYPERPLASIA.	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
FOLLICULAR HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
SCIATIC NERVE	-	-	X	-	-	X	-	-	-	-	-	X	-	-	-	-	-	-	X	-	-	X	-	-	-
BRAIN	-	-	X	-	-	X	-	-	-	-	-	X	-	A	-	-	-	A	X	-	-	X	-	-	-
PITUITARY	X	X	X	M	I	M	X	A	I	I	M	X	I	M	A	X	=	A	X	X	A	I	M	X	A
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=
ADRENALS	=	=	=	M	=	=	=	I	=	X	=	=	A	A	A	=	=	A	=	I	=	=	I	X	A
AMYLOID.	2+	=	2+	=	3+	3+	2+	=	4+	=	4+	4+	=	=	=	3+	2+	=	4+	3+	4+	3+	3+	=	=
CYST(S).	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
MEDULLARY CELL HYPERPLASIA.	=	1+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HYPERPLASIA.	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	P	=	=	=
CORTICAL ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
THYMUS	N	A	M	X	N	X	X	N	X	I	X	X	M	A	A	X	M	A	M	X	N	I	X	M	A
INVOLUTED.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
STOMACH	-	-	X	-	-	X	-	-	-	-	-	X	-	-	-	-	-	A	A	-	-	X	-	-	-
DUODENUM	-	-	X	-	-	X	-	-	-	-	-	X	-	-	-	-	-	A	A	-	-	X	-	-	-
JEJUNUM	-	-	X	-	-	X	-	-	-	-	-	X	-	-	-	-	-	-	X	-	-	X	-	-	-
CECUM	-	-	X	-	-	X	-	-	-	-	-	X	-	-	-	=	-	A	A	=	-	X	-	-	-
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=
HEMOSIDEROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=
COLON	-	-	X	-	-	X	-	-	-	-	-	X	-	-	-	-	-	A	A	-	-	X	-	-	-
RECTUM	-	-	X	-	-	X	-	-	-	-	-	X	-	-	-	-	-	A	A	-	-	X	-	-	-

(X) NO SIGNIFICANT LESION RECOGNIZED
(I) INSUFFICIENT TISSUE PRESENT IN SECTION
(N) NOT PRESENT IN SECTION
(M) MISSING
(A) AUTOLYZED
(-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 8 FEMALES

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	5	5	5	5	5	5	5	5	5	6	6	6	6	6	6	6	6	6	7	7	7	7	7	7	7
	0	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5
MESENTERIC LYMPH NODE	=	-	M	-	-	=	=	-	-	-	-	A	-	A	-	-	-	A	A	=	-	M	=	-	-
PLASMACYTOSIS.	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
LYMPHOID HYPERPLASIA.	=	=	=	=	=	P	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	=
RETICULUM CELL HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=
FOLLICULAR HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ILEUM	-	-	=	-	-	X	-	-	-	-	-	X	-	-	-	-	-	A	A	-	-	X	-	-	-
INFLAMMATION.	=	=	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
LARYNX	X	X	X	X	X	X	X	A	X	X	X	X	A	A	A	X	A	A	X	X	A	X	X	X	A
TRACHEA	X	X	X	X	X	X	X	A	X	X	X	X	A	A	A	X	A	A	X	X	A	X	X	X	A
THYROID	=	X	X	=	=	X	=	A	=	X	=	=	A	A	A	X	=	A	A	=	A	X	=	X	A
AMYLOID.	3+	=	=	2+	3+	=	=	=	3+	=	4+	3+	=	=	=	=	3+	=	=	3+	=	=	=	=	=
CYST(S).	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=
ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=
PARATHYROID	X	X	X	X	X	N	X	A	X	=	X	X	A	A	A	I	A	A	N	X	A	X	N	X	A
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ESOPHAGUS	X	X	X	X	X	X	X	A	X	X	X	X	A	A	A	X	X	A	X	X	A	X	X	A	A
LUNG	=	=	=	=	=	=	=	=	=	=	=	=	=	=	A	=	A	=	=	=	=	=	=	=	A
AMYLOID.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	2+	=	=	=	=	=	=	=
ALVEOLAR/BRONCHIOLAR CELL HYPERPLASIA.	2+	3+	3+	2+	2+	2+	2+	2+	2+	2+	2+	3+	2+	2+	=	2+	3+	2+	3+	2+	2+	3+	2+	3+	=
PIGMENT.	2+	2+	3+	2+	2+	2+	2+	2+	2+	2+	1+	3+	2+	2+	=	2+	=	=	3+	2+	2+	3+	3+	2+	=
INFLAMMATION.	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HISTIOCYTOSIS.	=	=	=	3+	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=
ATELECTASIS.	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ADENOMATOSIS.	=	=	=	=	=	=	=	=	=	=	2+	=	=	=	=	=	=	=	=	=	=	=	3+	=	=
INFARCT.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
EOSINOPHILIC MASS(ES).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	2+	=	=
NECROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
EMPHYSEMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CARCINOMA, METASTATIC.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
SARCOMA, UNDIFFERENTIATED.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEMORRHAGE.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
BRONCHIAL LYMPH NODES	N	I	M	M	N	X	=	A	=	N	X	=	N	A	A	=	M	A	M	=	A	M	=	M	A

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 8 FEMALES

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	5	5	5	5	5	5	5	5	5	6	6	6	6	6	6	6	6	6	7	7	7	7	7	7	7
	0	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5
BRONCHIAL LYMPH NODES (CONTINUED)																									
PIGMENT.	=	=	=	=	=	=	3+	=	2+	=	=	3+	=	=	=	1+	=	=	=	2+	=	=	3+	=	=
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=
MAINSTEM BRONCHI	X	X	X	X	X	X	X	A	X	X	X	X	A	A	A	X	A	A	X	X	A	X	X	X	A
LIVER	=	=	=	=	=	=	=	A	=	=	=	=	A	A	A	=	A	A	=	=	A	A	=	=	A
AMYLOID.	3+	3+	1+	3+	3+	2+	4+	=	3+	3+	3+	3+	=	=	=	3+	=	=	3+	2+	=	2+	2+	2+	=
CYST(S).	P	=	P	=	=	=	=	=	=	=	=	P	=	=	=	=	P	=	P	=	=	=	=	P	=
CLEAR CELL FOCUS/FOCI.	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CONGESTION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=
GALLBLADDER	-	-	X	-	-	X	-	-	-	-	-	A	-	-	-	-	-	-	A	-	-	A	-	-	-
SPLEEN	=	=	=	=	=	X	=	A	=	=	=	=	A	A	A	=	=	A	=	=	A	X	=	A	A
AMYLOID.	3+	3+	1+	3+	4+	=	3+	=	4+	3+	4+	3+	=	=	=	3+	3+	=	4+	4+	=	=	2+	=	=
PANCREAS	X	X	=	X	X	X	X	A	X	X	A	=	A	A	A	X	X	A	X	X	A	A	X	A	A
DUCTAL ECTASIA.	=	=	1+	=	=	=	=	=	=	=	=	2+	=	=	=	=	=	=	=	=	=	=	=	=	=
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEART	-	-	X	=	=	X	-	A	-	-	=	=	-	-	A	-	-	-	-	=	-	A	A	-	-
THROMBOSIS.	=	=	=	P	P	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=
MURAL THROMBOSIS.	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=
MYOCARDIOPATHY.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=
KIDNEYS	=	=	=	=	=	=	=	A	=	=	=	=	A	A	A	=	=	A	=	=	A	=	=	A	A
AMYLOID.	4+	4+	3+	4+	4+	3+	4+	=	4+	3+	4+	4+	=	=	=	4+	3+	=	4+	4+	=	3+	2+	=	=
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
MINERALIZATION.	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
GLOMERULAR NEPHROSIS.	=	=	=	=	=	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	2+	=	=
INFARCT.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=
CARCINOMA, METASTATIC.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
SARCOMA, UNDIFFERENTIATED.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
URINARY BLADDER	-	-	X	-	-	X	-	-	-	-	-	X	-	-	-	-	-	-	A	-	-	X	-	-	-
OVARIES	-	-	X	-	-	X	-	-	-	-	-	X	-	A	-	-	-	A	X	-	-	X	=	=	-
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	
GRANULOSA CELL TUMOR(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=
UTERUS	-	-	X	-	-	X	-	-	-	-	-	=	-	-	-	-	-	-	X	-	-	X	-	-	-

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 8 FEMALES

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	5	5	5	5	5	5	5	5	5	6	6	6	6	6	6	6	6	6	7	7	7	7	7	7	7
	0	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5
UTERUS (CONTINUED)																									
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=
STERNUM & RIB JUNCTION	-	-	X	-	-	X	-	-	-	-	-	X	-	-	-	-	-	-	X	-	-	X	-	-	-
FEMUR & BONE MARROW	-	-	X	-	-	X	-	-	-	-	-	X	-	-	-	-	-	-	X	-	-	X	-	-	-
NASAL CAVITY	-	-	X	-	-	X	-	-	-	-	-	X	-	-	-	-	-	-	X	-	-	X	-	-	-
OTHER	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

(X) NO SIGNIFICANT LESION RECOGNIZED
(I) INSUFFICIENT TISSUE PRESENT IN SECTION
(N) NOT PRESENT IN SECTION
(M) MISSING
(A) AUTOLYZED
(-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 8 FEMALES

	1967	1978	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2009
SKIN	-	-	-	-	-	-	-	-	-	-	X	X	X	-	-	-	-	X	-	-	-	X
SKIN/MAMMARY	-	-	-	-	-	-	-	-	-	-	X	X	X	-	-	-	-	X	-	-	-	X
THIGH MUSCLE	-	-	-	-	-	-	-	-	-	-	X	X	X	-	-	-	-	X	-	-	-	X
SALIVARY GLAND	-	-	-	-	-	-	-	-	-	-	X	X	X	-	-	-	-	X	-	-	-	X
MANDIBULAR LYMPH NODE	-	-	-	-	-	-	-	-	-	-	A	X	X	-	-	-	-	=	-	A	-	A
LYMPHOID HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
FOLLICULAR HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=
SCIATIC NERVE	-	-	-	-	-	-	-	-	-	-	X	X	X	-	-	-	-	X	-	-	-	X
BRAIN	-	-	-	-	-	-	-	-	-	-	X	X	X	-	-	-	-	X	A	A	-	X
PITUITARY	X	X	X	I	I	X	X	X	N	I	I	I	I	I	X	I	X	X	M	I	A	X	M
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ADRENALS	=	=	=	=	I	=	I	=	X	=	=	I	=	A	A	=	=	X	=	=	A	X	=
AMYLOID.	3+	3+	=	=	=	3+	3+	3+	=	2+	2+	3+	3+	2+	=	2+	2+	=	3+	2+	=	=	3+
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
MEDULLARY CELL HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HYPERPLASIA.	P	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	P	=	=	=	P
CORTICAL ADENOMA.	=	=	P	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
THYMUS	M	X	M	M	X	=	X	X	N	I	M	M	X	X	M	M	A	X	X	M	A	X	M
INVOLUTED.	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
STOMACH	-	-	-	-	-	-	-	-	-	-	A	A	A	-	-	-	-	X	-	A	-	A
DUODENUM	-	-	-	-	-	A	-	-	-	-	A	A	A	-	-	-	-	X	-	A	-	A
JEJUNUM	-	-	-	-	-	-	-	-	-	-	X	X	X	-	-	-	-	X	-	-	-	X
CECUM	-	-	-	-	-	A	-	-	-	-	A	A	=	-	-	-	-	X	-	A	-	A
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=
HEMOSIDEROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
COLON	-	-	-	-	-	A	-	-	-	-	A	A	A	-	-	-	-	X	-	A	-	A
RECTUM	-	-	-	-	-	A	-	-	-	-	A	A	A	-	-	-	-	X	-	A	-	A

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
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CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 8 FEMALES

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	7	7	7	7	8	8	8	8	8	8	8	8	8	8	9	9	9	9	9	9	9	9	9
	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	9
MESENTERIC LYMPH NODE	-	-	-	-	-	-	-	-	-	-	-	M	X	M	-	-	-	-	=	-	A	-	A
PLASMACYTOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
LYMPHOID HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
RETICULUM CELL HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
FOLLICULAR HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=
ILEUM	-	-	-	-	-	A	-	-	-	-	-	A	A	A	-	-	-	-	X	-	A	-	A
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
LARYNX	X	X	X	X	X	X	X	X	X	X	A	X	X	X	A	X	A	X	X	A	A	X	A
TRACHEA	X	X	X	X	X	X	X	X	X	X	A	X	X	X	A	X	A	X	X	A	A	X	A
THYROID	=	=	X	X	X	=	=	=	=	A	=	=	X	A	=	A	X	X	A	A	X	A	
AMYLOID.	2+	3+	=	=	=	2+	2+	=	2+	=	3+	2+	=	=	2+	=	=	=	=	=	=	=	
CYST(S).	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	
ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	
PARATHYROID	X	X	X	X	N	X	X	X	X	X	A	X	X	X	A	X	N	=	X	A	A	N	A
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	
ESOPHAGUS	X	X	X	X	X	X	X	X	X	X	X	A	A	X	A	X	X	X	X	A	A	X	A
LUNG	=	=	=	=	=	=	=	A	=	=	=	=	=	=	=	=	=	=	=	=	A	=	=
AMYLOID.	=	=	=	=	=	=	=	=	3+	=	2+	=	=	=	=	=	=	=	=	=	=	=	=
ALVEOLAR/BRONCHIOLAR CELL HYPERPLASIA.	3+	1+	2+	2+	3+	2+	3+	2+	3+	2+	=	2+	3+	2+	3+	3+	3+	3+	2+	2+	=	3+	2+
PIGMENT.	2+	1+	2+	2+	1+	2+	3+	2+	=	2+	2+	2+	3+	3+	2+	2+	3+	3+	3+	2+	=	2+	2+
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HISTIOCYTOSIS.	=	3+	=	=	=	=	3+	=	4+	=	3+	3+	3+	=	=	3+	=	=	=	=	=	3+	
ATELECTASIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	
ADENOMATOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	3+	=	=	=	
INFARCT.	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	
EOSINOPHILIC MASS(ES).	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	2+
NECROSIS.	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	
EMPHYSEMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	2+	=	=	=	=	=	
CARCINOMA, METASTATIC.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	
SARCOMA, UNDIFFERENTIATED.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	
HEMORRHAGE.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	2+	
BRONCHIAL LYMPH NODES	M	=	M	=	N	=	=	X	=	N	M	M	M	M	N	=	A	=	=	M	A	X	=

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 8 FEMALES

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	7	7	7	7	8	8	8	8	8	8	8	8	8	8	9	9	9	9	9	9	9
	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	9
BRONCHIAL LYMPH NODES (CONTINUED)																							
PIGMENT.	=	2+	=	1+	=	1+	1+	=	3+	=	=	=	=	=	2+	=	3+	3+	=	=	=	3+
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
MAINSTEM BRONCHI	X	X	X	X	X	X	X	X	X	X	A	X	X	X	A	X	A	X	X	A	A	X	A
LIVER	=	=	=	=	X	=	=	A	A	=	A	A	=	=	A	=	X	=	=	A	A	X	A
AMYLOID.	3+	4+	2+	2+	=	3+	3+	=	=	3+	=	3+	3+	3+	=	3+	=	3+	=	=	=	=	=
CYST(S).	P	=	P	P	=	=	=	=	=	P	=	=	P	P	=	=	=	=	=	=	=	=	=
CLEAR CELL FOCUS/FOCI.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=
CONGESTION.	=	=	=	=	=	4+	=	=	=	=	3+	=	4+	=	=	=	=	=	=	=	=	4+
GALLBLADDER	-	-	-	-	-	-	-	-	-	-	-	A	X	A	A	-	-	-	X	-	-	-	A
SPLEEN	=	=	A	X	X	=	=	A	=	X	=	=	X	=	A	=	X	=	=	A	A	X	=
AMYLOID.	3+	4+	=	=	=	1+	3+	=	2+	=	2+	3+	=	2+	=	3+	=	3+	1+	=	=	=	1+
PANCREAS	X	X	X	X	=	X	X	A	X	X	A	A	X	X	A	X	X	X	X	A	A	X	A
DUCTAL ECTASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HYPERPLASIA.	=	=	=	=	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEART	-	-	-	-	-	=	-	-	-	-	-	=	=	=	-	-	-	-	X	-	-	-	=
THROMBOSIS.	=	=	=	=	=	P	=	=	=	=	=	P	P	P	=	P	=	=	=	=	=	=	P
MURAL THROMBOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
MYOCARDIOPATHY.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
KIDNEYS	=	=	X	=	X	=	=	=	=	=	=	=	=	=	A	=	=	=	=	A	A	X	=
AMYLOID.	3+	4+	=	=	=	3+	4+	4+	=	4+	3+	3+	4+	4+	=	4+	=	4+	2+	=	=	=	2+
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=
MINERALIZATION.	=	=	=	=	=	=	=	=	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	=
GLOMERULAR NEPHROSIS.	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	=
INFARCT.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CARCINOMA, METASTATIC.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=
SARCOMA, UNDIFFERENTIATED.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=
URINARY BLADDER	-	-	-	-	-	-	-	-	-	-	-	A	X	A	-	-	-	-	X	-	-	-	A
OVARIES	-	-	-	-	-	-	-	-	-	-	-	X	X	X	-	-	-	-	=	A	A	-	X
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
GRANULOSA CELL TUMOR(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=
UTERUS	-	-	-	-	-	-	-	-	-	-	-	X	X	X	-	-	-	-	X	-	-	-	X

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 8 FEMALES

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
	7	7	7	7	8	8	8	8	8	8	8	8	8	9	9	9	9	9	9	9	9
	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	9
UTERUS (CONTINUED)																							
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
STERNUM & RIB JUNCTION	-	-	-	-	-	-	-	-	-	-	-	A	X	A	-	-	-	-	X	-	-	-	X
FEMUR & BONE MARROW	-	-	-	-	-	-	-	-	-	-	-	X	X	X	-	-	-	-	X	-	-	-	X
NASAL CAVITY	-	-	-	-	-	-	-	-	-	-	-	X	X	X	-	-	-	-	X	-	-	-	X
OTHER	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

(X) NO SIGNIFICANT LESION RECOGNIZED
(I) INSUFFICIENT TISSUE PRESENT IN SECTION
(N) NOT PRESENT IN SECTION
(M) MISSING
(A) AUTOLYZED
(-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

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CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 9 FEMALES

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
	5	5	5	5	5	5	5	5	5	6	6	6	6	6	6	6	6	7	7	7	7	7	7	7	7
	0	1	2	3	5	6	7	8	9	0	1	2	3	5	6	7	8	9	0	1	2	3	4	5	6
SKIN	-	-	-	X	-	-	-	X	-	-	-	-	X	-	-	-	-	-	-	-	-	-	X	-	-
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=
SKIN/MAMMARY	-	-	-	X	-	-	-	X	-	-	-	-	X	-	-	-	-	-	-	-	-	X	X	-	-
THIGH MUSCLE	-	-	-	X	-	-	-	X	-	-	-	-	X	-	-	-	-	-	-	-	-	X	X	-	-
SALIVARY GLAND	-	-	-	X	A	-	-	X	-	-	-	-	X	-	-	-	-	-	-	-	-	X	X	-	-
MANDIBULAR LYMPH NODE	-	-	-	X	A	-	-	A	-	-	-	-	M	-	-	-	-	-	-	-	-	M	X	-	-
CORTICAL ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
SCIATIC NERVE	-	-	-	X	-	-	-	X	-	-	-	-	X	-	-	-	-	-	-	-	-	X	X	-	-
BRAIN	-	-	-	X	-	-	-	X	-	-	-	-	=	-	-	-	-	-	-	-	-	X	X	-	-
MINERALIZATION.	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=
PITUITARY	I	I	X	X	A	X	X	I	I	X	X	A	I	M	A	I	X	I	N	I	X	X	X	X	X
ADRENALS	=	A	=	=	A	=	=	=	=	=	=	X	=	=	A	=	=	A	=	I	=	=	=	=	=
HYPERPLASIA.	P	=	=	P	=	=	=	P	=	=	P	=	P	=	=	=	=	=	=	=	P	=	P	=	=
AMYLOID.	3+	=	4+	3+	=	3+	3+	4+	2+	3+	2+	=	3+	3+	=	3+	2+	=	3+	3+	3+	3+	3+	3+	3+
MEDULLARY CELL HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	2+
THYMUS	M	M	M	M	M	M	M	M	X	M	X	M	M	A	X	N	X	A	N	N	N	M	M	=	X
HEMOSIDEROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=
STOMACH	-	-	-	X	A	-	-	X	-	-	-	-	X	-	-	-	X	-	-	-	-	=	X	-	-
PIGMENT.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=
DUODENUM	-	-	-	X	-	-	-	X	-	-	-	-	X	-	-	-	-	-	-	-	-	X	X	-	-
JEJUNUM	-	-	-	X	-	-	-	X	-	-	-	-	X	-	-	-	-	-	-	-	-	X	X	-	-
CECUM	-	-	-	X	-	-	=	X	-	-	-	-	X	-	-	-	-	-	-	-	-	X	X	-	-
INFLAMMATION.	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
COLON	-	-	-	X	-	-	-	X	-	-	-	-	X	-	-	-	-	-	-	-	-	X	X	-	-
RECTUM	-	-	-	X	-	-	-	X	-	-	-	-	X	A	-	A	-	-	-	-	-	X	X	-	-
MESENTERIC LYMPH NODE	-	-	-	=	A	-	-	A	-	-	-	-	X	-	-	-	-	-	-	-	-	X	=	-	-

