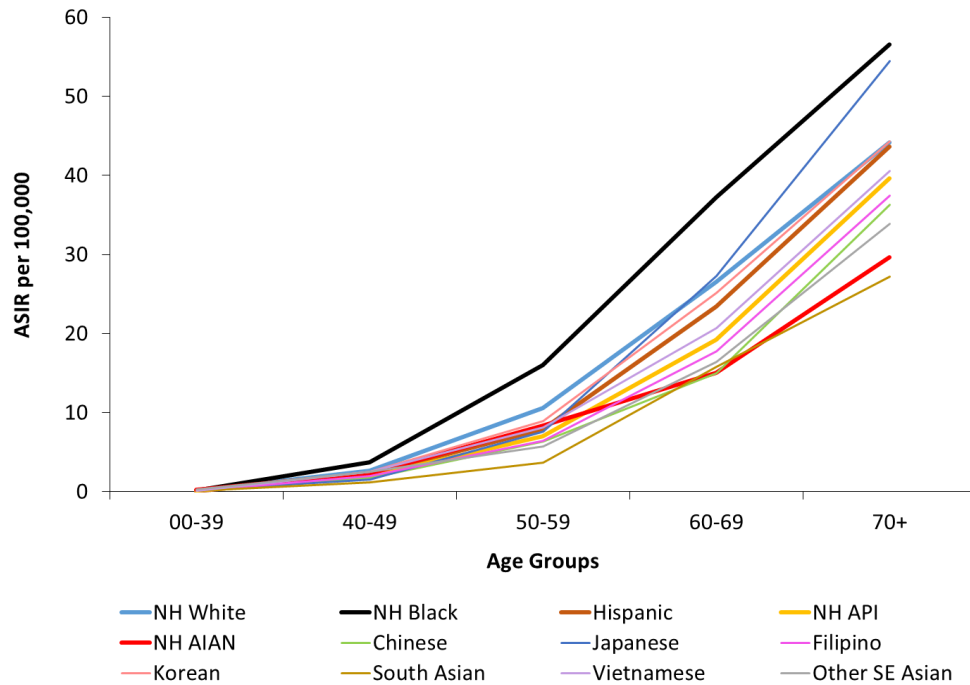


Differences in Pancreatic Cancer Incidence Rates and Temporal Trends Across Asian Subpopulations in California (1988–2015)

SUPPLEMENTAL DIGITAL CONTENT



SUPPLEMENTAL FIGURE 1. Age-specific Incidence Rate (ASIR) of Invasive Exocrine Pancreatic by Race/Ethnicity, California, 1988–2015

SUPPLEMENTAL TABLE 1. ASIRs, AAIRs, and AAPC by Race/Ethnicity, Invasive Exocrine Pancreatic Cancer, California, 1988–2015

Race/Ethnicity	Ages 0–39 y		Ages 40–49 y		Ages 50–59 y		Ages 60–69 y		Ages 70+ y		All Ages	
	ASIR (95% CI)	Count	ASIR (95% CI)	Count	ASIR (95% CI)	Count	ASIR (95% CI)	Count	ASIR (95% CI)	Count	AAIR (95% CI)	Count
NH White	0.13 (0.12–0.15)	303	2.68 (2.56–2.8)	1857	10.58 (10.32–10.84)	6314	26.56 (26.09–27.04)	11,904	44.13 (43.56–44.7)	22,958	7.65 (7.58–7.72)	43,336
NH Black	0.16 (0.12–0.2)	64	3.76 (3.36–4.18)	335	16.04 (15.10–17.03)	1075	37.18 (35.36–39.06)	1570	56.55 (54.14–59.05)	2065	10.4 (10.12–10.7)	5109
Hispanic	0.10 (0.09–0.11)	238	2.17 (2.02–2.32)	815	7.87 (7.51–8.24)	1814	23.45 (22.62–24.30)	3004	43.61 (42.33–44.92)	4410	7.07 (6.92–7.21)	10,281
NH API	0.13 (0.10–0.16)	90	1.97 (1.77–2.19)	349	7.01 (6.57–7.47)	945	19.18 (18.28–20.11)	1714	39.60 (38.23–41.01)	3150	6.24 (6.09–6.4)	6248
NH AIAN	*	*	2.25 (1.38–3.48)	20	8.35 (6.36–10.77)	59	14.99 (11.52–19.17)	63	29.61 (23.78–36.43)	89	5.20 (4.53–5.94)	239
Chinese	*	*	1.71 (1.36–2.12)	82	6.31 (5.54–7.16)	241	15.00 (13.52–16.59)	375	36.26 (33.93–38.71)	901	5.48 (5.22–5.76)	1612
Japanese	*	*	1.53 (0.96–2.32)	22	7.57 (6.10–9.28)	92	27.29 (24.1–30.78)	265	54.50 (50.33–58.93)	629	8.13 (7.64–8.65)	1017
Filipino	*	*	2.00 (1.61–2.46)	89	6.42 (5.62–7.3)	231	17.78 (16.13–19.55)	426	37.44 (34.8–40.23)	744	5.88 (5.58–6.19)	1507
Korean	*	*	2.53 (1.82–3.41)	42	8.93 (7.36–10.74)	113	25.16 (21.83–28.85)	205	44.26 (39.33–49.63)	293	7.48 (6.90–8.09)	666
South Asian	*	*	1.20 (0.73–1.85)	20	3.63 (2.58–4.96)	39	15.79 (12.90–19.13)	104	27.17 (22.43–32.62)	115	4.35 (3.82–4.93)	288
Vietnamese	*	*	2.51 (1.86–3.31)	50	8.17 (6.76–9.78)	118	20.69 (17.76–23.98)	177	40.53 (35.74–45.79)	258	6.60 (6.06–7.17)	609
Other SE Asian	*	*	2.54 (1.55–3.92)	20	5.74 (3.95–8.06)	33	16.44 (12.31–21.5)	53	33.91 (26.33–42.99)	68	5.58 (4.73–6.52)	187

*Numbers are withheld if based on <20 cases

ASIR indicates Age-specific incidence rate; AAIR, Age-adjusted incidence rate; AAPC, Average annual percent change; CI, Confidence interval.

SUPPLEMENTAL TABLE 2. AAIRs by Race/Ethnicity and Time Period and AAPC of Annual AAIRs, Invasive Exocrine Pancreatic Cancer, California, 1988-2015

	1988–1995		1996–2003		2004–2011		2012–2015		1988–2015
	AAIR (95% CI)	Count	AAIR (95% CI)	Count	AAIR (95% CI)	Count	AAIR (95% CI)	Count	AAPC (95% CI)
NH White	7.08 (6.94–7.22)	10,499	6.96 (6.83–7.09)	10,973	8.22 (8.08–8.36)	13,837	8.75 (8.55–8.94)	8027	1.0 (0.8–1.3)*
NH Black	10.52 (9.91–11.16)	1151	9.38 (8.85–9.92)	1230	11.12 (10.59–11.66)	1755	10.39 (9.72–11.08)	973	0.2 (-0.3 to 0.7)
Hispanic	6.41 (6.08–6.76)	1599	6.63 (6.34–6.92)	2284	7.22 (6.98–7.47)	3724	7.74 (7.43–8.05)	2674	1.0 (0.7–1.2)*
NH API	5.65 (5.25–6.07)	850	5.36 (5.07–5.66)	1327	6.61 (6.34–6.88)	2398	6.93 (6.59–7.27)	1673	1.2 (0.7–1.7)*
NH AIAN	2.59 (1.63–3.86)	25	3.86 (2.80–5.