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
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CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 9 FEMALES

	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9
	4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4
	3 5 5 5 5 5 5 5 5 6 6 6 6 6 6 6 6 6 7 7 7 7 7 7 7 7 7 7
	0 1 2 3 5 6 7 8 9 0 1 2 3 5 6 7 8 9 0 1 2 3 4 5 6
MESENTERIC LYMPH NODE (CONTINUED)	
HYPERPLASIA.	= =
AMYLOID.	= = = 3+= =
RETICULUM CELL HYPERPLASIA.	= P = =
LYMPHOID HYPERPLASIA.	= =
ILEUM	- - - X - - - X - - - - X - - - - - - - - - X X - -
LARYNX	X A X X A X X X X X X A X A X X X A X X X X X X X X
TRACHEA	X A X X A X X X X X X A X A X X X A X X X X X X X X
THYROID	= = = = = X = = = = = X = = = = = A = = = = = = = =
AMYLOID.	3+4+3+1+2+= 2+3+2+2+2+= 2+2+3+2+2+= 3+3+2+2+2+3+2+
CYST(S).	= = = = = = = = = = = = P P = = = = = = = = = = = =
ADENOMA.	= =
PARATHYROID	X A X = A = X X X X X A X A A X X N X I X X X = N
HYPERPLASIA.	= = = P = P =
ADENOMA.	= P =
ESOPHAGUS	X A X X A X X X X X X A X X X X X A X X X X X X X X
LUNG	= = A = A = = = = = = A = = A = = A = = = = = = = =
AMYLOID.	= 3+3+
ALVEOLAR/BRONCHIOLAR CELL HYPERPLASIA.	3+3+3+= 3+3+3+= 4+3+3+3+3+3+3+3+3+3+3+2+3+= 3+= =
EOSINOPHILIC MASS(ES).	P P = = = = P P P P P P = P = = P P P P = P 3+2+P
PIGMENT.	3+3+3+4+3+3+3+4+4+4+3+3+3+3+3+3+3+3+3+3+4+4+3+3+
ADENOMATOSIS.	= = = 3+= = = 4+= = = = = = = = = = = = = 4+= = =
HISTIOCYTOSIS.	= = = 3+= = = = = = = = = = = = = = = 4+= = = = =
CONGESTION.	= = = = = = = = = = = = = = = = = 3+= = = = = = =
EMPHYSEMA.	= = = = = = = P 3+= = = = = = = = = = = 3+= = = =
ATELECTASIS.	= =
HEMORRHAGE.	= =
BRONCHIAL LYMPH NODES	M = M I M M M M = M N M M = = = = = = = = M = N =
AMYLOID.	= =
PIGMENT.	= 3+= 2+= = = = 2+= = = = 3+3+3+3+3+3+2+1+3+= 2+= =
ERYTHROPHAGOCYTOSIS.	= 2+
LYMPHOID HYPERPLASIA.	= =
MAINSTEM BRONCHI	X A X X A X X X X X X A X A X X X = X X X X X X X

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
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CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 9 FEMALES

	19450	19451	19452	19453	19455	19456	19457	19458	19459	19460	19461	19462	19463	19465	19466	19467	19468	19469	19470	19471	19472	19473	19474	19475	19476
MAINSTEM BRONCHI (CONTINUED)																									
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=
LIVER	=	=	=	=	A	=	=	=	=	=	X	A	=	=	=	=	=	=	=	=	=	=	=	=	=
HYPERPLASIA.	=	=	=	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
AMYLOID.	3+	4+	3+	2+	=	3+	3+	3+	4+	3+	=	=	2+	3+	3+	4+	2+	4+	3+	3+	3+	3+	2+	3+	3+
NECROSIS.	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CONGESTION.	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=
CYST(S).	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	P	=	P	=	=	=
HEPATOCELLULAR CYSTIC DEGENERATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=
CHOLANGIOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=
CLEAR CELL FOCUS/FOCI.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
GALLBLADDER	-	-	-	X	A	-	-	A	-	-	-	-	A	-	-	-	-	-	-	-	-	A	A	-	-
SPLEEN	=	A	=	X	A	X	=	=	=	=	=	A	X	=	A	A	=	A	=	=	=	=	=	=	=
AMYLOID.	3+	=	4+	=	=	=	3+	2+	4+	3+	3+	=	=	3+	3+	=	2+	=	4+	4+	4+	2+	2+	3+	=
EXTRAMEDULLARY HEMATOPOIESIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+
PANCREAS	X	A	A	X	A	X	A	X	X	X	X	A	X	A	A	A	X	A	X	X	X	X	X	A	X
HEART	-	-	-	=	A	-	-	X	-	-	-	-	X	-	-	-	-	-	-	=	-	X	X	-	-
THROMBOSIS.	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=
MURAL THROMBOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
KIDNEYS	=	=	=	=	A	X	=	=	=	=	=	A	=	=	=	=	=	A	=	=	=	=	=	=	=
AMYLOID.	3+	4+	4+	3+	=	=	3+	4+	4+	4+	4+	=	2+	4+	4+	4+	4+	=	4+	4+	4+	4+	3+	4+	3+
EOSINOPHILIC MASS(ES).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=
GLOMERULAR NEPHROSIS.	3+	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=
MINERALIZATION.	=	=	=	=	=	=	=	=	=	=	=	=	1+	=	=	=	=	=	=	=	=	P	=	=	=
URINARY BLADDER	-	-	-	X	A	-	-	X	-	-	-	-	A	-	-	-	-	-	-	-	-	X	X	-	-
OVARIES	-	-	-	X	A	-	-	X	-	-	-	-	X	-	-	-	-	-	-	-	-	X	X	-	=
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P
UTERUS	-	-	-	X	A	-	-	X	-	-	-	-	X	X	-	-	-	-	-	-	-	X	X	-	-
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
STERNUM & RIB JUNCTION	-	-	-	X	-	-	-	X	-	-	-	-	X	-	-	-	-	-	-	-	-	X	X	-	-

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
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CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 9 FEMALES

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
	5	5	5	5	5	5	5	5	5	6	6	6	6	6	6	6	6	7	7	7	7	7	7	7
	0	1	2	3	5	6	7	8	9	0	1	2	3	5	6	7	8	9	0	1	2	3	4	5	6
FEMUR & BONE MARROW	-	-	-	X	-	-	-	X	-	-	-	-	X	-	-	-	-	-	-	-	-	X	X	-	-
NASAL CAVITY	-	-	-	X	-	-	-	X	-	-	-	-	X	-	-	-	-	-	-	-	-	X	X	-	-
OTHER	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 9 FEMALES

	19477	19478	19479	19480	19481	19483	19484	19485	19486	19488	19487	19488	19489	19490	19491	19492	19493	19494	19495	19496	19497	19498	19499
SKIN	-	X	-	-	-	-	-	X	-	X	-	-	-	-	-	X	-	-	-	-	X	-
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
SKIN/MAMMARY	-	X	-	-	-	-	-	X	-	X	-	-	-	-	-	X	-	-	-	-	X	-
THIGH MUSCLE	-	X	-	-	-	-	-	X	-	X	-	-	-	-	-	X	-	-	-	-	X	-
SALIVARY GLAND	-	X	-	-	-	-	-	X	-	X	-	-	-	-	-	X	-	-	-	-	X	-
MANDIBULAR LYMPH NODE	-	A	-	-	-	-	-	A	-	X	-	-	-	-	-	X	-	-	-	-	=	-
CORTICAL ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=
SCIATIC NERVE	-	X	-	-	-	-	-	X	-	X	-	-	-	-	-	X	-	-	-	-	X	-
BRAIN	-	X	-	-	-	-	-	X	-	X	-	-	-	-	-	X	-	-	-	-	X	-
MINERALIZATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PITUITARY	X	X	A	I	M	X	I	X	I	I	X	I	I	I	M	X	I	I	I	X	X	I
ADRENALS	=	=	A	X	A	=	=	=	=	=	=	A	=	=	=	=	=	=	=	=	=	X
HYPERPLASIA.	=	=	=	=	=	=	=	P	=	P	=	=	=	=	=	P	=	=	=	P	P	=
AMYLOID.	3+	3+	=	=	=	2+	3+	3+	2+	3+	2+	=	3+	3+	3+	4+	3+	3+	3+	3+	2+	=
MEDULLARY CELL HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
THYMUS	X	M	M	A	M	M	X	M	M	X	X	N	A	N	A	N	N	N	M	X	M	I
HEMOSIDEROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
STOMACH	-	A	A	-	-	-	-	A	-	X	-	-	-	-	-	X	-	-	-	-	X	-
PIGMENT.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
DUODENUM	-	A	A	-	A	-	-	A	-	X	-	-	-	-	-	X	-	-	-	-	X	-
JEJUNUM	-	X	-	-	-	-	-	X	-	X	-	-	-	-	-	X	-	-	-	-	X	-
CECUM	-	A	A	-	A	-	-	A	-	X	-	A	-	-	A	X	-	-	-	-	X	-
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
COLON	-	A	A	-	A	-	-	A	-	X	-	A	-	-	-	X	-	-	-	-	X	-
RECTUM	-	A	A	-	-	-	-	A	-	X	-	A	-	-	-	X	-	-	-	-	X	-
MESENTERIC LYMPH NODE	-	A	A	-	-	-	-	X	A	X	-	-	-	=	-	X	-	-	-	-	X	-

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
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CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 9 FEMALES

	19477	19478	19479	19480	19481	19483	19484	19485	19486	19487	19488	19489	19490	19491	19492	19493	19494	19495	19496	19497	19498	19499
MESENTERIC LYMPH NODE (CONTINUED)																						
HYPERPLASIA.	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=
AMYLOID.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
RETICULUM CELL HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
LYMPHOID HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=
ILEUM	-	A	A	-	A	-	-	A	A	X	-	A	-	-	-	X	-	-	-	-	X	-
LARYNX	X	X	A	X	A	X	X	X	A	X	X	A	X	X	A	X	X	X	X	X	X	X
TRACHEA	X	X	A	X	A	X	X	X	A	X	X	A	X	X	A	X	X	X	X	X	X	X
THYROID	A	A	=	I	A	=	=	=	A	=	X	=	=	=	=	=	=	=	=	=	=	A
AMYLOID.	=	=	4+	=	=	2+	2+	=	=	2+	=	3+	3+	3+	3+	=	2+	3+	2+	2+	=	=
CYST(S).	=	=	=	=	=	=	=	P	=	P	=	=	=	=	=	P	=	=	=	=	=	=
ADENOMA.	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=
PARATHYROID	=	A	A	N	A	X	X	=	A	=	X	A	X	=	A	X	X	X	X	=	X	A
HYPERPLASIA.	2+	=	=	=	=	=	=	P	=	P	=	=	=	=	=	=	=	=	=	1+	=	=
ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=
ESOPHAGUS	X	X	A	X	A	X	X	A	X	X	X	A	X	X	X	X	X	X	X	X	X	A
LUNG	=	=	A	=	A	=	=	=	=	=	=	A	=	=	=	=	=	=	=	=	=	=
AMYLOID.	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ALVEOLAR/BRONCHIOLAR CELL HYPERPLASIA.	3+	3+	=	3+	=	3+	3+	3+	3+	3+	3+	2+	3+	3+	3+	3+	3+	3+	2+	4+	3+	3+
EOSINOPHILIC MASS(ES).	2+	=	=	P	=	P	=	P	P	P	=	=	P	P	=	3+	=	P	P	P	1+	=
PIGMENT.	3+	3+	=	3+	3+	3+	3+	3+	4+	3+	3+	3+	3+	3+	3+	3+	3+	3+	2+	=	3+	3+
ADENOMATOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HISTIOCYTOSIS.	4+	=	=	=	=	=	4+	=	=	4+	=	4+	4+	=	=	=	=	=	=	=	=	=
CONGESTION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
EMPHYSEMA.	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ATELECTASIS.	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEMORRHAGE.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	3+	=	=
BRONCHIAL LYMPH NODES	=	M	A	N	M	M	=	M	A	=	=	A	N	X	A	=	N	=	=	=	=	N
AMYLOID.	=	=	=	=	=	=	2+	=	4+	=	=	2+	=	=	=	=	=	=	=	=	=	=
PIGMENT.	3+	=	=	=	=	=	=	=	=	2+	3+	=	=	=	=	3+	=	3+	4+	1+	1+	=
ERYTHROPHAGOCYTOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
LYMPHOID HYPERPLASIA.	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
MAINSTEM BRONCHI	X	X	A	X	A	X	X	X	A	X	X	A	X	X	A	X	X	X	X	X	X	X

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
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CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
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GROUP 9 FEMALES

	19477	19478	19479	19480	19481	19483	19484	19485	19486	19487	19488	19489	19490	19491	19492	19493	19494	19495	19496	19497	19498	19499
MAINSTEM BRONCHI (CONTINUED)																						
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
LIVER	=	=	A	A	A	=	=	A	=	=	A	A	=	=	A	=	=	=	=	=	=	A
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
AMYLOID.	3+	2+	=	=	3+	3+	4+	3+	3+	2+	3+	=	2+	3+	3+	3+	4+	3+	3+	4+	=	=
NECROSIS.	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CONGESTION.	4+	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=
CYST(S).	=	=	=	=	=	=	=	P	=	P	=	=	=	=	P	P	=	=	=	=	P	=
HEPATOCELLULAR CYSTIC DEGENERATION.	=	=	=	=	=	=	=	=	=	2+	=	=	=	=	=	=	=	=	P	=	=	=
CHOLANGIOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CLEAR CELL FOCUS/FOCI.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	3+	=
GALLBLADDER	-	A	-	-	-	-	-	A	-	X	-	-	-	-	-	X	-	-	-	-	X	-
SPLEEN	=	=	A	X	=	=	=	X	X	=	A	A	=	=	=	=	=	=	=	=	=	A
AMYLOID.	2+	2+	=	=	4+	2+	=	=	=	3+	3+	4+	2+	3+	3+	3+	3+	3+	=	3+	3+	=
EXTRAMEDULLARY HEMATOPOIESIS.	3+	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=
PANCREAS	X	X	A	A	A	A	X	A	A	X	A	A	A	X	X	X	X	X	X	X	X	A
HEART	=	=	A	-	-	-	=	=	-	=	-	-	=	X	-	X	-	-	-	-	X	A
THROMBOSIS.	P	=	=	=	=	=	P	=	=	P	=	=	P	=	=	=	=	=	=	=	=	=
MURAL THROMBOSIS.	=	P	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=
KIDNEYS	=	=	A	=	A	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	A
AMYLOID.	4+	2+	=	=	4+	3+	4+	=	4+	4+	3+	4+	4+	4+	4+	3+	4+	4+	4+	4+	3+	=
EOSINOPHILIC MASS(ES).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
GLOMERULAR NEPHROSIS.	=	=	=	1+	=	=	=	2+	=	=	=	=	=	=	=	=	=	=	3+	=	2+	=
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=
MINERALIZATION.	=	=	=	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=
URINARY BLADDER	-	X	-	-	-	-	-	A	-	X	-	-	-	-	-	X	-	-	-	-	X	-
OVARIES	-	X	A	-	-	-	-	X	-	X	-	-	-	-	=	X	=	-	-	-	X	-
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	4+	=	=	=	=	=
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
UTERUS	-	X	A	-	-	-	-	X	-	X	-	-	-	-	-	X	-	-	-	=	X	-
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	2+	=	=
STERNUM & RIB JUNCTION	-	X	-	-	-	-	-	X	-	X	-	-	-	-	-	X	-	-	-	-	X	-

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
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CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
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GROUP 9 FEMALES

	19477	19478	19479	19480	19481	19483	19484	19485	19486	19487	19488	19489	19490	19491	19492	19493	19494	19495	19496	19497	19498	19499
FEMUR & BONE MARROW	-	X	-	-	-	-	-	X	-	X	-	-	-	-	-	X	-	-	-	-	X	-
NASAL CAVITY	-	X	-	-	-	-	-	X	-	X	-	-	-	-	-	X	-	-	-	-	X	-
OTHER	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

(X) NO SIGNIFICANT LESION RECOGNIZED
(I) INSUFFICIENT TISSUE PRESENT IN SECTION
(N) NOT PRESENT IN SECTION
(M) MISSING
(A) AUTOLYZED
(-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
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CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 10 FEMALES

	19550	19551	19552	19553	19554	19555	19556	19557	19558	19559	19560	19561	19562	19563	19564	19565	19566	19567	19568	19569	19570	19571	19572	19574	19575
SKIN	-	X	-	-	-	-	X	-	X	-	-	-	-	-	-	-	-	X	-	-	X	X	-	-	-
SKIN/MAMMARY	-	X	-	-	-	-	X	-	X	-	-	-	-	-	-	-	-	X	-	-	X	X	-	-	-
THIGH MUSCLE	-	X	-	-	-	-	X	-	X	-	-	-	-	-	-	-	-	X	-	-	X	X	-	-	-
SALIVARY GLAND	-	X	-	-	-	-	X	-	X	-	-	-	-	-	-	-	-	X	-	-	X	A	-	-	-
MANDIBULAR LYMPH NODE	-	X	-	-	-	-	X	-	=	-	-	-	-	-	-	-	-	=	-	-	X	A	-	-	-
AMYLOID.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	2+	=	=	=	=	=	=	=
PIGMENT.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
LYMPHOID HYPERPLASIA.	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
NECROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
SCIATIC NERVE	-	X	-	-	-	-	X	-	X	-	-	-	-	-	-	-	-	X	-	-	X	X	-	-	-
BRAIN	-	X	-	-	-	-	=	-	X	-	-	-	-	-	-	-	-	X	-	-	X	A	-	-	-
MINERALIZATION.	=	=	=	=	=	=	1+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PITUITARY	X	X	I	X	X	I	X	X	X	A	M	I	I	X	X	X	A	I	X	I	X	A	X	M	I
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ADRENALS	=	=	=	=	=	=	=	=	=	A	A	=	=	X	=	=	A	I	=	=	=	=	X	=	=
AMYLOID.	2+	3+	4+	2+	3+	2+	3+	=	3+	=	=	3+	2+	=	3+	3+	=	=	3+	3+	4+	4+	=	3+	2+
HYPERPLASIA.	=	P	=	=	=	=	P	P	P	=	=	=	=	=	=	P	=	=	P	=	=	=	=	=	=
CYST(S).	=	=	=	P	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=
ADENOMA.	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P
THYMUS	I	N	X	M	X	M	M	X	M	A	A	X	N	X	X	N	A	M	X	X	M	A	X	M	X
STOMACH	-	X	-	-	-	-	X	-	X	-	-	-	-	-	-	-	-	X	-	-	X	A	-	-	-
DUODENUM	-	X	-	-	-	-	X	-	X	-	-	-	-	-	-	-	-	X	A	-	X	A	-	-	-
JEJUNUM	-	X	-	-	-	-	X	-	X	-	-	-	-	-	-	-	-	X	A	-	X	X	-	-	-
CECUM	-	X	-	-	-	-	X	-	X	A	A	-	-	-	-	-	A	X	A	-	X	A	-	-	-
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
COLON	-	X	-	-	-	-	X	-	X	-	-	-	-	-	-	-	-	X	A	-	X	A	-	-	-
RECTUM	-	X	-	-	-	-	X	-	X	-	-	-	-	-	-	-	-	X	A	-	X	A	-	-	-

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
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CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 10 FEMALES

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
	5	5	5	5	5	5	5	5	5	5	6	6	6	6	6	6	6	6	6	6	7	7	7	7	7
	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	4	5
MESENTERIC LYMPH NODE	-	X	-	-	-	-	X	-	M	A	A	-	-	-	-	-	A	X	-	-	X	A	A	-	-
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ILEUM	-	X	-	-	-	-	X	-	X	-	-	-	-	-	-	-	-	X	A	-	X	A	-	-	-
LARYNX	X	X	X	X	X	X	X	X	X	A	A	X	X	X	X	X	A	X	X	X	X	A	M	X	X
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
TRACHEA	X	X	X	X	X	X	X	X	X	A	A	X	X	X	X	X	A	X	X	X	X	A	X	X	X
THYROID	=	=	=	N	=	=	=	=	=	A	A	=	=	X	=	=	A	=	=	=	=	=	X	=	=
AMYLOID.	2+	3+	4+	=	3+	2+	2+	2+	=	=	=	1+	3+	=	3+	2+	=	2+	2+	=	=	3+	=	4+	2+
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	2+	=	=	=	=
FOLLICULAR CELL ADENOMA.	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=
CYST(S).	=	=	=	=	P	=	=	P	P	=	=	=	P	=	=	P	=	=	=	=	=	=	=	=	=
PARATHYROID	X	X	X	N	X	A	X	=	X	A	A	X	X	=	N	X	A	=	X	X	M	=	X	X	A
HYPERPLASIA.	=	=	=	=	=	=	=	2+	=	=	=	=	=	2+	=	=	=	=	=	=	=	=	=	=	=
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	P	=	=	=
ESOPHAGUS	X	X	X	X	X	X	X	X	X	A	A	X	X	X	X	X	A	X	X	X	X	A	X	X	X
LUNG	=	=	=	=	X	X	=	=	X	A	X	X	=	=	X	X	X	=	=	=	=	X	X	=	=
FIBROSIS.	1+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	1+	=	=	=	=
HISTIOCYTOSIS.	=	4+	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	3+
ALVEOLAR/BRONCHIOLAR CELL HYPERPLASIA.	=	1+	=	=	=	=	=	=	=	=	=	=	1+	1+	=	=	=	=	=	=	1+	=	=	=	=
CONGESTION.	=	=	=	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=
ATELECTASIS.	=	=	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PNEUMOLITHIASIS.	=	=	=	=	=	=	=	1+	=	=	=	=	=	=	=	=	=	2+	=	=	=	=	=	=	=
HEMORRHAGE.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
EOSINOPHILIC MASS(ES).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
BRONCHIAL LYMPH NODES	I	=	X	M	X	M	X	=	M	A	M	X	I	X	X	N	=	M	N	N	M	A	X	M	X
PIGMENT.	=	2+	=	=	=	=	=	3+	=	=	=	=	=	=	=	1+	=	=	=	=	=	=	=	=	=
HEMOSIDEROSIS.	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
MAINSTEM BRONCHI	X	X	X	X	X	X	X	X	X	A	A	X	X	X	X	X	A	X	X	X	X	A	X	X	X
LIVER	=	=	=	=	=	=	A	=	=	A	A	=	=	X	=	=	A	=	=	=	=	=	X	=	=
AMYLOID.	3+	4+	3+	3+	3+	3+	3+	3+	2+	=	=	3+	3+	=	3+	3+	=	2+	2+	3+	3+	3+	=	3+	3+

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
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CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 10 FEMALES

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
	5	5	5	5	5	5	5	5	5	5	6	6	6	6	6	6	6	6	6	7	7	7	7	7
	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	5	6	7	8	9	0	1	2	4	5
LIVER (CONTINUED)																									
CONGESTION.	=	4+	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	4+	3+	=	=	=	=	3+
CLEAR CELL FOCUS/FOCI.	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=
CYST(S).	=	=	=	=	P	=	P	P	=	=	=	=	P	=	=	=	=	P	=	=	P	P	=	=	=
CHOLANGIOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
BILE DUCT HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEPATOCELLULAR CYSTIC DEGENERATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
GALLBLADDER	-	A	-	-	-	-	A	-	X	-	-	-	-	-	-	-	-	X	-	-	X	A	-	-	-
SPLEEN	=	=	=	X	=	=	=	=	X	A	A	=	=	X	=	=	A	=	=	=	X	A	=	=	=
AMYLOID.	3+	2+	3+	=	3+	3+	4+	3+	=	=	=	=	3+	=	3+	3+	=	2+	3+	3+	=	=	=	4+	3+
EXTRAMEDULLARY HEMATOPOIESIS.	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=
LEUKEMIA/LYMPHOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=
PANCREAS	X	X	A	X	X	A	X	X	X	A	A	X	X	X	X	X	A	X	X	X	=	A	X	A	A
AMYLOID.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
DUCTAL ECTASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	2+	=	=	=	=
ATROPHY.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEART	-	=	-	-	-	-	=	-	X	A	A	-	-	-	-	-	A	=	=	-	=	=	-	-	=
THROMBOSIS.	=	P	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	P
MINERALIZATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=
MURAL THROMBOSIS.	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=
MYOCARDIOPATHY.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=
KIDNEYS	=	=	=	=	=	=	=	=	=	A	A	=	=	X	=	=	A	=	=	=	=	=	=	=	=
AMYLOID.	4+	4+	4+	3+	4+	4+	4+	4+	1+	=	=	4+	4+	=	4+	4+	=	1+	4+	4+	4+	4+	=	4+	4+
GLOMERULAR NEPHROSIS.	4+	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	3+	=	=	=	=	2+	=	=
MINERALIZATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	2+	=	=	=	=	=	=
URINARY BLADDER	-	X	-	-	-	-	A	-	X	-	-	-	-	-	-	-	-	X	-	-	X	A	-	-	-
OVARIES	-	X	-	-	-	-	X	-	X	A	A	-	-	-	-	-	A	X	-	-	X	X	-	-	-
CONGESTION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
UTERUS	-	X	-	-	-	-	X	-	X	-	-	-	-	-	-	-	-	X	-	-	X	A	-	-	-
STERNUM & RIB JUNCTION	-	X	-	-	-	-	X	-	X	-	-	-	-	-	-	-	-	X	-	-	X	A	-	-	-
FEMUR & BONE MARROW	-	X	-	-	-	-	X	-	X	-	-	-	-	-	-	-	-	X	-	-	X	X	-	-	-

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CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 10 FEMALES

	19550	19551	19552	19553	19554	19555	19556	19557	19558	19559	19560	19561	19562	19563	19564	19565	19566	19567	19568	19569	19570	19571	19572	19574	19575
NASAL CAVITY	-	X	-	-	-	-	X	-	X	-	-	-	-	-	-	-	-	X	-	-	X	X	-	-	-
OTHER	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
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CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 10 FEMALES

	19576	19577	19578	19579	19580	19581	19582	19583	19584	19585	19586	19587	19588	19589	19591	19592	19593	19594	19595	19596	19598	19599
SKIN	-	-	-	-	X	X	-	-	-	-	-	-	-	-	X	-	X	-	-	-	-	-
SKIN/MAMMARY	-	-	-	-	X	X	-	-	-	-	-	-	-	-	X	-	X	-	-	-	-	-
THIGH MUSCLE	-	-	-	-	X	X	-	-	-	-	-	-	-	-	X	-	X	-	-	-	-	-
SALIVARY GLAND	-	-	-	-	X	X	-	-	-	-	-	-	-	-	X	-	X	-	-	-	-	-
MANDIBULAR LYMPH NODE	-	-	-	-	X	=	-	-	-	-	-	-	-	=	-	X	-	-	-	-	-	-
AMYLOID.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PIGMENT.	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
LYMPHOID HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
NECROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=
SCIATIC NERVE	-	-	-	-	X	X	-	-	-	-	-	-	-	-	X	-	X	-	-	-	-	-
BRAIN	-	-	-	-	X	X	-	-	-	-	-	-	-	-	X	-	X	-	-	-	-	-
MINERALIZATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PITUITARY	X	I	I	I	X	X	X	X	X	A	X	I	I	A	=	X	I	I	A	I	X	X
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=
ADRENALS	=	=	=	X	=	=	=	=	=	A	=	X	=	A	=	=	I	=	A	=	X	=
AMYLOID.	3+	2+	3+	=	3+	2+	2+	2+	4+	=	P	=	2+	=	3+	3+	3+	2+	=	4+	=	3+
HYPERPLASIA.	=	=	=	=	=	P	=	=	=	=	P	=	=	=	=	P	P	P	=	=	=	=
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
THYMUS	X	M	M	M	N	N	N	X	I	X	A	M	M	I	M	I	M	N	M	A	M	X	M
STOMACH	-	-	-	-	X	X	-	-	-	-	-	-	-	-	A	-	X	-	-	-	-	-
DUODENUM	-	-	-	-	X	X	-	-	-	-	-	-	-	-	A	-	X	-	-	-	-	-
JEJUNUM	-	-	-	-	X	X	-	-	-	-	-	-	-	-	A	-	X	-	-	-	-	-
CECUM	-	-	-	=	X	X	-	-	-	-	-	-	-	A	A	-	=	-	-	-	-	-
INFLAMMATION.	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=
COLON	-	-	-	-	X	X	-	-	-	-	-	-	-	-	A	-	X	-	-	-	-	-
RECTUM	-	-	-	-	X	X	-	-	-	-	-	-	-	-	A	-	X	-	-	-	-	-

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FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 10 FEMALES

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5
	7	7	7	7	8	8	8	8	8	8	8	8	8	9	9	9	9	9	9	9
	6	7	8	9	0	1	2	3	4	5	6	7	8	9	1	2	3	4	5	6	8	9
MESENTERIC LYMPH NODE	=	-	-	-	X	X	-	-	-	-	-	-	-	A	A	-	X	-	-	-	-	-
INFLAMMATION.	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ILEUM	-	-	-	-	X	X	-	-	-	-	-	-	-	-	A	-	X	-	-	-	-	-
LARYNX	=	X	X	X	X	X	X	X	X	A	X	X	X	A	X	X	X	X	A	X	X	X
HYPERPLASIA.	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
TRACHEA	X	X	X	X	X	X	X	X	X	A	X	X	X	A	X	X	X	X	A	X	X	X
THYROID	=	=	=	X	=	=	X	=	=	A	X	X	=	A	=	=	=	=	A	=	X	=
AMYLOID.	2+	2+	3+	=	3+	=	=	3+	3+	=	=	=	3+	=	4+	3+	3+	3+	=	3+	=	3+
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
FOLLICULAR CELL ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CYST(S).	=	=	=	=	P	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PARATHYROID	X	=	X	=	N	X	X	I	X	A	X	X	X	A	X	X	X	X	A	X	X	I
HYPERPLASIA.	=	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CYST(S).	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ESOPHAGUS	X	X	X	X	X	X	X	X	X	A	X	X	X	A	A	X	X	X	A	X	X	X
LUNG	=	=	=	=	=	=	X	=	X	A	X	=	=	A	=	=	=	X	A	=	X	=
FIBROSIS.	=	=	1+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HISTIOCYTOSIS.	=	=	=	=	4+	=	=	4+	=	=	=	=	=	3+	=	3+	=	=	4+	=	2+	
ALVEOLAR/BRONCHIOLAR CELL HYPERPLASIA.	=	=	=	1+	=	=	=	=	=	=	=	=	=	2+	=	=	=	=	=	=	=	
CONGESTION.	3+	=	=	=	4+	=	=	=	=	=	4+	3+	=	=	=	=	=	=	=	=	=	
ATELECTASIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	
PNEUMOLITHIASIS.	=	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	
HEMORRHAGE.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	3+		
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=		
EOSINOPHILIC MASS(ES).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	1+	=	=	=	=	=		
BRONCHIAL LYMPH NODES	X	M	X	N	X	I	X	X	X	A	M	M	X	M	=	M	M	M	A	X	X	M
PIGMENT.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	2+	=	=	=	=	=	=	
HEMOSIDEROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	
MAINSTEM BRONCHI	X	X	X	X	X	X	X	X	X	A	X	X	X	A	X	X	X	X	A	X	X	X
LIVER	X	A	=	X	=	=	=	=	=	A	=	X	=	A	=	=	=	=	A	=	=	=
AMYLOID.	=	2+	2+	=	2+	2+	2+	3+	2+	=	2+	=	3+	=	3+	2+	3+	3+	=	3+	3+	2+

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 10 FEMALES

	19576	19577	19578	19579	19580	19581	19582	19583	19584	19585	19586	19587	19588	19589	19591	19592	19593	19594	19595	19596	19598	19599
LIVER (CONTINUED)																						
CONGESTION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=
CLEAR CELL FOCUS/FOCI.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CYST(S).	=	P	=	=	P	P	P	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=
CHOLANGIOMA.	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
BILE DUCT HYPERPLASIA.	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEPATOCELLULAR CYSTIC DEGENERATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=
GALLBLADDER	-	-	-	-	A	X	-	-	-	-	-	-	-	-	A	-	A	-	-	-	-	-
SPLEEN	=	=	X	X	X	X	=	=	=	A	=	X	=	A	=	M	=	=	A	=	=	=
AMYLOID.	3+	3+	=	=	=	=	3+	3+	4+	=	1+	=	3+	=	3+	=	3+	3+	=	3+	3+	3+
EXTRAMEDULLARY HEMATOPOIESIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
LEUKEMIA/LYMPHOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PANCREAS	A	A	X	X	X	X	X	=	A	A	X	X	=	A	X	A	X	A	A	X	X	A
AMYLOID.	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	=
DUCTAL ECTASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ATROPHY.	=	=	=	=	=	=	=	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEART	-	-	-	-	=	X	-	-	-	A	-	-	-	A	=	-	=	-	A	=	=	-
THROMBOSIS.	=	=	=	=	P	=	=	=	=	=	=	=	=	=	P	=	P	=	=	P	=	=
MINERALIZATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
MURAL THROMBOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=
MYOCARDIOPATHY.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
KIDNEYS	=	=	=	=	=	=	=	=	=	A	=	=	=	A	=	=	=	=	A	=	=	=
AMYLOID.	4+	4+	2+	=	4+	=	4+	4+	4+	=	2+	=	4+	=	4+	4+	4+	4+	=	4+	4+	4+
GLOMERULAR NEPHROSIS.	=	=	2+	=	=	=	=	=	=	=	=	2+	=	=	=	=	=	=	=	=	=	=
MINERALIZATION.	=	=	=	3+	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
URINARY BLADDER	-	-	-	-	A	X	-	-	-	-	-	-	-	-	A	-	A	-	-	-	-	-
OVARIES	-	-	-	-	X	X	-	-	-	-	-	-	-	A	X	-	X	-	-	-	=	-
CONGESTION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=
UTERUS	-	-	-	-	X	X	-	-	-	-	-	-	-	-	X	-	X	-	-	-	-	-
STERNUM & RIB JUNCTION	-	-	-	-	X	X	-	-	-	-	-	-	-	-	X	-	X	-	-	-	-	-
FEMUR & BONE MARROW	-	-	-	-	X	X	-	-	-	-	-	-	-	-	X	-	X	-	-	-	-	-

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
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CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 10 FEMALES

	19576	19577	19578	19579	19580	19581	19582	19583	19584	19585	19586	19587	19588	19589	19591	19592	19593	19594	19595	19596	19598	19599
NASAL CAVITY	-	-	-	-	X	X	-	-	-	-	-	-	-	-	X	-	X	-	-	-	-	-
OTHER	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

(X) NO SIGNIFICANT LESION RECOGNIZED
(I) INSUFFICIENT TISSUE PRESENT IN SECTION
(N) NOT PRESENT IN SECTION
(M) MISSING
(A) AUTOLYZED
(-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 11 FEMALES

	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987
SKIN	X	-	-	X	-	-	-	-	X	-	-	-	-	-	X	-	-	X	-	-	-	-	-	X	-
SKIN/MAMMARY	X	-	-	X	-	-	-	-	X	-	-	-	-	-	X	-	-	X	-	-	-	-	-	X	-
THIGH MUSCLE	X	-	-	X	-	-	-	-	X	-	-	-	-	-	X	-	-	X	-	-	-	-	-	X	-
SALIVARY GLAND	A	-	-	X	-	-	-	-	X	-	-	-	-	-	X	-	-	X	-	-	-	X	-	X	-
MANDIBULAR LYMPH NODE	A	-	-	X	-	-	-	-	=	-	-	-	-	-	X	-	-	A	-	-	-	-	-	X	-
LYMPHOID HYPERPLASIA.	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
LEUKOSTASIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PLASMACYTOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
SCIATIC NERVE	X	-	-	X	-	-	-	-	X	-	-	-	-	-	X	-	-	X	-	-	-	-	-	X	-
BRAIN	A	-	-	X	-	-	-	-	X	-	-	-	-	-	X	-	-	X	-	-	-	-	-	X	-
PITUITARY	A	M	I	X	X	I	X	X	X	I	X	X	X	I	I	X	X	I	X	X	X	I	X	I	I
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ADRENALS	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	X	=	=	I	=	=	=
ADENOMA.	P	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
AMYLOID.	=	3+	4+	=	2+	2+	2+	2+	2+	2+	1+	3+	3+	=	2+	3+	3+	=	4+	3+	2+	4+	3+	3+	
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	P	=	=	=	=
HYPERPLASIA.	=	=	=	=	=	=	=	=	=	P	=	=	=	=	2+	=	=	P	=	=	=	=	P	=	P
MEDULLARY CELL HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=
THYMUS	M	M	N	X	M	X	M	N	N	M	M	M	X	M	X	M	X	X	N	X	M	X	X	N	I
LEUKEMIA/LYMPHOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PLASMACYTOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
STOMACH	A	-	-	X	=	-	-	-	X	-	-	-	-	-	X	A	-	A	-	-	-	-	-	X	-
LEUKEMIA/LYMPHOMA.	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
DUODENUM	A	-	-	X	-	-	-	-	X	-	-	-	-	-	X	A	-	A	-	-	-	-	-	X	-
JEJUNUM	A	-	-	X	-	-	-	-	X	-	-	-	-	-	X	A	-	A	-	-	-	-	-	X	-
CECUM	A	-	-	X	-	-	-	-	X	-	-	=	-	-	X	A	-	A	-	-	-	-	-	X	-
AMYLOID.	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=
COLON	A	-	-	X	-	-	-	-	X	-	-	-	X	-	X	A	-	A	-	-	-	-	-	X	-

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
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CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 11 FEMALES

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	5	5	5	5	5	5	5	5	6	6	6	6	6	6	6	6	6	7	7	7	7	7	7	7
	0	2	3	4	5	6	7	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	6	7
RECTUM	A	-	-	X	-	-	-	-	X	-	-	-	-	-	-	X	A	-	A	-	-	-	-	-	X	-
MESENTERIC LYMPH NODE	A	-	-	X	-	-	-	-	=	-	-	-	=	-	-	-	-	A	-	-	-	-	-	-	X	-
LYMPHOID HYPERPLASIA.	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PLASMACYTOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=
RETICULUM CELL HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=
PLASMACYTOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ILEUM	A	-	-	X	-	-	-	-	X	-	-	-	-	-	-	X	A	-	A	-	-	-	-	-	X	-
LARYNX	A	X	X	X	X	X	X	X	X	X	X	X	X	M	X	X	X	X	M	X	X	X	X	X	X	
TRACHEA	A	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
THYROID	=	=	=	X	=	=	=	X	=	=	=	=	=	M	X	=	=	=	M	=	=	=	=	=	=	
ADENOMA.	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	
AMYLOID.	3+	3+	2+	=	2+	2+	=	=	2+	2+	=	3+	=	=	2+	2+	2+	=	3+	3+	3+	2+	4+	2+		
CYST(S).	=	=	=	=	=	=	=	=	P	=	=	P	=	=	=	=	=	=	=	P	=	P	=	P	=	
PARATHYROID	N	X	X	=	X	X	X	=	X	X	X	X	X	M	X	X	X	X	X	M	X	X	X	X	A	X
ADENOMA.	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HYPERPLASIA.	=	=	=	=	=	=	=	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ESOPHAGUS	A	X	X	X	=	X	X	X	X	X	X	X	X	X	X	X	X	A	X	X	X	X	X	X	X	
LEUKEMIA/LYMPHOMA.	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	
LUNG	A	=	X	=	=	X	X	X	X	X	=	=	X	=	X	=	=	=	=	=	=	=	=	=	=	
ATELECTASIS.	=	3+	=	=	=	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	
HISTIOCYTOSIS.	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	4+	4+	=	=	=	3+	=	4+	3+	
CONGESTION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	4+	=	=	=	=	=	=	
LEUKEMIA/LYMPHOMA.	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	
FIBROSIS.	=	=	=	=	=	=	=	=	=	=	=	1+	=	=	=	=	=	=	=	1+	=	2+	=	=		
ALVEOLAR/BRONCHIOLAR CELL HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	2+	=	=	=	=	=	1+	=	=	=	=	=		
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	4+	=	=	=	=	=	=	=		
PIGMENT.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=		
HEMORRHAGE.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=		
PNEUMOLITHIASIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=		
BRONCHIAL LYMPH NODES	M	X	=	X	=	X	M	X	X	M	N	M	X	M	M	X	=	=	N	X	X	N	X	X	X	
HEMOSIDEROSIS.	=	=	2+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=		
LEUKEMIA/LYMPHOMA.	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=		

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
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CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 11 FEMALES

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	5	5	5	5	5	5	5	5	6	6	6	6	6	6	6	6	6	7	7	7	7	7	7
	0	2	3	4	5	6	7	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	6	7
BRONCHIAL LYMPH NODES (CONTINUED)																							
ERYTHROPHAGOCYTOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=
PIGMENT.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	2+	=	=	=	=	=	=
CARCINOMA, METASTATIC.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PLASMACYTOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
MAINSTEM BRONCHI	A	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
LIVER	A	=	=	=	=	=	X	X	=	A	=	=	=	=	X	=	=	=	=	=	=	=	=
AMYLOID.	=	3+	3+	2+	2+	3+	=	=	=	3+	3+	1+	3+	3+	=	4+	3+	3+	=	4+	3+	3+	3+
CYST(S).	=	P	=	P	=	=	=	=	P	=	=	=	=	=	=	P	=	=	=	P	=	=	=
CONGESTION.	=	=	=	4+	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=	=	4+	=
LEUKEMIA/LYMPHOMA.	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
CLEAR CELL FOCUS/FOCI.	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	P	=	=	=	=
EXTRAMEDULLARY HEMATOPOIESIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEPATOCELLULAR CYSTIC DEGENERATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
NECROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PLASMACYTOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
GALLBLADDER	A	-	-	A	-	-	-	-	X	-	-	-	-	-	X	-	-	A	-	-	-	-	X	-
SPLEEN	A	=	=	=	=	=	X	X	X	=	=	=	=	=	X	=	=	=	X	=	=	=	=
AMYLOID.	=	4+	3+	1+	=	3+	=	=	=	4+	2+	2+	3+	3+	=	3+	3+	2+	=	4+	4+	2+	3+
LEUKEMIA/LYMPHOMA.	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
EXTRAMEDULLARY HEMATOPOIESIS.	=	=	=	=	=	=	=	=	=	=	=	2+	=	3+	=	=	=	=	=	=	=	=	=
PANCREAS	A	X	X	X	X	X	X	A	X	X	X	=	A	X	X	A	X	A	X	X	=	A	A
AMYLOID.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	2+	=	=
PAPILLARY HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	2+	=	=	=	=	=	=	=	=	=	=	=
ATROPHY.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEPATOCELLULAR DIFFERENTIATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
HEART	=	-	-	=	-	-	-	-	X	-	-	-	-	-	X	-	-	=	-	-	-	-	-
THROMBOSIS.	P	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=
MURAL THROMBOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
KIDNEYS	A	=	=	=	=	=	X	=	=	=	=	=	=	=	=	=	=	=	X	=	=	=	=
AMYLOID.	=	4+	4+	=	4+	4+	=	1+	=	4+	3+	3+	4+	4+	=	2+	4+	4+	=	4+	4+	3+	4+
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=
CONGESTION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
GLOMERULAR NEPHROSIS.	=	=	=	2+	=	=	=	=	2+	=	=	=	=	=	2+	=	=	=	=	=	=	=	=
MINERALIZATION.	=	=	=	=	3+	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 11 FEMALES

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	5	5	5	5	5	5	5	5	6	6	6	6	6	6	6	6	6	7	7	7	7	7	7	7
	0	2	3	4	5	6	7	9	0	1	2	3	4	5	6	7	8	9	0	1	2	3	4	6	7
URINARY BLADDER	A	-	-	X	-	-	-	-	X	-	-	-	-	-	X	-	-	X	-	-	-	-	-	X	-
OVARIES	A	-	-	X	-	-	-	-	X	-	-	-	-	-	=	-	-	X	-	-	-	-	-	X	-
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
GRANULOSA CELL TUMOR(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=
UTERUS	A	-	-	X	-	-	-	-	X	-	-	-	-	-	X	-	-	X	-	-	-	-	-	X	-
STERNUM & RIB JUNCTION	X	-	-	X	=	-	-	-	X	-	-	-	-	-	X	-	-	X	-	-	-	-	-	X	-
LEUKEMIA/LYMPHOMA.	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
FEMUR & BONE MARROW	X	-	-	X	-	-	-	-	X	-	-	-	-	-	X	-	-	X	-	-	-	-	-	X	-
NASAL CAVITY	X	-	-	X	-	-	-	-	X	-	-	-	-	-	X	-	-	X	-	-	-	-	-	X	-
OTHER	-	-	-	-	=	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(AXILLARY MASS), LEUKEMIA/LYMPHOMA.	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
(RENAL LYMPH NODE), LEUKEMIA/LYMPHOMA.	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 11 FEMALES

	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19	19
	66	66	66	66	66	66	66	66	66	66	66	66	66	66	66	66	66	66	66	66
	78	78	88	88	88	88	88	88	88	88	99	99	99	99	99	99	99	99	99	99
	89	90	01	12	23	34	45	67	89	90	01	12	23	34	45	56	67	78	89	90
SKIN	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	-
SKIN/MAMMARY	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	-
THIGH MUSCLE	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	-
SALIVARY GLAND	A	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	-
MANDIBULAR LYMPH NODE	A	-	M	-	-	-	-	-	-	-	-	-	-	-	-	-	-	=	=	-
LYMPHOID HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
LEUKOSTASIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=
PLASMACYTOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=
SCIATIC NERVE	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	-
BRAIN	X	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	-
PITUITARY	A	I	X	X	X	X	X	X	X	X	I	I	I	=	=	X	I	X	X	X
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	P	P	=	=	=	=	=
ADRENALS	A	=	=	X	=	I	I	=	X	X	=	I	I	X	=	=	X	=	=	=
ADENOMA.	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	P
AMYLOID.	=	3+	2+	=	2+	2+	3+	3+	=	=	3+	3+	3+	=	3+	2+	=	2+	3+	3+	2+
CYST(S).	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=
HYPERPLASIA.	=	=	P	=	P	=	=	=	=	=	=	=	=	P	=	=	=	P	P	=
MEDULLARY CELL HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
THYMUS	A	M	M	M	M	X	M	N	X	N	X	X	M	M	M	X	X	M	X	=	X
LEUKEMIA/LYMPHOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=
PLASMACYTOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=
STOMACH	A	A	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	A	-
LEUKEMIA/LYMPHOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
DUODENUM	A	A	A	-	-	-	-	-	-	A	-	-	-	-	-	-	-	X	A	-
JEJUNUM	A	A	A	-	-	-	-	-	-	A	-	-	-	-	-	-	-	X	A	-
CECUM	A	A	A	-	-	-	-	-	-	A	-	-	-	-	-	-	-	X	A	-
AMYLOID.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
COLON	A	A	A	-	-	-	-	-	-	A	-	-	-	-	-	-	-	X	A	-

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 11 FEMALES

	19667	19678	19680	19681	19682	19683	19684	19686	19687	19688	19689	19690	19691	19692	19693	19694	19695	19696	19697	19698	19699
RECTUM	A	A	A	-	-	-	-	-	-	A	-	-	-	-	-	-	-	-	X	A	-
MESENTERIC LYMPH NODE	A	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	=	-
LYMPHOID HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PLASMACYTOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
RETICULUM CELL HYPERPLASIA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PLASMACYTOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=
ILEUM	A	A	A	-	-	-	-	-	-	A	-	-	-	-	-	-	-	-	X	A	-
LARYNX	A	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
TRACHEA	A	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
THYROID	X	=	=	=	=	X	=	=	=	X	=	=	=	X	=	=	X	=	X	=	=
ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	P
AMYLOID.	=	2+	2+	=	2+	=	2+	1+	2+	=	2+	2+	2+	=	2+	2+	=	2+	=	4+	=
CYST(S).	=	=	=	P	P	=	=	=	=	=	=	=	=	P	P	=	=	=	=	=	P
PARATHYROID	X	A	=	X	X	X	X	X	X	I	X	X	=	X	=	X	X	X	X	X	X
ADENOMA.	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=	=
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=	=	=
HYPERPLASIA.	=	=	P	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
ESOPHAGUS	A	X	A	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	A	X
LEUKEMIA/LYMPHOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
LUNG	A	A	=	=	=	=	X	X	=	X	=	X	X	=	=	=	=	=	=	X	=
ATELECTASIS.	=	=	=	=	=	=	=	=	2+	=	4+	=	=	=	=	=	=	3+	=	=	=
HISTIOCYTOSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+
CONGESTION.	=	=	3+	=	=	=	=	=	=	=	=	=	=	3+	=	3+	=	=	=	=	=
LEUKEMIA/LYMPHOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
FIBROSIS.	=	=	=	=	1+	=	=	=	=	=	=	=	=	=	=	=	=	1+	=	=	=
ALVEOLAR/BRONCHIOLAR CELL HYPERPLASIA.	=	=	=	2+	=	1+	=	=	=	=	=	=	=	3+	=	=	1+	2+	3+	=	3+
INFLAMMATION.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	3+	=	=
PIGMENT.	=	=	=	3+	=	=	=	=	=	=	1+	=	=	3+	=	=	=	=	=	=	=
HEMORRHAGE.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
PNEUMOLITHIASIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	2+	=	=	=	=	=	=
BRONCHIAL LYMPH NODES	A	M	M	M	M	M	M	X	X	X	X	X	=	M	M	=	X	M	X	=	X
HEMOSIDEROSIS.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=	=	=	=
LEUKEMIA/LYMPHOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 11 FEMALES

	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
	9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9
	6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6
	7 7 8 8 8 8 8 8 8 8 8 9 9 9 9 9 9 9 9 9 9
	8 9 0 1 2 3 4 6 7 8 9 0 1 2 3 4 5 6 7 8 9
BRONCHIAL LYMPH NODES (CONTINUED)	
ERYTHROPHAGOCYTOSIS.	= =
PIGMENT.	= = = = = = = = = = = = = = = 3+= = = = =
CARCINOMA, METASTATIC.	= = = = = = = = = = = = P = = = = = = = =
PLASMACYTOMA.	= = = = = = = = = = = = = = = = = = = P =
MAINSTEM BRONCHI	A X X X X X X X X X X X X X X X X X X X X
LIVER	A A = X = = = A = = = = = = = = X = = = =
AMYLOID.	2+= 3+= 3+2+3+2+2+= 3+2+2+= 3+3+= 3+= 3+3+
CYST(S).	P = = = = P = = = = = = = = = = = = = = =
CONGESTION.	= = = = = = = = = 3+= = = 3+= = = = 4+= =
LEUKEMIA/LYMPHOMA.	= =
CLEAR CELL FOCUS/FOCI.	= P
EXTRAMEDULLARY HEMATOPOIESIS.	= = = = = = = = = = = = = = = = = = 1+= =
HEPATOCELLULAR CYSTIC DEGENERATION.	= = = = = = = = = = = 3+= = = = = = = =
NECROSIS.	= = = = = = = = = = = = = = = = = = P = =
PLASMACYTOMA.	= = = = = = = = = = = = = = = = = = = P =
GALLBLADDER	A - A - - - - - - - - - - - - - - - X A -
SPLEEN	A A = X = = = = = X = = = X = = X = = = =
AMYLOID.	= = 4+= 3+3+3+4+3+= 3+3+3+= 3+2+= 3+= 3+2+
LEUKEMIA/LYMPHOMA.	= =
EXTRAMEDULLARY HEMATOPOIESIS.	= = = = = = = = = = = 3+= = = = = = 3+3+3+
PANCREAS	A A X X X X A A X A X = X X X X X A X X X
AMYLOID.	= =
PAPILLARY HYPERPLASIA.	= =
ATROPHY.	= = = = = = = = = = = 2+= = = = = = = = =
HEPATOCELLULAR DIFFERENTIATION.	= = = = = = = = = = = 1+= = = = = = = = =
HEART	X - = - - - - - - - - - - - - - - - - = X =
THROMBOSIS.	= = = = = = = = = = = = = = = = = = P = P
MURAL THROMBOSIS.	= = P = = = = = = = = = = = = = = = = = =
KIDNEYS	= A = X = = = = = X = = = = = = = = = A =
AMYLOID.	= = 2+= 4+4+4+4+4+= 4+4+3+= 4+3+2+4+3+= 4+
CYST(S).	= =
CONGESTION.	= = P = = = = = = = = = = = = = = = = = =
GLOMERULAR NEPHROSIS.	2+= = = = = = = 2+= = = = 2+= = = = = = =
MINERALIZATION.	3+= = = = = = = = = = = = = = = 3+= = = =

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
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CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS
FROM IRON FOUNDRY CASTING OPERATIONS

GROUP 11 FEMALES

	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
	7	7	8	8	8	8	8	8	8	8	9	9	9	9	9	9	9	9	9	9
	8	9	0	1	2	3	4	6	7	8	9	0	1	2	3	4	5	6	7	8	9
URINARY BLADDER	A	-	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	A	-
OVARIES	A	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	X	-	=	X	-
CYST(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	P	=	=
GRANULOSA CELL TUMOR(S).	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
UTERUS	A	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	-
STERNUM & RIB JUNCTION	A	-	A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	-
LEUKEMIA/LYMPHOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
FEMUR & BONE MARROW	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	-
NASAL CAVITY	-	-	X	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	X	X	-
OTHER	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(AXILLARY MASS), LEUKEMIA/LYMPHOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=
(RENAL LYMPH NODE), LEUKEMIA/LYMPHOMA.	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=	=

(X) NO SIGNIFICANT LESION RECOGNIZED (M) MISSING
(I) INSUFFICIENT TISSUE PRESENT IN SECTION (A) AUTOLYZED
(N) NOT PRESENT IN SECTION (-) NOT REQUIRED
(P) PRESENT (1+) MINIMAL (2+) SLIGHT
(3+) MODERATE (4+) SEVERE

APPENDIX 6

TUMOR INVENTORY

KEY TO GROUP IDENTIFICATION

GROUP NUMBER	TREATMENT	DOSE LEVEL (mg/0.2 ml distilled water)
1	Vehicle Control	--
2	Ferric Oxide Control (Fe_2O_3 + Vehicle)	3.0
3	Positive Control (BaP + Fe_2O_3)	3.0 + 3.0
4	Shell Sand	5.0
5	Shell Sand	10.0
6	Green Sand	5.0
7	Green Sand	10.0
8	Furan	5.0
9	Furan	10.0
10	Urethane	2.5
11	Urethane	5.0

TUMOR INVENTORY FOR PROJECT 0102 GROUP: 1M

18600 DIED ON 04/14/82 WITH NO TUMORS
18601 DIED ON 06/18/82 WITH NO TUMORS
18602 DIED ON 10/08/82 WITH NO TUMORS
18603 DIED ON 02/23/83 WITH NO TUMORS
18604 DIED ON 11/05/82 WITH NO TUMORS
18605 DIED ON 02/16/83 WITH NO TUMORS
18606 DIED ON 06/02/83 WITH 1 TUMORS
ADRENALS ADENOMA

18607 DIED ON 06/10/82 WITH NO TUMORS
18608 DIED ON 06/10/83 WITH NO TUMORS
18609 DIED ON 01/04/82 WITH NO TUMORS
18610 DIED ON 12/20/82 WITH NO TUMORS
18611 DIED ON 02/03/83 WITH NO TUMORS
18612 DIED ON 08/03/82 WITH NO TUMORS
18613 DIED ON 10/28/82 WITH 1 TUMORS
ADRENALS ADENOMA

18614 DIED ON 07/16/82 WITH NO TUMORS
18615 DIED ON 12/20/82 WITH NO TUMORS
18616 DIED ON 07/15/83 WITH 1 TUMORS
ADRENALS ADENOMA

18617 DIED ON 02/05/83 WITH 1 TUMORS
LARYNX PAPILLOMA

18618 DIED ON 01/01/83 WITH NO TUMORS
18619 DIED ON 09/10/82 WITH 1 TUMORS
ADRENALS ADENOMA

18620 DIED ON 02/10/83 WITH NO TUMORS
18621 DIED ON 04/22/83 WITH NO TUMORS
18622 DIED ON 04/25/82 WITH NO TUMORS
18623 DIED ON 07/22/82 WITH 2 TUMORS
ADRENALS ADENOMA
LUNG ALVEOLAR/BRONCHIOLAR CELL ADENOMA

18624 DIED ON 07/19/82 WITH 1 TUMORS
ADRENALS ADENOMA

18626 DIED ON 11/08/82 WITH NO TUMORS
18627 DIED ON 01/04/82 WITH NO TUMORS
18629 DIED ON 12/21/82 WITH NO TUMORS
18630 DIED ON 02/14/83 WITH NO TUMORS
18631 DIED ON 03/28/82 WITH NO TUMORS
18632 DIED ON 07/15/83 WITH NO TUMORS
18633 DIED ON 04/25/82 WITH NO TUMORS
18634 DIED ON 11/09/82 WITH NO TUMORS
18635 DIED ON 04/11/82 WITH NO TUMORS
18636 DIED ON 11/11/82 WITH 2 TUMORS
ADRENALS ADENOMA
PARATHYROID ADENOMA

18637 DIED ON 12/12/82 WITH NO TUMORS
18638 DIED ON 11/10/82 WITH 1 TUMORS
ADRENALS ADENOMA

18639 DIED ON 04/22/82 WITH NO TUMORS
18640 DIED ON 04/05/82 WITH NO TUMORS
18641 DIED ON 02/08/83 WITH NO TUMORS
18642 DIED ON 06/17/82 WITH NO TUMORS
18643 DIED ON 02/14/82 WITH NO TUMORS
18644 DIED ON 07/15/83 WITH NO TUMORS
18645 DIED ON 04/18/83 WITH NO TUMORS
18646 DIED ON 10/31/82 WITH 1 TUMORS
ADRENALS ADENOMA

18647 DIED ON 10/04/82 WITH NO TUMORS
18648 DIED ON 05/07/82 WITH NO TUMORS
18649 DIED ON 09/25/81 WITH NO TUMORS

TUMOR INVENTORY FOR PROJECT 0102 GROUP: 2M

18700 DIED ON 07/15/83 WITH NO TUMORS
18701 DIED ON 12/14/82 WITH 1 TUMORS
LARYNX PAPILLOMA

18702 DIED ON 08/13/81 WITH NO TUMORS
18703 DIED ON 01/16/83 WITH 1 TUMORS
ADRENALS ADENOMA

18704 DIED ON 09/23/82 WITH NO TUMORS
18705 DIED ON 11/03/82 WITH NO TUMORS
18706 DIED ON 07/15/83 WITH 1 TUMORS
ADRENALS ADENOMA

18707 DIED ON 10/30/81 WITH NO TUMORS
18708 DIED ON 06/17/82 WITH NO TUMORS
18709 DIED ON 06/03/83 WITH NO TUMORS
18710 DIED ON 12/22/82 WITH NO TUMORS
18711 DIED ON 04/06/82 WITH NO TUMORS
18712 DIED ON 02/01/83 WITH NO TUMORS
18713 DIED ON 07/15/83 WITH NO TUMORS
18714 DIED ON 06/28/82 WITH NO TUMORS
18715 DIED ON 07/15/83 WITH NO TUMORS
18716 DIED ON 02/26/83 WITH NO TUMORS
18717 DIED ON 04/19/83 WITH 1 TUMORS
MESENTERIC LYMPH NODE LEUKEMIA/LYMPHOMA

18718 DIED ON 12/17/82 WITH NO TUMORS
18719 DIED ON 10/13/82 WITH NO TUMORS
18720 DIED ON 08/09/82 WITH NO TUMORS
18721 DIED ON 04/07/83 WITH 1 TUMORS
ADRENALS ADENOMA

18722 DIED ON 12/16/82 WITH NO TUMORS
18723 DIED ON 07/15/83 WITH NO TUMORS
18724 DIED ON 01/20/83 WITH NO TUMORS
18725 DIED ON 06/14/82 WITH NO TUMORS
18726 DIED ON 06/08/83 WITH 1 TUMORS
ADRENALS ADENOMA

18727 DIED ON 02/10/83 WITH NO TUMORS
18728 DIED ON 01/02/83 WITH 1 TUMORS
ADRENALS PHEOCHROMOCYTOMA

18729 DIED ON 02/09/83 WITH NO TUMORS
18730 DIED ON 12/14/82 WITH NO TUMORS
18731 DIED ON 08/26/82 WITH NO TUMORS
18732 DIED ON 03/23/83 WITH 2 TUMORS
ADRENALS CORTICAL ADENOMA
ADRENALS PHEOCHROMOCYTOMA

18733 DIED ON 02/09/83 WITH NO TUMORS
18734 DIED ON 12/08/82 WITH 1 TUMORS
ADRENALS ADENOMA

18735 DIED ON 12/21/82 WITH 2 TUMORS
LUNG CARCINOMA, METASTATIC
KIDNEYS CARCINOMA

18736 DIED ON 03/08/83 WITH NO TUMORS
18737 DIED ON 09/09/82 WITH NO TUMORS
18738 DIED ON 01/25/83 WITH NO TUMORS
18739 DIED ON 12/13/82 WITH NO TUMORS
18740 DIED ON 12/07/81 WITH NO TUMORS
18741 DIED ON 07/15/83 WITH 1 TUMORS
ADRENALS ADENOMA

18742 DIED ON 08/24/82 WITH 1 TUMORS
ADRENALS ADENOMA

18743 DIED ON 10/02/81 WITH 4 TUMORS
LARYNX CARCINOMA
TRACHEA CARCINOMA
LUNG ADENOMA
MAINSTEM BRONCHI CARCINOMA

18744 DIED ON 07/07/82 WITH NO TUMORS
18745 DIED ON 10/26/82 WITH NO TUMORS

TUMOR INVENTORY FOR PROJECT 0102 GROUP: 2M (Continued)

18746 DIED ON 10/22/82 WITH 1 TUMORS
MESENTERIC LYMPH NODE LEUKEMIA/LYMPHOMA

18747 DIED ON 07/14/81 WITH 2 TUMORS
LUNG CARCINOMA
LUNG ADENOMA

18748 DIED ON 01/03/83 WITH NO TUMORS
18749 DIED ON 12/12/81 WITH NO TUMORS

TUMOR INVENTORY FOR PROJECT 0102 GROUP: 3M

18800 DIED ON 12/28/81 WITH 1 TUMORS
LARYNX CARCINOMA

18801 DIED ON 12/23/81 WITH 2 TUMORS
LARYNX CARCINOMA
LUNG CARCINOMA

18802 DIED ON 07/20/81 WITH NO TUMORS
18803 DIED ON 07/14/82 WITH 4 TUMORS
STOMACH PAPILLOMA
LARYNX CARCINOMA
LUNG CARCINOMA
MAINSTEM BRONCHI CARCINOMA

18804 DIED ON 01/13/82 WITH 1 TUMORS
LUNG ADENOMA

18805 DIED ON 11/09/81 WITH 1 TUMORS
TRACHEA CARCINOMA

18806 DIED ON 03/04/82 WITH 1 TUMORS
LUNG CARCINOMA

18807 DIED ON 10/26/81 WITH NO TUMORS
18808 DIED ON 05/23/82 WITH NO TUMORS
18809 DIED ON 01/26/82 WITH 4 TUMORS
ADRENALS CORTICAL ADENOMA
LARYNX CARCINOMA
TRACHEA CARCINOMA
LUNG CARCINOMA

18810 DIED ON 07/30/81 WITH NO TUMORS
18811 DIED ON 04/29/82 WITH 2 TUMORS
LUNG CARCINOMA
BRONCHIAL LYMPH NODES CARCINOMA

18812 DIED ON 03/28/82 WITH 3 TUMORS
LARYNX CARCINOMA
TRACHEA CARCINOMA
LUNG CARCINOMA

18813 DIED ON 08/10/81 WITH NO TUMORS
18814 DIED ON 09/17/81 WITH 2 TUMORS
LUNG CARCINOMA
MAINSTEM BRONCHI CARCINOMA

18815 DIED ON 02/17/82 WITH 3 TUMORS
LARYNX CARCINOMA
TRACHEA CARCINOMA
LUNG CARCINOMA

18816 DIED ON 12/10/81 WITH 1 TUMORS
LUNG CARCINOMA

18817 DIED ON 03/16/82 WITH 2 TUMORS
LARYNX CARCINOMA
LUNG CARCINOMA

18818 DIED ON 07/19/82 WITH 1 TUMORS
LUNG ALVEOLAR/BRONCHIOLAR CELL CARCINOMA

18819 DIED ON 02/24/82 WITH 3 TUMORS
LARYNX CARCINOMA
TRACHEA CARCINOMA
LUNG CARCINOMA

18820 DIED ON 10/27/81 WITH 3 TUMORS
TRACHEA CARCINOMA
LUNG ADENOMA
BRONCHIAL LYMPH NODES CARCINOMA

18821 DIED ON 07/09/81 WITH 1 TUMORS
LARYNX CARCINOMA

18822 DIED ON 10/07/82 WITH 3 TUMORS
STOMACH PAPILLOMA
LARYNX ADENOMA
LUNG ALVEOLAR/BRONCHIOLAR CELL CARCINOMA

TUMOR INVENTORY FOR PROJECT 0102 GROUP: 3M (Continued)

18823 DIED ON 10/23/81 WITH 1 TUMORS
TRACHEA CARCINOMA

18824 DIED ON 04/29/82 WITH 1 TUMORS
LUNG CARCINOMA

18825 DIED ON 04/30/82 WITH 3 TUMORS
LARYNX CARCINOMA
TRACHEA CARCINOMA
LUNG CARCINOMA

18826 DIED ON 02/03/82 WITH 1 TUMORS
LUNG CARCINOMA

18827 DIED ON 02/07/82 WITH 1 TUMORS
LUNG CARCINOMA

18828 DIED ON 09/29/82 WITH 3 TUMORS
ADRENALS ADENOMA
STOMACH PAPILLOMA
LUNG ALVEOLAR/BRONCHIOLAR CELL CARCINOMA

18829 DIED ON 01/02/82 WITH 1 TUMORS
LUNG CARCINOMA

18830 DIED ON 08/02/82 WITH 1 TUMORS
LUNG ALVEOLAR/BRONCHIOLAR CELL ADENOMA

18831 DIED ON 10/12/81 WITH NO TUMORS
18832 DIED ON 10/30/81 WITH 1 TUMORS
MAINSTEM BRONCHI CARCINOMA

18833 DIED ON 10/31/82 WITH 4 TUMORS
MANDIBULAR LYMPH NODE SARCOMA
BRONCHIAL LYMPH NODES SARCOMA
LIVER SARCOMA
STERNUM & RIB JUNCTION SARCOMA

18834 DIED ON 06/06/82 WITH 1 TUMORS
LUNG CARCINOMA

18835 DIED ON 07/07/82 WITH 1 TUMORS
LUNG ALVEOLAR/BRONCHIOLAR CELL CARCINOMA

18836 DIED ON 01/30/82 WITH NO TUMORS
18837 DIED ON 08/29/82 WITH 2 TUMORS
LUNG CARCINOMA
MAINSTEM BRONCHI CARCINOMA, SQUAMOUS

18839 DIED ON 06/06/82 WITH 2 TUMORS
ADRENALS CARCINOMA
LUNG CARCINOMA

18840 DIED ON 02/04/82 WITH 1 TUMORS
LUNG CARCINOMA

18841 DIED ON 12/08/81 WITH NO TUMORS
18842 DIED ON 03/20/82 WITH 1 TUMORS
TRACHEA CARCINOMA

18843 DIED ON 01/01/82 WITH 2 TUMORS
LUNG CARCINOMA
MAINSTEM BRONCHI CARCINOMA

18844 DIED ON 05/06/82 WITH 2 TUMORS
LARYNX CARCINOMA
LUNG CARCINOMA

18846 DIED ON 01/04/82 WITH NO TUMORS
18847 DIED ON 03/21/82 WITH 3 TUMORS
LARYNX CARCINOMA
TRACHEA CARCINOMA
MAINSTEM BRONCHI CARCINOMA

18848 DIED ON 08/31/82 WITH NO TUMORS

18849 DIED ON 06/23/82 WITH 2 TUMORS
LUNG CARCINOMA
LUNG ALVEOLAR/BRONCHIOLAR CELL CARCINOMA

TUMOR INVENTORY FOR PROJECT 0102 GROUP: 4M

18900 DIED ON 06/20/83 WITH NO TUMORS
18901 DIED ON 06/27/83 WITH 1 TUMORS
ADRENALS ADENOMA

18902 DIED ON 07/15/83 WITH 1 TUMORS
PARATHYROID ADENOMA

18903 DIED ON 03/01/83 WITH NO TUMORS
18904 DIED ON 07/15/83 WITH NO TUMORS
18905 DIED ON 01/04/82 WITH NO TUMORS
18906 DIED ON 06/20/83 WITH NO TUMORS
18907 DIED ON 07/12/83 WITH NO TUMORS
18908 DIED ON 02/22/83 WITH NO TUMORS
18909 DIED ON 06/02/82 WITH NO TUMORS
18910 DIED ON 09/27/82 WITH NO TUMORS
18911 DIED ON 01/26/82 WITH NO TUMORS
18912 DIED ON 07/19/82 WITH NO TUMORS
18913 DIED ON 09/24/82 WITH NO TUMORS
18914 DIED ON 06/10/82 WITH NO TUMORS
18915 DIED ON 09/14/82 WITH 2 TUMORS
ADRENALS ADENOMA
LARYNX PAPILLOMA

18916 DIED ON 05/30/83 WITH NO TUMORS
18917 DIED ON 11/12/82 WITH NO TUMORS
18918 DIED ON 02/03/83 WITH NO TUMORS
18919 DIED ON 07/15/83 WITH 1 TUMORS
ADRENALS ADENOMA

18920 DIED ON 07/04/83 WITH NO TUMORS
18921 DIED ON 10/13/81 WITH NO TUMORS
18922 DIED ON 06/28/82 WITH NO TUMORS
18923 DIED ON 12/15/82 WITH 1 TUMORS
ADRENALS ADENOMA

18924 DIED ON 09/05/82 WITH NO TUMORS
18925 DIED ON 01/14/83 WITH NO TUMORS
18926 DIED ON 03/06/82 WITH NO TUMORS
18927 DIED ON 01/17/83 WITH 1 TUMORS
LIVER CHOLANGIOMA

18928 DIED ON 02/11/83 WITH NO TUMORS
18929 DIED ON 12/14/82 WITH NO TUMORS
18930 DIED ON 09/10/82 WITH NO TUMORS
18931 DIED ON 06/07/83 WITH 2 TUMORS
ADRENALS CARCINOMA
THYROID FOLLICULAR CELL ADENOMA

18932 DIED ON 12/20/82 WITH 1 TUMORS
ADRENALS ADENOMA

18933 DIED ON 03/26/82 WITH 2 TUMORS
ADRENALS CORTICAL ADENOMA
LIVER LEUKEMIA/LYMPHOMA

18934 DIED ON 06/30/82 WITH NO TUMORS
18935 DIED ON 06/02/82 WITH NO TUMORS
18936 DIED ON 05/29/82 WITH NO TUMORS
18937 DIED ON 06/03/83 WITH 1 TUMORS
ADRENALS ADENOMA

18938 DIED ON 10/23/82 WITH NO TUMORS
18939 DIED ON 12/14/82 WITH NO TUMORS
18940 DIED ON 05/16/83 WITH NO TUMORS
18941 DIED ON 02/04/83 WITH NO TUMORS
18942 DIED ON 01/10/83 WITH NO TUMORS
18943 DIED ON 07/15/83 WITH NO TUMORS
18944 DIED ON 03/01/83 WITH NO TUMORS
18945 DIED ON 07/15/83 WITH NO TUMORS
18946 DIED ON 11/24/82 WITH NO TUMORS
18947 DIED ON 07/15/83 WITH 3 TUMORS
ADRENALS CORTICAL ADENOMA
ADRENALS ADENOMA
THYROID ADENOMA

18948 DIED ON 06/04/83 WITH NO TUMORS
18949 DIED ON 10/22/82 WITH NO TUMORS

TUMOR INVENTORY FOR PROJECT 0102 GROUP: 5M

```
19000  DIED ON 04/12/83 WITH   3 TUMORS
    ADRENALS                                ADENOMA
    THYROID                                 PAPILLARY ADENOMA
    THYROID                                 ADENOMA

19001  DIED ON 07/30/81 WITH NO TUMORS
19002  DIED ON 07/15/83 WITH   1 TUMORS
    THYROID                                 ADENOMA

19003  DIED ON 12/09/82 WITH NO TUMORS
19004  DIED ON 12/31/81 WITH NO TUMORS
19005  DIED ON 07/31/81 WITH NO TUMORS
19006  DIED ON 11/30/82 WITH NO TUMORS
19007  DIED ON 04/21/83 WITH NO TUMORS
19008  DIED ON 02/25/83 WITH NO TUMORS
19009  DIED ON 09/23/82 WITH NO TUMORS
19010  DIED ON 11/21/82 WITH NO TUMORS
19011  DIED ON 02/28/82 WITH   2 TUMORS
    SALIVARY GLAND                          LEUKEMIA/LYMPHOMA
    SALIVARY GLAND                          ADENOMA

19012  DIED ON 06/15/82 WITH NO TUMORS
19013  DIED ON 02/11/83 WITH NO TUMORS
19014  DIED ON 07/15/83 WITH   2 TUMORS
    ADRENALS                                ADENOMA
    PARATHYROID                             ADENOMA

19015  DIED ON 12/14/82 WITH NO TUMORS
19016  DIED ON 04/03/83 WITH NO TUMORS
19017  DIED ON 12/15/82 WITH NO TUMORS
19018  DIED ON 06/15/82 WITH NO TUMORS
19019  DIED ON 08/30/82 WITH NO TUMORS
19020  DIED ON 09/08/81 WITH NO TUMORS
19021  DIED ON 01/27/83 WITH NO TUMORS
19022  DIED ON 12/19/82 WITH NO TUMORS
19023  DIED ON 07/15/83 WITH NO TUMORS
19024  DIED ON 02/14/83 WITH NO TUMORS
19025  DIED ON 07/15/83 WITH   2 TUMORS
    ADRENALS                                ADENOMA
    PARATHYROID                             ADENOMA

19026  DIED ON 03/25/83 WITH NO TUMORS
19027  DIED ON 07/15/83 WITH NO TUMORS
19028  DIED ON 02/10/83 WITH NO TUMORS
19029  DIED ON 10/02/82 WITH NO TUMORS
19030  DIED ON 09/05/82 WITH NO TUMORS
19031  DIED ON 07/15/83 WITH   1 TUMORS
    ADRENALS                                ADENOMA

19032  DIED ON 07/23/82 WITH   1 TUMORS
    PANCREAS                                ADENOMA

19033  DIED ON 08/25/82 WITH NO TUMORS
19034  DIED ON 02/10/83 WITH NO TUMORS
19035  DIED ON 06/15/82 WITH NO TUMORS
19036  DIED ON 12/27/82 WITH   1 TUMORS
    ADRENALS                                ADENOMA

19037  DIED ON 08/29/82 WITH NO TUMORS
19038  DIED ON 02/01/83 WITH   1 TUMORS
    ADRENALS                                ADENOMA

19039  DIED ON 08/23/81 WITH NO TUMORS
19040  DIED ON 07/28/82 WITH NO TUMORS
19041  DIED ON 03/26/83 WITH NO TUMORS
19042  DIED ON 10/25/82 WITH NO TUMORS
19043  DIED ON 01/23/83 WITH NO TUMORS
19044  DIED ON 08/10/82 WITH NO TUMORS
19045  DIED ON 06/05/82 WITH   1 TUMORS
    ADRENALS                                ADENOMA

19046  DIED ON 07/15/83 WITH   1 TUMORS
    ADRENALS                                ADENOMA

19047  DIED ON 08/22/82 WITH NO TUMORS
19048  DIED ON 11/30/82 WITH NO TUMORS
19049  DIED ON 08/18/82 WITH NO TUMORS
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TUMOR INVENTORY FOR PROJECT 0102 GROUP: 6M

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19100  DIED ON 03/30/82 WITH NO TUMORS
19101  DIED ON 10/19/82 WITH NO TUMORS
19102  DIED ON 07/15/83 WITH NO TUMORS
19103  DIED ON 06/24/83 WITH NO TUMORS
19104  DIED ON 07/15/83 WITH NO TUMORS
19105  DIED ON 02/16/83 WITH NO TUMORS
19106  DIED ON 06/22/83 WITH NO TUMORS
19107  DIED ON 08/04/82 WITH NO TUMORS
19108  DIED ON 07/27/82 WITH NO TUMORS
19109  DIED ON 06/14/83 WITH   1 TUMORS
    ADRENALS                            ADENOMA

19110  DIED ON 07/15/83 WITH   3 TUMORS
    ADRENALS                            CARCINOMA
    PARATHYROID                         ADENOMA
    PANCREAS                            ADENOMA

19111  DIED ON 07/23/82 WITH NO TUMORS
19112  DIED ON 02/02/83 WITH NO TUMORS
19113  DIED ON 09/05/82 WITH NO TUMORS
19114  DIED ON 01/21/82 WITH NO TUMORS
19115  DIED ON 08/24/82 WITH NO TUMORS
19116  DIED ON 06/16/82 WITH NO TUMORS
19117  DIED ON 03/13/82 WITH NO TUMORS
19118  DIED ON 07/15/83 WITH NO TUMORS
19119  DIED ON 01/23/83 WITH NO TUMORS
19120  DIED ON 09/08/82 WITH NO TUMORS
19121  DIED ON 06/23/82 WITH NO TUMORS
19122  DIED ON 02/07/83 WITH NO TUMORS
19123  DIED ON 03/10/82 WITH NO TUMORS
19124  DIED ON 10/25/81 WITH NO TUMORS
19125  DIED ON 11/09/82 WITH NO TUMORS
19126  DIED ON 02/24/83 WITH NO TUMORS
19127  DIED ON 08/09/82 WITH NO TUMORS
19128  DIED ON 07/15/83 WITH   1 TUMORS
    PARATHYROID                         ADENOMA

19129  DIED ON 12/14/81 WITH NO TUMORS
19130  DIED ON 08/20/82 WITH NO TUMORS
19131  DIED ON 04/17/83 WITH NO TUMORS
19132  DIED ON 02/01/83 WITH   1 TUMORS
    ADRENALS                            ADENOMA

19133  DIED ON 10/04/82 WITH NO TUMORS
19134  DIED ON 06/25/83 WITH NO TUMORS
19135  DIED ON 02/14/83 WITH NO TUMORS
19136  DIED ON 07/31/82 WITH NO TUMORS
19137  DIED ON 12/31/82 WITH NO TUMORS
19138  DIED ON 07/15/83 WITH   2 TUMORS
    THYROID                             ADENOMA
    PANCREAS                            ADENOMA

19139  DIED ON 10/25/82 WITH NO TUMORS
19140  DIED ON 06/03/83 WITH   1 TUMORS
    ADRENALS                            ADENOMA

19141  DIED ON 06/28/82 WITH   1 TUMORS
    ADRENALS                            ADENOMA

19142  DIED ON 02/03/83 WITH   3 TUMORS
    PITUITARY                           ADENOMA
    ADRENALS                            ADENOMA
    THYROID                             ADENOMA

19143  DIED ON 01/14/82 WITH   2 TUMORS
    SKIN                                SARCOMA
    CECUM                               SARCOMA

19144  DIED ON 08/04/82 WITH NO TUMORS
19145  DIED ON 11/11/81 WITH NO TUMORS
19146  DIED ON 12/08/81 WITH NO TUMORS
19147  DIED ON 02/08/82 WITH NO TUMORS
19148  DIED ON 12/09/82 WITH NO TUMORS
19149  DIED ON 11/09/82 WITH NO TUMORS
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TUMOR INVENTORY FOR PROJECT 0102 GROUP: 7M

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19200  DIED ON 12/02/82 WITH   1 TUMORS
    ADRENALS                              ADENOMA

19201  DIED ON 05/08/83 WITH NO TUMORS
19203  DIED ON 07/01/83 WITH NO TUMORS
19204  DIED ON 05/09/82 WITH NO TUMORS
19205  DIED ON 05/12/83 WITH   8 TUMORS
    MANDIBULAR LYMPH NODE                 LEUKEMIA/LYMPHOMA
    MESENTERIC LYMPH NODE                 LEUKEMIA/LYMPHOMA
    LUNG                                  LEUKEMIA/LYMPHOMA
    BRONCHIAL LYMPH NODES                 LEUKEMIA/LYMPHOMA
    LIVER                                 LEUKEMIA/LYMPHOMA
    SPLEEN                                LEUKEMIA/LYMPHOMA
    KIDNEYS                               LEUKEMIA/LYMPHOMA
    PANCREATIC LYMPH NODE                 LEUKEMIA/LYMPHOMA

19206  DIED ON 02/26/83 WITH NO TUMORS
19207  DIED ON 02/04/83 WITH NO TUMORS
19208  DIED ON 02/05/83 WITH NO TUMORS
19209  DIED ON 05/08/83 WITH   1 TUMORS
    ADRENALS                              ADENOMA

19210  DIED ON 10/01/82 WITH NO TUMORS
19211  DIED ON 02/19/82 WITH NO TUMORS
19212  DIED ON 04/14/83 WITH   7 TUMORS
    SKIN                                  CARCINOMA, METASTATIC
    MANDIBULAR LYMPH NODE                 CARCINOMA
    ADRENALS                              CARCINOMA
    MESENTERIC LYMPH NODE                 CARCINOMA
    LUNG                                  CARCINOMA, METASTATIC
    LIVER                                 CARCINOMA, METASTATIC
    KIDNEYS                               CARCINOMA, METASTATIC

19213  DIED ON 05/18/83 WITH   2 TUMORS
    ADRENALS                              ADENOMA
    THYROID                               NEOPLASM

19214  DIED ON 03/14/82 WITH NO TUMORS
19215  DIED ON 08/04/82 WITH NO TUMORS
19216  DIED ON 12/13/82 WITH   1 TUMORS
    THYROID                               ADENOMA

19217  DIED ON 06/15/82 WITH NO TUMORS
19218  DIED ON 02/25/83 WITH NO TUMORS
19219  DIED ON 06/23/82 WITH NO TUMORS
19220  DIED ON 04/11/83 WITH NO TUMORS
19221  DIED ON 01/03/83 WITH NO TUMORS
19222  DIED ON 09/10/82 WITH NO TUMORS
19223  DIED ON 08/24/82 WITH NO TUMORS
19224  DIED ON 09/08/82 WITH NO TUMORS
19225  DIED ON 10/08/82 WITH NO TUMORS
19226  DIED ON 06/12/82 WITH NO TUMORS
19227  DIED ON 05/10/83 WITH   1 TUMORS
    ADRENALS                              ADENOMA

19228  DIED ON 12/23/81 WITH NO TUMORS
19229  DIED ON 07/15/83 WITH   1 TUMORS
    ADRENALS                              ADENOMA

19230  DIED ON 01/26/82 WITH NO TUMORS
19231  DIED ON 07/15/83 WITH NO TUMORS
19232  DIED ON 11/11/81 WITH NO TUMORS
19233  DIED ON 01/30/83 WITH NO TUMORS
19234  DIED ON 01/17/83 WITH NO TUMORS
19235  DIED ON 11/26/81 WITH NO TUMORS
19236  DIED ON 07/15/83 WITH NO TUMORS
19237  DIED ON 08/14/82 WITH   2 TUMORS
    MESENTERIC LYMPH NODE                 LEUKEMIA/LYMPHOMA
    LIVER                                 LEUKEMIA/LYMPHOMA

19238  DIED ON 11/24/82 WITH NO TUMORS
19239  DIED ON 06/23/82 WITH   3 TUMORS
    MANDIBULAR LYMPH NODE                 LEUKEMIA/LYMPHOMA
    MESENTERIC LYMPH NODE                 LEUKEMIA/LYMPHOMA
    LIVER                                 LEUKEMIA/LYMPHOMA

19240  DIED ON 07/15/83 WITH   1 TUMORS
    ADRENALS                              ADENOMA
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TUMOR INVENTORY FOR PROJECT 0102 GROUP: 7M (Continued)

19242	DIED	ON	02/02/83	WITH	NO	TUMORS
19243	DIED	ON	10/28/82	WITH	NO	TUMORS
19244	DIED	ON	09/28/82	WITH	NO	TUMORS
19245	DIED	ON	11/26/81	WITH	NO	TUMORS
19246	DIED	ON	06/03/82	WITH	NO	TUMORS
19247	DIED	ON	07/08/82	WITH	NO	TUMORS
19248	DIED	ON	02/07/83	WITH	NO	TUMORS
19249	DIED	ON	06/23/82	WITH	NO	TUMORS

TUMOR INVENTORY FOR PROJECT 0102 GROUP: 8M

19300 DIED ON 11/21/82 WITH 1 TUMORS
LIVER CARCINOMA

19301 DIED ON 07/15/83 WITH NO TUMORS
19302 DIED ON 02/25/82 WITH NO TUMORS
19303 DIED ON 04/23/83 WITH 1 TUMORS
ADRENALS ADENOMA

19304 DIED ON 10/23/82 WITH NO TUMORS
19305 DIED ON 05/02/82 WITH NO TUMORS
19306 DIED ON 07/15/83 WITH NO TUMORS
19307 DIED ON 10/23/82 WITH NO TUMORS
19308 DIED ON 07/15/83 WITH 1 TUMORS
PARATHYROID ADENOMA

19309 DIED ON 05/27/82 WITH NO TUMORS
19310 DIED ON 03/19/82 WITH NO TUMORS
19311 DIED ON 10/03/82 WITH 1 TUMORS
ADRENALS ADENOMA

19312 DIED ON 07/01/83 WITH NO TUMORS
19313 DIED ON 05/20/82 WITH NO TUMORS
19314 DIED ON 07/15/83 WITH 2 TUMORS
THYROID CARCINOMA
THYROID ADENOMA

19315 DIED ON 01/25/83 WITH NO TUMORS
19316 DIED ON 01/16/83 WITH NO TUMORS
19317 DIED ON 01/30/83 WITH NO TUMORS
19318 DIED ON 08/14/82 WITH NO TUMORS
19319 DIED ON 03/22/83 WITH NO TUMORS
19320 DIED ON 04/19/82 WITH NO TUMORS
19321 DIED ON 04/22/83 WITH 1 TUMORS
ADRENALS ADENOMA

19322 DIED ON 09/28/82 WITH NO TUMORS
19323 DIED ON 07/04/83 WITH 1 TUMORS
ADRENALS ADENOMA

19324 DIED ON 03/29/83 WITH NO TUMORS
19325 DIED ON 06/06/82 WITH NO TUMORS
19326 DIED ON 02/21/83 WITH NO TUMORS
19327 DIED ON 01/25/83 WITH NO TUMORS
19328 DIED ON 11/30/82 WITH NO TUMORS
19329 DIED ON 07/15/83 WITH NO TUMORS
19330 DIED ON 03/07/82 WITH NO TUMORS
19331 DIED ON 01/18/83 WITH NO TUMORS
19332 DIED ON 07/15/83 WITH NO TUMORS
19333 DIED ON 12/23/82 WITH NO TUMORS
19334 DIED ON 01/18/83 WITH NO TUMORS
19335 DIED ON 10/24/82 WITH NO TUMORS
19336 DIED ON 07/08/82 WITH NO TUMORS
19337 DIED ON 01/09/83 WITH 1 TUMORS
KIDNEYS CARCINOMA

19338 DIED ON 01/14/82 WITH NO TUMORS
19339 DIED ON 04/29/82 WITH NO TUMORS
19340 DIED ON 06/07/82 WITH NO TUMORS
19341 DIED ON 04/01/82 WITH NO TUMORS
19342 DIED ON 12/26/82 WITH NO TUMORS
19343 DIED ON 12/26/82 WITH NO TUMORS
19344 DIED ON 01/20/82 WITH NO TUMORS
19345 DIED ON 07/15/83 WITH 1 TUMORS
STERNUM & RIB JUNCTION SARCOMA

19346 DIED ON 07/15/83 WITH NO TUMORS
19347 DIED ON 12/20/82 WITH NO TUMORS
19348 DIED ON 09/27/82 WITH 2 TUMORS
LUNG ALVEOLAR/BRONCHIOLAR CELL ADENOMA
KIDNEYS ADENOMA

19349 DIED ON 05/20/83 WITH NO TUMORS

TUMOR INVENTORY FOR PROJECT 0102 GROUP: 9H

19400 DIED ON 05/07/83 WITH NO TUMORS
19401 DIED ON 02/14/83 WITH NO TUMORS
19402 DIED ON 02/14/83 WITH 1 TUMORS
THYROID PAPILLARY ADENOMA

19404 DIED ON 08/14/82 WITH NO TUMORS
19405 DIED ON 11/12/81 WITH NO TUMORS
19406 DIED ON 10/14/82 WITH NO TUMORS
19407 DIED ON 02/11/83 WITH NO TUMORS
19408 DIED ON 03/28/83 WITH NO TUMORS
19409 DIED ON 12/16/82 WITH NO TUMORS
19410 DIED ON 06/02/82 WITH NO TUMORS
19411 DIED ON 07/15/83 WITH NO TUMORS
19412 DIED ON 04/11/83 WITH NO TUMORS
19413 DIED ON 12/02/82 WITH NO TUMORS
19414 DIED ON 10/18/82 WITH NO TUMORS
19415 DIED ON 11/05/82 WITH 1 TUMORS
ADRENALS ADENOMA

19416 DIED ON 05/19/83 WITH NO TUMORS
19417 DIED ON 06/21/82 WITH NO TUMORS
19418 DIED ON 08/09/82 WITH NO TUMORS
19419 DIED ON 09/13/82 WITH 2 TUMORS
LUNG SARCOMA
TISSUE MASS SARCOMA

19420 DIED ON 04/15/82 WITH NO TUMORS
19421 DIED ON 03/26/83 WITH NO TUMORS
19422 DIED ON 07/01/82 WITH 1 TUMORS
ADRENALS ADENOMA

19423 DIED ON 07/21/82 WITH NO TUMORS
19424 DIED ON 02/11/83 WITH 1 TUMORS
ADRENALS ADENOMA

19425 DIED ON 10/07/82 WITH 1 TUMORS
VERTEBRAE SARCOMA

19426 DIED ON 05/26/83 WITH NO TUMORS
19427 DIED ON 07/23/82 WITH NO TUMORS
19428 DIED ON 10/07/82 WITH NO TUMORS
19429 DIED ON 05/09/83 WITH NO TUMORS
19430 DIED ON 02/06/83 WITH 1 TUMORS
ADRENALS ADENOMA

19431 DIED ON 11/03/82 WITH NO TUMORS
19432 DIED ON 09/23/82 WITH NO TUMORS
19433 DIED ON 10/27/82 WITH NO TUMORS
19434 DIED ON 08/29/82 WITH NO TUMORS
19435 DIED ON 04/15/82 WITH NO TUMORS
19436 DIED ON 02/06/83 WITH 1 TUMORS
ADRENALS ADENOMA

19437 DIED ON 05/24/83 WITH NO TUMORS
19438 DIED ON 08/02/82 WITH 1 TUMORS
THYROID ADENOMA

19439 DIED ON 12/17/82 WITH 1 TUMORS
LIVER CHOLANGIOMA

19440 DIED ON 09/08/82 WITH NO TUMORS
19441 DIED ON 07/12/83 WITH NO TUMORS
19442 DIED ON 09/14/82 WITH NO TUMORS
19443 DIED ON 01/26/82 WITH NO TUMORS
19444 DIED ON 01/21/83 WITH 2 TUMORS
ADRENALS ADENOMA
ADRENALS CARCINOMA

19445 DIED ON 11/17/81 WITH NO TUMORS
19446 DIED ON 09/27/82 WITH NO TUMORS
19447 DIED ON 08/06/82 WITH NO TUMORS
19448 DIED ON 09/20/82 WITH NO TUMORS
19449 DIED ON 05/04/83 WITH NO TUMORS

TUMOR INVENTORY FOR PROJECT 0102 GROUP: 10M

19500 DIED ON 07/06/81 WITH NO TUMORS
19501 DIED ON 02/17/82 WITH NO TUMORS
19502 DIED ON 10/21/81 WITH 3 TUMORS
ADRENALS CARCINOMA
STOMACH CARCINOMA
LUNG CARCINOMA

19503 DIED ON 09/01/82 WITH 1 TUMORS
ADRENALS ADENOMA

19504 DIED ON 06/15/82 WITH NO TUMORS
19505 DIED ON 12/21/81 WITH NO TUMORS
19506 DIED ON 01/21/83 WITH NO TUMORS
19507 DIED ON 07/15/83 WITH NO TUMORS
19508 DIED ON 01/07/82 WITH NO TUMORS
19509 DIED ON 01/04/83 WITH NO TUMORS
19510 DIED ON 09/30/82 WITH NO TUMORS
19511 DIED ON 02/15/83 WITH NO TUMORS
19512 DIED ON 02/21/83 WITH NO TUMORS
19513 DIED ON 05/20/83 WITH 1 TUMORS
ADRENALS ADENOMA

19514 DIED ON 01/03/82 WITH NO TUMORS
19515 DIED ON 09/08/82 WITH NO TUMORS
19516 DIED ON 06/03/82 WITH NO TUMORS
19517 DIED ON 06/03/83 WITH NO TUMORS
19518 DIED ON 11/16/82 WITH NO TUMORS
19519 DIED ON 04/04/83 WITH 1 TUMORS
THYROID NEOPLASM, N.O.S.

19520 DIED ON 07/13/83 WITH 1 TUMORS
ADRENALS ADENOMA

19521 DIED ON 08/13/82 WITH 1 TUMORS
PARATHYROID ADENOMA

19522 DIED ON 02/17/83 WITH 1 TUMORS
THYROID NEOPLASM, N.O.S.

19523 DIED ON 09/29/82 WITH 1 TUMORS
ADRENALS ADENOMA

19524 DIED ON 09/05/82 WITH 2 TUMORS
MESENTERIC LYMPH NODE LEUKEMIA/LYMPHOMA
LIVER LEUKEMIA/LYMPHOMA

19525 DIED ON 03/12/83 WITH NO TUMORS
19526 DIED ON 12/13/82 WITH NO TUMORS
19527 DIED ON 02/19/83 WITH 1 TUMORS
ADRENALS ADENOMA

19528 DIED ON 02/19/83 WITH NO TUMORS
19529 DIED ON 09/29/83 WITH NO TUMORS
19530 DIED ON 11/29/82 WITH 2 TUMORS
ADRENALS ADENOMA
THYROID NEOPLASM, N.O.S.

19531 DIED ON 06/25/82 WITH NO TUMORS
19532 DIED ON 01/25/82 WITH NO TUMORS
19533 DIED ON 07/11/83 WITH 1 TUMORS
ADRENALS ADENOMA

19534 DIED ON 03/14/83 WITH NO TUMORS
19535 DIED ON 07/15/83 WITH 1 TUMORS
ADRENALS ADENOMA

19536 DIED ON 02/11/83 WITH 1 TUMORS
ADRENALS ADENOMA

19537 DIED ON 04/11/83 WITH NO TUMORS
19538 DIED ON 12/01/82 WITH NO TUMORS
19539 DIED ON 09/30/82 WITH NO TUMORS
19540 DIED ON 07/15/83 WITH 1 TUMORS
ADRENALS ADENOMA

19541 DIED ON 02/01/83 WITH NO TUMORS
19542 DIED ON 03/31/82 WITH NO TUMORS

TUMOR INVENTORY FOR PROJECT 0102 GROUP: 10M (Continued)

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19543  DIED ON 01/05/83 WITH   1 TUMORS
    THYROID                                ADENOMA

19544  DIED ON 05/13/83 WITH NO TUMORS
19545  DIED ON 08/20/82 WITH   2 TUMORS
    LUNG                                   LEUKEMIA/LYMPHOMA
    KIDNEYS                                LEUKEMIA/LYMPHOMA

19546  DIED ON 02/16/83 WITH NO TUMORS
19547  DIED ON 06/18/82 WITH NO TUMORS
19548  DIED ON 04/06/82 WITH NO TUMORS
19549  DIED ON 06/07/82 WITH NO TUMORS
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TUMOR INVENTORY FOR PROJECT 0102 GROUP: 11M

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19600  DIED ON 04/25/82 WITH NO TUMORS
19601  DIED ON 01/21/83 WITH NO TUMORS
19602  DIED ON 02/22/83 WITH NO TUMORS
19603  DIED ON 11/11/81 WITH NO TUMORS
19604  DIED ON 11/11/81 WITH NO TUMORS
19605  DIED ON 12/20/82 WITH   1 TUMORS
    ADRENALS                            ADENOMA

19607  DIED ON 02/26/83 WITH NO TUMORS
19608  DIED ON 07/15/83 WITH   1 TUMORS
    ADRENALS                            ADENOMA

19609  DIED ON 07/15/83 WITH NO TUMORS
19610  DIED ON 08/19/82 WITH NO TUMORS
19611  DIED ON 07/09/82 WITH NO TUMORS
19612  DIED ON 02/25/82 WITH NO TUMORS
19613  DIED ON 10/20/82 WITH NO TUMORS
19614  DIED ON 04/30/83 WITH NO TUMORS
19615  DIED ON 11/07/81 WITH NO TUMORS
19616  DIED ON 05/12/83 WITH NO TUMORS
19617  DIED ON 01/19/83 WITH   1 TUMORS
    ADRENALS                            ADENOMA

19618  DIED ON 05/20/83 WITH   1 TUMORS
    ADRENALS                            ADENOMA

19619  DIED ON 07/16/82 WITH NO TUMORS
19620  DIED ON 04/09/82 WITH   1 TUMORS
    ADRENALS                            ADENOMA

19621  DIED ON 03/23/82 WITH NO TUMORS
19622  DIED ON 01/22/83 WITH NO TUMORS
19623  DIED ON 07/15/83 WITH   2 TUMORS
    ADRENALS                            ADENOMA
    PARATHYROID                         ADENOMA

19624  DIED ON 05/29/82 WITH NO TUMORS
19625  DIED ON 05/11/82 WITH NO TUMORS
19626  DIED ON 03/15/82 WITH NO TUMORS
19627  DIED ON 09/29/82 WITH NO TUMORS
19628  DIED ON 01/22/83 WITH NO TUMORS
19629  DIED ON 11/17/82 WITH   1 TUMORS
    THYROID                             ADENOMA

19630  DIED ON 01/03/82 WITH NO TUMORS
19631  DIED ON 08/31/82 WITH NO TUMORS
19632  DIED ON 07/11/82 WITH NO TUMORS
19633  DIED ON 02/20/83 WITH NO TUMORS
19634  DIED ON 09/29/82 WITH NO TUMORS
19635  DIED ON 07/15/83 WITH NO TUMORS
19636  DIED ON 06/13/83 WITH NO TUMORS
19637  DIED ON 05/09/83 WITH NO TUMORS
19638  DIED ON 08/06/82 WITH NO TUMORS
19639  DIED ON 02/03/83 WITH   1 TUMORS
    PARATHYROID                         ADENOMA

19640  DIED ON 06/01/83 WITH   2 TUMORS
    ADRENALS                            ADENOMA
    PARATHYROID                         ADENOMA

19641  DIED ON 07/06/82 WITH   1 TUMORS
    ADRENALS                            ADENOMA

19642  DIED ON 05/27/82 WITH NO TUMORS
19643  DIED ON 07/15/83 WITH   1 TUMORS
    ADRENALS                            ADENOMA

19644  DIED ON 10/20/82 WITH NO TUMORS
19645  DIED ON 06/02/83 WITH NO TUMORS
19646  DIED ON 02/11/83 WITH NO TUMORS
19647  DIED ON 05/12/83 WITH   1 TUMORS
    ADRENALS                            ADENOMA

19648  DIED ON 07/14/82 WITH NO TUMORS
19649  DIED ON 02/15/83 WITH   1 TUMORS
    PARATHYROID                         ADENOMA
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TUMOR INVENTORY FOR PROJECT 0102 GROUP: 1F

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18650  DIED ON 10/23/82 WITH NO TUMORS
18651  DIED ON 05/10/82 WITH NO TUMORS
18652  DIED ON 11/01/82 WITH NO TUMORS
18653  DIED ON 09/20/82 WITH NO TUMORS
18654  DIED ON 12/25/81 WITH NO TUMORS
18655  DIED ON 09/14/82 WITH NO TUMORS
18656  DIED ON 12/25/82 WITH   2 TUMORS
    ADRENALS                              CORTICAL ADENOMA
    STOMACH                               PAPILLOMA

18657  DIED ON 11/21/82 WITH NO TUMORS
18658  DIED ON 04/26/82 WITH   1 TUMORS
    PITUITARY                             CORTICAL ADENOMA

18659  DIED ON 08/25/82 WITH NO TUMORS
18660  DIED ON 10/04/82 WITH NO TUMORS
18661  DIED ON 01/24/83 WITH   1 TUMORS
    ADRENALS                              CORTICAL ADENOMA

18662  DIED ON 12/10/82 WITH   1 TUMORS
    PARATHYROID                           ADENOMA

18663  DIED ON 03/11/82 WITH NO TUMORS
18664  DIED ON 07/15/82 WITH NO TUMORS
18665  DIED ON 11/29/82 WITH   1 TUMORS
    PARATHYROID                           ADENOMA

18666  DIED ON 08/01/82 WITH NO TUMORS
18667  DIED ON 02/13/83 WITH   1 TUMORS
    PARATHYROID                           ADENOMA

18668  DIED ON 10/14/82 WITH NO TUMORS
18669  DIED ON 01/26/82 WITH NO TUMORS
18670  DIED ON 04/02/82 WITH NO TUMORS
18671  DIED ON 10/02/82 WITH   1 TUMORS
    OVARIES                               THECA CELL TUMOR

18672  DIED ON 06/16/82 WITH NO TUMORS
18673  DIED ON 04/06/83 WITH NO TUMORS
18674  DIED ON 06/11/82 WITH NO TUMORS
18675  DIED ON 06/15/82 WITH NO TUMORS
18676  DIED ON 09/21/82 WITH NO TUMORS
18677  DIED ON 10/18/82 WITH NO TUMORS
18678  DIED ON 10/30/82 WITH NO TUMORS
18679  DIED ON 09/23/82 WITH   1 TUMORS
    PARATHYROID                           ADENOMA

18680  DIED ON 06/08/82 WITH NO TUMORS
18682  DIED ON 06/16/82 WITH NO TUMORS
18683  DIED ON 02/04/83 WITH NO TUMORS
18684  DIED ON 08/31/82 WITH NO TUMORS
18685  DIED ON 07/04/82 WITH NO TUMORS
18686  DIED ON 01/04/83 WITH NO TUMORS
18687  DIED ON 09/24/82 WITH NO TUMORS
18688  DIED ON 09/04/82 WITH NO TUMORS
18689  DIED ON 06/23/82 WITH NO TUMORS
18691  DIED ON 08/25/82 WITH NO TUMORS
18692  DIED ON 04/06/83 WITH   1 TUMORS
    PARATHYROID                           ADENOMA

18693  DIED ON 10/07/82 WITH NO TUMORS
18694  DIED ON 09/12/82 WITH   1 TUMORS
    THYROID                               FOLLICULAR CELL ADENOMA

18695  DIED ON 12/11/81 WITH NO TUMORS
18696  DIED ON 07/20/82 WITH NO TUMORS
18697  DIED ON 01/21/83 WITH   2 TUMORS
    COLON                                 CARCINOMA
    PARATHYROID                           ADENOMA

18698  DIED ON 11/29/82 WITH NO TUMORS
18699  DIED ON 10/01/82 WITH   2 TUMORS
    PARATHYROID                           ADENOMA
    LUNG                                  ADENOMA
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TUMOR INVENTORY FOR PROJECT 0102 GROUP: 2F

18750 DIED ON 07/03/82 WITH NO TUMORS
18751 DIED ON 09/12/81 WITH NO TUMORS
18752 DIED ON 09/02/82 WITH NO TUMORS
18753 DIED ON 06/22/82 WITH NO TUMORS
18754 DIED ON 02/02/83 WITH NO TUMORS
18755 DIED ON 04/15/82 WITH NO TUMORS
18756 DIED ON 01/27/83 WITH 2 TUMORS
ADRENALS CORTICAL ADENOMA
PARATHYROID ADENOMA

18757 DIED ON 11/16/82 WITH 1 TUMORS
ADRENALS CORTICAL ADENOMA

18758 DIED ON 08/06/82 WITH NO TUMORS
18759 DIED ON 04/27/82 WITH NO TUMORS
18760 DIED ON 12/21/81 WITH 1 TUMORS
LUNG CARCINOMA

18761 DIED ON 11/26/82 WITH NO TUMORS
18762 DIED ON 09/03/82 WITH 1 TUMORS
ADRENALS CORTICAL ADENOMA

18763 DIED ON 04/06/83 WITH NO TUMORS
18764 DIED ON 04/06/83 WITH NO TUMORS
18765 DIED ON 03/29/82 WITH NO TUMORS
18766 DIED ON 04/22/82 WITH NO TUMORS
18767 DIED ON 08/06/82 WITH 1 TUMORS
ADRENALS CORTICAL ADENOMA

18768 DIED ON 12/02/82 WITH 1 TUMORS
UTERUS FIBROMA

18769 DIED ON 11/05/82 WITH NO TUMORS
18770 DIED ON 05/24/82 WITH NO TUMORS
18771 DIED ON 06/30/82 WITH NO TUMORS
18772 DIED ON 08/31/82 WITH NO TUMORS
18773 DIED ON 04/06/83 WITH 1 TUMORS
ADRENALS ADENOMA

18774 DIED ON 08/22/82 WITH NO TUMORS
18775 DIED ON 04/13/82 WITH NO TUMORS
18776 DIED ON 01/20/83 WITH NO TUMORS
18777 DIED ON 11/29/82 WITH NO TUMORS
18778 DIED ON 11/23/82 WITH 1 TUMORS
ADRENALS ADENOMA

18779 DIED ON 06/14/82 WITH NO TUMORS
18780 DIED ON 08/29/82 WITH NO TUMORS
18781 DIED ON 03/29/83 WITH NO TUMORS
18782 DIED ON 03/27/82 WITH NO TUMORS
18783 DIED ON 08/07/82 WITH NO TUMORS
18784 DIED ON 01/19/83 WITH NO TUMORS
18785 DIED ON 03/07/82 WITH NO TUMORS
18786 DIED ON 04/06/83 WITH NO TUMORS
18787 DIED ON 04/11/82 WITH NO TUMORS
18788 DIED ON 11/02/82 WITH 1 TUMORS
LIVER CHOLANGIOMA

18789 DIED ON 03/07/82 WITH NO TUMORS
18790 DIED ON 10/15/82 WITH NO TUMORS
18791 DIED ON 02/06/83 WITH 1 TUMORS
ADRENALS CORTICAL ADENOMA

18792 DIED ON 02/02/83 WITH NO TUMORS
18793 DIED ON 09/18/81 WITH NO TUMORS
18794 DIED ON 07/11/82 WITH 8 TUMORS
ADRENALS ADENOMA
THYMUS PLASMACYTOMA
MESENTERIC LYMPH NODE PLASMACYTOMA
LUNG PLASMACYTOMA
BRONCHIAL LYMPH NODES PLASMACYTOMA
OVARIES PLASMACYTOMA
RENAL LYMPH NODE PLASMACYTOMA
LARGE INTESTINE PLASMACYTOMA

18795 DIED ON 05/17/82 WITH NO TUMORS
18796 DIED ON 08/02/82 WITH NO TUMORS
18797 DIED ON 08/14/82 WITH NO TUMORS
18798 DIED ON 11/17/82 WITH NO TUMORS
18799 DIED ON 11/08/82 WITH NO TUMORS

TUMOR INVENTORY FOR PROJECT 0102 GROUP: 3F

18850 DIED ON 08/27/82 WITH 1 TUMORS
LUNG CARCINOMA

18851 DIED ON 02/26/82 WITH 1 TUMORS
LUNG CARCINOMA

18852 DIED ON 11/10/82 WITH 3 TUMORS
STOMACH PAPILLOMA
TRACHEA CARCINOMA
LUNG ALVEOLAR/BRONCHIOLAR CELL CARCINOMA

18853 DIED ON 01/09/82 WITH NO TUMORS
18854 DIED ON 04/15/82 WITH 3 TUMORS
TRACHEA CARCINOMA
LUNG CARCINOMA
MAINSTEM BRONCHI CARCINOMA

18855 DIED ON 01/03/82 WITH NO TUMORS
18856 DIED ON 12/11/82 WITH 1 TUMORS
LUNG CARCINOMA

18857 DIED ON 04/11/82 WITH NO TUMORS
18858 DIED ON 05/16/81 WITH NO TUMORS
18859 DIED ON 10/12/81 WITH NO TUMORS
18860 DIED ON 11/08/82 WITH 1 TUMORS
ADRENALS CORTICAL ADENOMA

18861 DIED ON 06/21/82 WITH 1 TUMORS
LUNG CARCINOMA

18862 DIED ON 04/21/82 WITH 2 TUMORS
LUNG ADENOMA
LUNG CARCINOMA

18863 DIED ON 12/13/81 WITH 2 TUMORS
TRACHEA CARCINOMA
LUNG CARCINOMA

18864 DIED ON 07/30/82 WITH NO TUMORS
18865 DIED ON 01/19/82 WITH 6 TUMORS
TRACHEA CARCINOMA
ESOPHAGUS CARCINOMA
LUNG CARCINOMA
HEART CARCINOMA
KIDNEYS CARCINOMA, METASTATIC
MEDIASTINUM CARCINOMA

18866 DIED ON 01/25/82 WITH NO TUMORS
18867 DIED ON 06/29/81 WITH 2 TUMORS
THYMUS LEUKEMIA/LYMPHOMA
BRONCHIAL LYMPH NODES LEUKEMIA/LYMPHOMA

18868 DIED ON 05/29/82 WITH 1 TUMORS
LUNG CARCINOMA

18869 DIED ON 05/09/82 WITH 1 TUMORS
LUNG CARCINOMA

18870 DIED ON 04/13/82 WITH NO TUMORS
18871 DIED ON 02/14/82 WITH 1 TUMORS
LUNG ALVEOLAR/BRONCHIOLAR CELL CARCINOMA

18872 DIED ON 12/10/82 WITH 3 TUMORS
LUNG CARCINOMA
LUNG ALVEOLAR/BRONCHIOLAR CELL ADENOMA
MAINSTEM BRONCHI CARCINOMA

18873 DIED ON 11/11/81 WITH 1 TUMORS
TRACHEA CARCINOMA

18874 DIED ON 10/29/82 WITH 3 TUMORS
STOMACH PAPILLOMA
LUNG ALVEOLAR/BRONCHIOLAR CELL CARCINOMA
LUNG ALVEOLAR/BRONCHIOLAR CELL ADENOMA

TUMOR INVENTORY FOR PROJECT 0102 GROUP: 3F (Continued)

18875 DIED ON 04/03/82 WITH 3 TUMORS
ADRENALS CORTICAL ADENOMA
LARYNX CARCINOMA
LUNG CARCINOMA

18876 DIED ON 08/10/82 WITH 2 TUMORS
TRACHEA CARCINOMA
LUNG ALVEOLAR/BRONCHIOLAR CELL CARCINOMA

18877 DIED ON 07/24/82 WITH 2 TUMORS
LARYNX CARCINOMA
LUNG CARCINOMA

18878 DIED ON 06/19/82 WITH 2 TUMORS
TRACHEA CARCINOMA
LUNG CARCINOMA

18879 DIED ON 09/28/81 WITH 1 TUMORS
TRACHEA CARCINOMA

18880 DIED ON 01/26/82 WITH NO TUMORS
18881 DIED ON 08/20/82 WITH 6 TUMORS
MANDIBULAR LYMPH NODE PLASMACYTOMA
LUNG ALVEOLAR/BRONCHIOLAR CELL ADENOMA
LUNG ALVEOLAR/BRONCHIOLAR CELL CARCINOMA
MAINSTEM BRONCHI CARCINOMA
LIVER PLASMACYTOMA
SPLEEN PLASMACYTOMA

18882 DIED ON 07/19/82 WITH 3 TUMORS
LARYNX CARCINOMA
LUNG ALVEOLAR/BRONCHIOLAR CELL CARCINOMA
MAINSTEM BRONCHI CARCINOMA

18883 DIED ON 06/21/82 WITH 1 TUMORS
LUNG CARCINOMA

18884 DIED ON 06/18/82 WITH 3 TUMORS
LUNG CARCINOMA
LUNG ALVEOLAR/BRONCHIOLAR CELL CARCINOMA
BRONCHIAL LYMPH NODES CARCINOMA

18885 DIED ON 12/03/81 WITH NO TUMORS
18886 DIED ON 12/31/81 WITH NO TUMORS
18887 DIED ON 11/06/81 WITH 2 TUMORS
TRACHEA CARCINOMA
LUNG CARCINOMA

18888 DIED ON 07/29/82 WITH 1 TUMORS
LUNG ALVEOLAR/BRONCHIOLAR CELL CARCINOMA

18889 DIED ON 01/14/83 WITH 2 TUMORS
THYROID CARCINOMA, METASTATIC
LUNG CARCINOMA

18890 DIED ON 05/17/82 WITH NO TUMORS
18891 DIED ON 09/13/82 WITH 1 TUMORS
LUNG CARCINOMA

18892 DIED ON 05/08/82 WITH 1 TUMORS
LUNG CARCINOMA

18893 DIED ON 08/02/82 WITH 3 TUMORS
LUNG ALVEOLAR/BRONCHIOLAR CELL CARCINOMA
LUNG CARCINOMA
HEART NEOPLASM

18894 DIED ON 10/17/81 WITH 1 TUMORS
TRACHEA CARCINOMA

TUMOR INVENTORY FOR PROJECT 0102 GROUP: 3F (Continued)

18895 DIED ON 10/16/82 WITH	4 TUMORS	
TRACHEA		CARCINOMA
THYROID		CARCINOMA, METASTATIC
LUNG		CARCINOMA
MAINSTEM BRONCHI		CARCINOMA
18896 DIED ON 01/18/82 WITH	4 TUMORS	
LARYNX		CARCINOMA
TRACHEA		CARCINOMA
LUNG		CARCINOMA
MAINSTEM BRONCHI		CARCINOMA
18897 DIED ON 03/10/82 WITH	9 TUMORS	
MANDIBULAR LYMPH NODE		MALIGNANT LYMPHOMA
MESENTERIC LYMPH NODE		MALIGNANT LYMPHOMA
LUNG		MALIGNANT LYMPHOMA
BRONCHIAL LYMPH NODES		MALIGNANT LYMPHOMA
LIVER		MALIGNANT LYMPHOMA
SPLEEN		MALIGNANT LYMPHOMA
KIDNEYS		MALIGNANT LYMPHOMA
SUBLUMBAR LYMPH NODE		MALIGNANT LYMPHOMA
RENAL LYMPH NODE		MALIGNANT LYMPHOMA
18898 DIED ON 09/02/81 WITH	2 TUMORS	
TRACHEA		CARCINOMA
LUNG		CARCINOMA
18899 DIED ON 05/28/82 WITH	1 TUMORS	
LUNG		CARCINOMA

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TUMOR INVENTORY FOR PROJECT 0102 GROUP: 4F

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18950  DIED ON 07/28/82 WITH NO TUMORS
18951  DIED ON 04/06/83 WITH NO TUMORS
18952  DIED ON 07/27/82 WITH NO TUMORS
18953  DIED ON 06/16/81 WITH NO TUMORS
18954  DIED ON 12/24/82 WITH NO TUMORS
18955  DIED ON 07/28/82 WITH NO TUMORS
18956  DIED ON 12/23/82 WITH NO TUMORS
18958  DIED ON 04/06/83 WITH   1 TUMORS
    ADRENALS                            CORTICAL ADENOMA

18959  DIED ON 02/04/83 WITH   1 TUMORS
    PANCREAS                            ADENOMA

18960  DIED ON 12/03/82 WITH   2 TUMORS
    LIVER                               ADENOMA
    PANCREAS                            ADENOMA

18961  DIED ON 10/20/81 WITH NO TUMORS
18962  DIED ON 01/28/83 WITH NO TUMORS
18963  DIED ON 06/14/82 WITH NO TUMORS
18964  DIED ON 04/06/82 WITH NO TUMORS
18965  DIED ON 10/25/82 WITH NO TUMORS
18966  DIED ON 07/31/82 WITH NO TUMORS
18967  DIED ON 12/25/82 WITH NO TUMORS
18968  DIED ON 04/06/83 WITH   1 TUMORS
    ADRENALS                            CORTICAL ADENOMA

18969  DIED ON 07/21/82 WITH NO TUMORS
18970  DIED ON 04/06/83 WITH NO TUMORS
18971  DIED ON 08/20/82 WITH NO TUMORS
18972  DIED ON 10/22/82 WITH NO TUMORS
18973  DIED ON 12/26/82 WITH NO TUMORS
18974  DIED ON 06/04/82 WITH NO TUMORS
18975  DIED ON 02/18/82 WITH NO TUMORS
18976  DIED ON 08/03/82 WITH   1 TUMORS
    ADRENALS                            CORTICAL ADENOMA

18977  DIED ON 08/23/82 WITH NO TUMORS
18978  DIED ON 11/24/82 WITH NO TUMORS
18979  DIED ON 10/26/82 WITH NO TUMORS
18980  DIED ON 10/28/82 WITH NO TUMORS
18981  DIED ON 07/22/82 WITH   1 TUMORS
    ADRENALS                            ADENOMA

18982  DIED ON 03/06/83 WITH   1 TUMORS
    ADRENALS                            CORTICAL ADENOMA

18983  DIED ON 11/08/82 WITH   1 TUMORS
    ADRENALS                            CORTICAL ADENOMA

18984  DIED ON 07/27/82 WITH NO TUMORS
18985  DIED ON 03/30/82 WITH NO TUMORS
18986  DIED ON 04/06/83 WITH NO TUMORS
18987  DIED ON 04/06/83 WITH   1 TUMORS
    THYROID                             FOLLICULAR CELL ADENOMA

18988  DIED ON 05/29/82 WITH NO TUMORS
18989  DIED ON 04/06/83 WITH NO TUMORS
18990  DIED ON 02/17/82 WITH NO TUMORS
18991  DIED ON 06/02/82 WITH NO TUMORS
18992  DIED ON 04/06/83 WITH   2 TUMORS
    ADRENALS                            CORTICAL ADENOMA
    PARATHYROID                         ADENOMA

18993  DIED ON 06/22/82 WITH NO TUMORS
18994  DIED ON 06/20/82 WITH   1 TUMORS
    UTERUS                              CARCINOMA

18995  DIED ON 07/21/82 WITH NO TUMORS
18996  DIED ON 08/27/82 WITH NO TUMORS
18997  DIED ON 04/06/83 WITH   1 TUMORS
    LIVER                               CHOLANGIOMA

18998  DIED ON 08/12/81 WITH NO TUMORS
18999  DIED ON 10/05/82 WITH NO TUMORS
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TUMOR INVENTORY FOR PROJECT 0102 GROUP: SF

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19050  DIED ON 04/06/83 WITH   2 TUMORS
    PARATHYROID                          ADENOMA
    UTERUS                               LEIOMYOMA

19051  DIED ON 01/04/82 WITH NO TUMORS
19052  DIED ON 11/26/81 WITH NO TUMORS
19053  DIED ON 01/26/83 WITH   1 TUMORS
    ADRENALS                             CORTICAL ADENOMA

19054  DIED ON 06/21/82 WITH NO TUMORS
19055  DIED ON 09/03/81 WITH NO TUMORS
19056  DIED ON 08/15/82 WITH   1 TUMORS
    ADRENALS                             CORTICAL ADENOMA

19057  DIED ON 09/04/82 WITH   1 TUMORS
    PARATHYROID                          ADENOMA

19058  DIED ON 08/04/81 WITH NO TUMORS
19059  DIED ON 06/08/82 WITH NO TUMORS
19060  DIED ON 01/05/83 WITH   1 TUMORS
    PARATHYROID                          ADENOMA

19061  DIED ON 02/06/83 WITH   2 TUMORS
    ADRENALS                             CORTICAL ADENOMA
    PARATHYROID                          ADENOMA

19062  DIED ON 06/16/82 WITH NO TUMORS
19063  DIED ON 11/12/81 WITH NO TUMORS
19064  DIED ON 04/06/83 WITH   1 TUMORS
    THYROID                              FOLLICULAR CELL ADENOMA

19065  DIED ON 01/04/82 WITH NO TUMORS
19066  DIED ON 10/19/82 WITH NO TUMORS
19067  DIED ON 04/06/83 WITH   1 TUMORS
    ADRENALS                             CORTICAL ADENOMA

19068  DIED ON 01/05/82 WITH NO TUMORS
19069  DIED ON 12/20/82 WITH NO TUMORS
19070  DIED ON 11/02/82 WITH NO TUMORS
19071  DIED ON 04/04/83 WITH NO TUMORS
19072  DIED ON 09/20/82 WITH NO TUMORS
19073  DIED ON 02/22/82 WITH NO TUMORS
19074  DIED ON 01/19/83 WITH NO TUMORS
19075  DIED ON 11/26/82 WITH NO TUMORS
19076  DIED ON 10/09/82 WITH   1 TUMORS
    PARATHYROID                          ADENOMA

19077  DIED ON 02/13/83 WITH NO TUMORS
19078  DIED ON 11/30/82 WITH NO TUMORS
19079  DIED ON 09/08/82 WITH NO TUMORS
19080  DIED ON 04/28/82 WITH NO TUMORS
19081  DIED ON 06/25/82 WITH NO TUMORS
19082  DIED ON 10/14/82 WITH   1 TUMORS
    ADRENALS                             CORTICAL ADENOMA

19083  DIED ON 02/23/83 WITH NO TUMORS
19084  DIED ON 02/27/83 WITH NO TUMORS
19085  DIED ON 10/09/82 WITH NO TUMORS
19086  DIED ON 06/25/82 WITH NO TUMORS
19087  DIED ON 06/20/82 WITH NO TUMORS
19088  DIED ON 12/20/82 WITH   4 TUMORS
    MANDIBULAR LYMPH NODE                PLASMACYTOMA
    LIVER                                PLASMACYTOMA
    SPLEEN                               PLASMACYTOMA
    KIDNEYS                              PLASMACYTOMA

19089  DIED ON 06/24/81 WITH NO TUMORS
19090  DIED ON 04/06/83 WITH   1 TUMORS
    PANCREAS                             CARCINOMA

19091  DIED ON 02/28/82 WITH NO TUMORS
19092  DIED ON 06/26/81 WITH NO TUMORS
19093  DIED ON 10/14/82 WITH   1 TUMORS
    ADRENALS                             CORTICAL ADENOMA

19094  DIED ON 10/14/82 WITH NO TUMORS
19095  DIED ON 06/24/81 WITH NO TUMORS
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TUMOR INVENTORY FOR PROJECT 0102 GROUP: 5F (Continued)

19096 DIED ON 07/29/81 WITH NO TUMORS
19097 DIED ON 07/30/81 WITH NO TUMORS
19098 DIED ON 03/03/82 WITH NO TUMORS
19099 DIED ON 07/30/81 WITH NO TUMORS

TUMOR INVENTORY FOR PROJECT 0102 GROUP: 6F

19150 DIED ON 09/09/82 WITH NO TUMORS
19151 DIED ON 01/09/83 WITH 1 TUMORS
* MESOTHELIOMA

19152 DIED ON 09/09/82 WITH NO TUMORS
19153 DIED ON 09/24/82 WITH NO TUMORS
19154 DIED ON 10/02/82 WITH NO TUMORS
19155 DIED ON 01/01/82 WITH NO TUMORS
19156 DIED ON 01/07/83 WITH 1 TUMORS
PARATHYROID ADENOMA

19158 DIED ON 04/14/82 WITH NO TUMORS
19159 DIED ON 10/18/82 WITH NO TUMORS
19160 DIED ON 03/17/82 WITH NO TUMORS
17161 DIED ON 04/29/82 WITH NO TUMORS
19162 DIED ON 08/06/82 WITH NO TUMORS
19163 DIED ON 04/06/83 WITH NO TUMORS
19164 DIED ON 12/20/82 WITH NO TUMORS
19165 DIED ON 08/21/82 WITH NO TUMORS
19166 DIED ON 11/04/82 WITH 2 TUMORS
ADRENALS ADENOMA
PARATHYROID ADENOMA

19167 DIED ON 09/22/82 WITH NO TUMORS
19168 DIED ON 08/02/82 WITH NO TUMORS
19169 DIED ON 01/31/83 WITH NO TUMORS
19170 DIED ON 09/25/82 WITH NO TUMORS
19171 DIED ON 07/21/82 WITH NO TUMORS
19173 DIED ON 06/17/82 WITH NO TUMORS
19174 DIED ON 08/25/82 WITH NO TUMORS
19175 DIED ON 12/08/82 WITH NO TUMORS
19176 DIED ON 11/14/82 WITH NO TUMORS
19177 DIED ON 11/15/82 WITH NO TUMORS
19178 DIED ON 10/27/82 WITH NO TUMORS
19179 DIED ON 04/06/83 WITH NO TUMORS
19180 DIED ON 06/15/82 WITH NO TUMORS
19181 DIED ON 07/04/82 WITH NO TUMORS
19182 DIED ON 06/24/82 WITH NO TUMORS
19183 DIED ON 02/22/82 WITH NO TUMORS
19184 DIED ON 10/21/82 WITH NO TUMORS
19185 DIED ON 12/20/82 WITH NO TUMORS
19186 DIED ON 07/25/82 WITH 1 TUMORS
THYROID ADENOMA

19187 DIED ON 06/21/82 WITH NO TUMORS
19188 DIED ON 11/07/81 WITH NO TUMORS
19189 DIED ON 11/22/82 WITH 1 TUMORS
THYROID C-CELL ADENOMA

19190 DIED ON 08/25/82 WITH NO TUMORS
19191 DIED ON 01/28/82 WITH NO TUMORS
19192 DIED ON 10/16/82 WITH NO TUMORS
19193 DIED ON 07/19/82 WITH NO TUMORS
19194 DIED ON 06/29/82 WITH NO TUMORS
19195 DIED ON 02/20/83 WITH 1 TUMORS
THYROID FOLLICULAR CELL ADENOMA

19196 DIED ON 04/06/83 WITH 1 TUMORS
ADRENALS ADENOMA

19197 DIED ON 11/09/82 WITH 1 TUMORS
MESENTERIC LYMPH NODE LEUKEMIA/LYMPHOMA

19198 DIED ON 11/23/82 WITH NO TUMORS
19199 DIED ON 10/17/82 WITH NO TUMORS

TUMOR INVENTORY FOR PROJECT 0102 GROUP: 7F

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19250  DIED ON 07/20/82 WITH NO TUMORS
19251  DIED ON 10/23/82 WITH NO TUMORS
19252  DIED ON 06/17/82 WITH NO TUMORS
19253  DIED ON 10/13/82 WITH NO TUMORS
19254  DIED ON 01/01/83 WITH   1 TUMORS
    ADRENALS                              ADENOMA

19255  DIED ON 04/04/83 WITH NO TUMORS
19256  DIED ON 09/08/82 WITH   1 TUMORS
    PITUITARY                             ADENOMA

19257  DIED ON 03/22/82 WITH NO TUMORS
19258  DIED ON 04/06/83 WITH   1 TUMORS
    THYROID                               FOLLICULAR CELL ADENOMA

19259  DIED ON 08/04/82 WITH NO TUMORS
19260  DIED ON 12/26/82 WITH NO TUMORS
19261  DIED ON 10/13/82 WITH NO TUMORS
19262  DIED ON 06/02/82 WITH NO TUMORS
19263  DIED ON 07/12/82 WITH NO TUMORS
19264  DIED ON 08/25/82 WITH NO TUMORS
19265  DIED ON 09/08/82 WITH NO TUMORS
19266  DIED ON 03/28/83 WITH   2 TUMORS
    THYROID                               FOLLICULAR CELL ADENOMA
    PARATHYROID                           ADENOMA

19267  DIED ON 09/07/82 WITH NO TUMORS
19268  DIED ON 01/29/83 WITH NO TUMORS
19269  DIED ON 11/22/82 WITH NO TUMORS
19270  DIED ON 04/06/83 WITH   1 TUMORS
    THYROID                               FOLLICULAR CELL ADENOMA

19271  DIED ON 04/06/83 WITH NO TUMORS
19272  DIED ON 11/27/82 WITH   1 TUMORS
    ADRENALS                              ADENOMA

19273  DIED ON 03/02/83 WITH NO TUMORS
19274  DIED ON 09/27/82 WITH NO TUMORS
19275  DIED ON 03/20/83 WITH   1 TUMORS
    PARATHYROID                           ADENOMA

19276  DIED ON 09/08/82 WITH   1 TUMORS
    ADRENALS                              ADENOMA

19277  DIED ON 12/21/81 WITH NO TUMORS
19278  DIED ON 02/28/83 WITH   2 TUMORS
    THYROID                               PAPILLOMA
    THYROID                               ADENOMA

19279  DIED ON 06/29/82 WITH NO TUMORS
19280  DIED ON 11/19/82 WITH NO TUMORS
19281  DIED ON 06/01/82 WITH NO TUMORS
19282  DIED ON 08/02/81 WITH NO TUMORS
19283  DIED ON 12/14/82 WITH   1 TUMORS
    THYROID                               PAPILLARY ADENOMA

19284  DIED ON 12/25/81 WITH NO TUMORS
19285  DIED ON 09/14/82 WITH NO TUMORS
19286  DIED ON 11/21/82 WITH NO TUMORS
19287  DIED ON 09/28/82 WITH NO TUMORS
19288  DIED ON 07/22/82 WITH NO TUMORS
19289  DIED ON 01/10/82 WITH NO TUMORS
19290  DIED ON 07/13/82 WITH NO TUMORS
19291  DIED ON 04/06/83 WITH   3 TUMORS
    ADRENALS                              ADENOMA
    PARATHYROID                           ADENOMA
    LIVER                                 CHOLANGIOMA

19292  DIED ON 06/29/82 WITH NO TUMORS
19293  DIED ON 11/30/82 WITH NO TUMORS
19294  DIED ON 10/29/82 WITH   1 TUMORS
    THYROID                               FOLLICULAR CELL ADENOMA

19295  DIED ON 10/13/82 WITH NO TUMORS
19296  DIED ON 08/10/82 WITH NO TUMORS
19297  DIED ON 07/02/82 WITH NO TUMORS
19298  DIED ON 11/22/81 WITH NO TUMORS
19299  DIED ON 09/15/82 WITH NO TUMORS
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TUMOR INVENTORY FOR PROJECT 0102 GROUP: 8F

19350 DIED ON 06/29/82 WITH NO TUMORS
19352 DIED ON 06/18/82 WITH NO TUMORS
19353 DIED ON 01/20/83 WITH NO TUMORS
19354 DIED ON 10/07/82 WITH NO TUMORS
19355 DIED ON 09/11/82 WITH NO TUMORS
19356 DIED ON 04/06/83 WITH NO TUMORS
19357 DIED ON 06/21/82 WITH NO TUMORS
19358 DIED ON 12/10/81 WITH NO TUMORS
19359 DIED ON 07/24/82 WITH NO TUMORS
19360 DIED ON 12/30/82 WITH NO TUMORS
19361 DIED ON 04/01/82 WITH NO TUMORS
19362 DIED ON 02/15/83 WITH NO TUMORS
19363 DIED ON 11/08/81 WITH NO TUMORS
19364 DIED ON 04/28/82 WITH NO TUMORS
19365 DIED ON 02/15/82 WITH NO TUMORS
19366 DIED ON 05/18/82 WITH NO TUMORS
19367 DIED ON 10/21/82 WITH NO TUMORS
19368 DIED ON 07/13/82 WITH NO TUMORS
19369 DIED ON 02/14/83 WITH NO TUMORS
19370 DIED ON 05/09/82 WITH NO TUMORS
19371 DIED ON 01/10/82 WITH NO TUMORS
19372 DIED ON 02/10/83 WITH NO TUMORS
19373 DIED ON 06/29/82 WITH 1 TUMORS
THYROID ADENOMA

19374 DIED ON 09/07/82 WITH 1 TUMORS
OVARIES GRANULOSA CELL TUMOR

19375 DIED ON 12/20/82 WITH NO TUMORS
19376 DIED ON 12/30/82 WITH NO TUMORS
19377 DIED ON 12/26/82 WITH NO TUMORS
19378 DIED ON 09/04/82 WITH 1 TUMORS
ADRENALS CORTICAL ADENOMA

19379 DIED ON 09/30/82 WITH 1 TUMORS
ADRENALS CORTICAL ADENOMA

19380 DIED ON 01/16/82 WITH NO TUMORS
19381 DIED ON 05/19/82 WITH NO TUMORS
19382 DIED ON 12/23/81 WITH NO TUMORS
19383 DIED ON 07/20/82 WITH NO TUMORS
19384 DIED ON 04/09/82 WITH NO TUMORS
19385 DIED ON 12/31/82 WITH NO TUMORS
19386 DIED ON 08/19/82 WITH NO TUMORS
19387 DIED ON 01/16/83 WITH NO TUMORS
19388 DIED ON 02/20/83 WITH NO TUMORS
19389 DIED ON 03/20/83 WITH NO TUMORS
19390 DIED ON 12/29/82 WITH NO TUMORS
19391 DIED ON 08/15/82 WITH NO TUMORS
19392 DIED ON 10/24/82 WITH 4 TUMORS
LUNG CARCINOMA, METASTATIC
LUNG SARCOMA
KIDNEYS CARCINOMA, METASTATIC
KIDNEYS SARCOMA

19393 DIED ON 06/15/82 WITH NO TUMORS
19394 DIED ON 04/06/83 WITH 1 TUMORS
OVARIES GRANULOSA CELL TUMOR

19395 DIED ON 10/04/82 WITH NO TUMORS
19396 DIED ON 11/30/82 WITH NO TUMORS
19397 DIED ON 06/20/82 WITH NO TUMORS
19399 DIED ON 04/04/83 WITH NO TUMORS

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TUMOR INVENTORY FOR PROJECT 0102 GROUP: 9F

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19450  DIED ON 08/16/82 WITH NO TUMORS
19451  DIED ON 09/08/82 WITH NO TUMORS
19452  DIED ON 07/06/82 WITH NO TUMORS
19453  DIED ON 03/06/83 WITH NO TUMORS
19454  DIED ON 10/14/82 WITH NO TUMORS
19456  DIED ON 06/25/82 WITH NO TUMORS
19457  DIED ON 08/15/82 WITH NO TUMORS
19458  DIED ON 02/01/83 WITH NO TUMORS
19459  DIED ON 03/10/82 WITH NO TUMORS
19460  DIED ON 08/13/82 WITH NO TUMORS
19461  DIED ON 07/11/82 WITH NO TUMORS
19462  DIED ON 07/03/82 WITH NO TUMORS
19463  DIED ON 11/14/82 WITH NO TUMORS
19465  DIED ON 02/17/82 WITH NO TUMORS
19466  DIED ON 06/24/82 WITH NO TUMORS
19467  DIED ON 04/01/82 WITH NO TUMORS
19468  DIED ON 05/17/82 WITH NO TUMORS
19469  DIED ON 05/10/82 WITH NO TUMORS
19470  DIED ON 10/03/82 WITH NO TUMORS
19471  DIED ON 08/13/82 WITH NO TUMORS
19472  DIED ON 11/05/82 WITH NO TUMORS
19473  DIED ON 03/31/83 WITH   1 TUMORS
    LIVER                              CHOLANGIOMA

19474  DIED ON 03/04/83 WITH NO TUMORS
19475  DIED ON 07/21/82 WITH   1 TUMORS
    PARATHYROID                        ADENOMA

19476  DIED ON 09/17/82 WITH NO TUMORS
19477  DIED ON 09/19/82 WITH   1 TUMORS
    THYROID                            ADENOMA

19478  DIED ON 11/21/82 WITH NO TUMORS
19479  DIED ON 06/28/82 WITH NO TUMORS
19480  DIED ON 12/23/81 WITH NO TUMORS
19481  DIED ON 08/19/82 WITH NO TUMORS
19483  DIED ON 06/13/82 WITH NO TUMORS
19484  DIED ON 03/18/82 WITH NO TUMORS
19485  DIED ON 02/02/83 WITH NO TUMORS
19486  DIED ON 07/14/82 WITH NO TUMORS
19487  DIED ON 01/31/83 WITH NO TUMORS
19488  DIED ON 05/01/82 WITH NO TUMORS
19489  DIED ON 08/03/82 WITH NO TUMORS
19490  DIED ON 04/20/82 WITH NO TUMORS
19491  DIED ON 07/16/82 WITH   1 TUMORS
    PARATHYROID                        ADENOMA

19492  DIED ON 10/21/82 WITH NO TUMORS
19493  DIED ON 02/24/83 WITH NO TUMORS
19494  DIED ON 09/24/82 WITH NO TUMORS
19495  DIED ON 07/31/82 WITH NO TUMORS
19496  DIED ON 09/19/82 WITH NO TUMORS
19497  DIED ON 09/02/82 WITH NO TUMORS
19498  DIED ON 04/06/83 WITH   2 TUMORS
    MANDIBULAR LYMPH NODE              CORTICAL ADENOMA
    THYROID                            ADENOMA

19499  DIED ON 11/29/81 WITH NO TUMORS
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TUMOR INVENTORY FOR PROJECT 0102 GROUP: 10F

19550 DIED ON 07/11/82 WITH NO TUMORS
19551 DIED ON 02/15/83 WITH 1 TUMORS
THYROID FOLLICULAR CELL ADENOMA

19552 DIED ON 08/29/82 WITH NO TUMORS
19553 DIED ON 08/09/82 WITH NO TUMORS
19554 DIED ON 09/09/82 WITH NO TUMORS
19555 DIED ON 07/04/82 WITH NO TUMORS
19556 DIED ON 01/31/83 WITH NO TUMORS
19557 DIED ON 09/27/82 WITH 1 TUMORS
ADRENALS ADENOMA

19558 DIED ON 02/03/83 WITH NO TUMORS
19559 DIED ON 12/03/81 WITH NO TUMORS
19560 DIED ON 01/16/82 WITH NO TUMORS
19561 DIED ON 07/24/82 WITH NO TUMORS
19562 DIED ON 11/13/82 WITH NO TUMORS
19563 DIED ON 01/11/82 WITH NO TUMORS
19564 DIED ON 05/03/82 WITH NO TUMORS
19565 DIED ON 10/22/82 WITH NO TUMORS
19566 DIED ON 12/03/81 WITH NO TUMORS
19567 DIED ON 03/18/83 WITH 1 TUMORS
PARATHYROID ADENOMA

19568 DIED ON 10/19/82 WITH NO TUMORS
19569 DIED ON 07/12/82 WITH NO TUMORS
19570 DIED ON 04/06/83 WITH 1 TUMORS
THYROID FOLLICULAR CELL ADENOMA

19571 DIED ON 01/03/83 WITH 1 TUMORS
PARATHYROID ADENOMA

19572 DIED ON 10/14/81 WITH 1 TUMORS
SPLEEN LEUKEMIA/LYMPHOMA

19574 DIED ON 08/09/82 WITH NO TUMORS
19575 DIED ON 09/24/82 WITH 1 TUMORS
ADRENALS ADENOMA

19576 DIED ON 09/26/82 WITH NO TUMORS
19577 DIED ON 07/01/82 WITH NO TUMORS
19578 DIED ON 08/19/82 WITH NO TUMORS
19579 DIED ON 04/20/82 WITH NO TUMORS
19580 DIED ON 01/25/83 WITH NO TUMORS
19581 DIED ON 01/02/83 WITH 1 TUMORS
LIVER CHOLANGIOMA

19582 DIED ON 09/10/82 WITH NO TUMORS
19583 DIED ON 08/20/82 WITH NO TUMORS
19584 DIED ON 07/11/82 WITH NO TUMORS
19585 DIED ON 07/27/81 WITH NO TUMORS
19586 DIED ON 09/19/82 WITH NO TUMORS
19587 DIED ON 09/14/82 WITH NO TUMORS
19588 DIED ON 12/07/82 WITH NO TUMORS
19589 DIED ON 08/20/82 WITH NO TUMORS
19591 DIED ON 02/26/83 WITH NO TUMORS
19592 DIED ON 12/14/82 WITH NO TUMORS
19593 DIED ON 01/26/83 WITH NO TUMORS
19594 DIED ON 11/14/82 WITH NO TUMORS
19595 DIED ON 03/08/82 WITH NO TUMORS
19596 DIED ON 10/13/82 WITH NO TUMORS
19598 DIED ON 03/19/82 WITH NO TUMORS
19599 DIED ON 12/08/82 WITH NO TUMORS

TUMOR INVENTORY FOR PROJECT 0102 GROUP: 11F

19650 DIED ON 11/16/82 WITH 1 TUMORS
ADRENALS ADENOMA

19652 DIED ON 06/28/82 WITH NO TUMORS
19653 DIED ON 09/24/82 WITH NO TUMORS
19654 DIED ON 12/04/82 WITH 2 TUMORS
ADRENALS ADENOMA
PARATHYROID ADENOMA

19655 DIED ON 09/11/82 WITH 9 TUMORS
STOMACH LEUKEMIA/LYMPHOMA
ESOPHAGUS LEUKEMIA/LYMPHOMA
LUNG LEUKEMIA/LYMPHOMA
BRONCHIAL LYMPH NODES LEUKEMIA/LYMPHOMA
LIVER LEUKEMIA/LYMPHOMA
SPLEEN LEUKEMIA/LYMPHOMA
STERNUM & RIB JUNCTION LEUKEMIA/LYMPHOMA
AXILLARY MASS LEUKEMIA/LYMPHOMA
RENAL LYMPH NODE LEUKEMIA/LYMPHOMA

19656 DIED ON 08/20/82 WITH NO TUMORS
19657 DIED ON 07/11/82 WITH 1 TUMORS
THYROID ADENOMA

19659 DIED ON 08/13/82 WITH NO TUMORS
19660 DIED ON 04/06/83 WITH NO TUMORS
19661 DIED ON 07/26/82 WITH NO TUMORS
19662 DIED ON 01/07/82 WITH NO TUMORS
19663 DIED ON 07/28/82 WITH NO TUMORS
19664 DIED ON 07/19/82 WITH NO TUMORS
19665 DIED ON 07/02/82 WITH NO TUMORS
19666 DIED ON 04/06/83 WITH 1 TUMORS
OVARIES GRANULOSA CELL TUMOR

19667 DIED ON 01/13/82 WITH NO TUMORS
19668 DIED ON 07/10/82 WITH NO TUMORS
19669 DIED ON 12/08/82 WITH NO TUMORS
19670 DIED ON 07/06/82 WITH NO TUMORS
19671 DIED ON 08/16/82 WITH NO TUMORS
19672 DIED ON 06/17/82 WITH NO TUMORS
19673 DIED ON 06/29/82 WITH NO TUMORS
19674 DIED ON 07/16/82 WITH NO TUMORS
19676 DIED ON 11/01/82 WITH NO TUMORS
19677 DIED ON 09/01/82 WITH NO TUMORS
19678 DIED ON 11/22/82 WITH NO TUMORS
19679 DIED ON 07/07/82 WITH NO TUMORS
19680 DIED ON 01/27/83 WITH NO TUMORS
19681 DIED ON 01/22/82 WITH NO TUMORS
19682 DIED ON 10/18/82 WITH NO TUMORS
19683 DIED ON 07/29/82 WITH NO TUMORS
19684 DIED ON 10/08/82 WITH NO TUMORS
19686 DIED ON 09/10/82 WITH NO TUMORS
19687 DIED ON 12/20/81 WITH NO TUMORS
19688 DIED ON 08/13/82 WITH NO TUMORS
19689 DIED ON 08/21/81 WITH 1 TUMORS
ADRENALS ADENOMA

19690 DIED ON 09/19/82 WITH NO TUMORS
19691 DIED ON 08/10/82 WITH 3 TUMORS
THYROID ADENOMA
PARATHYROID ADENOMA
BRONCHIAL LYMPH NODES CARCINOMA, METASTATIC

19692 DIED ON 09/24/82 WITH NO TUMORS
19693 DIED ON 06/28/82 WITH NO TUMORS
19694 DIED ON 07/31/82 WITH NO TUMORS
19695 DIED ON 11/12/81 WITH NO TUMORS
19696 DIED ON 09/01/82 WITH NO TUMORS
19697 DIED ON 12/17/82 WITH NO TUMORS
19698 DIED ON 12/13/82 WITH 7 TUMORS
MANDIBULAR LYMPH NODE PLASMACYTOMA
THYMUS LEUKEMIA/LYMPHOMA
THYMUS PLASMACYTOMA
MESENTERIC LYMPH NODE PLASMACYTOMA
BRONCHIAL LYMPH NODES LEUKEMIA/LYMPHOMA
BRONCHIAL LYMPH NODES PLASMACYTOMA
LIVER PLASMACYTOMA

19699 DIED ON 10/28/82 WITH 2 TUMORS
ADRENALS ADENOMA
THYROID ADENOMA

TABLE 23D (Continued)
CARCINOGENIC POTENTIAL OF CONDENSED PYROLYSIS EFFLUENTS FROM IRON FOUNDRY CASTING OPERATIONS (CHRONIC STUDY)
FISHER'S ANALYSIS OF TUMOR BEARING ANIMALS
COMPARISONS BETWEEN TEST MATERIALS (HIGH DOSE)

DESCRIPTION	GROUP	AFFECTED	AT RISK	GROUP	AFFECTED	AT RISK	1-TAIL	2-TAIL
(ADRENALS) - MALE	5	8	44	7	7	40	0.58158	0.99428
(ADRENALS) - MALE	5	8	44	9	6	44	0.38591	0.37728
(ADRENALS) - MALE	5	8	44	11	10	42	0.35345	1.00010
(ADRENALS) - MALE	7	7	35	9	6	42	0.35763	1.00016
(ADRENALS) - MALE	7	7	41	11	10	42	0.31339	1.00018
(ADRENALS) - MALE	9	6	46	11	10	42	0.15131	0.41717
(ADRENALS) - FEMALE	5	6	27	7	4	33	0.24264	0.48807
(ADRENALS) - FEMALE	5	6	27	9	0	25	0.01454	0.01454 *
(ADRENALS) - FEMALE	5	6	43	11	4	46	0.32687	1.00011
(ADRENALS) - FEMALE	7	4	30	9	0	18	0.14084	0.28238
(ADRENALS) - FEMALE	7	4	49	11	4	46	0.60663	1.00011
(ADRENALS) - FEMALE	9	0	47	11	4	46	0.05590	0.06708

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* Significantly increased incidence of tumor bearing animals for the high dose shell sand females (Group 5) as compared to the high dose furan females (Group 9)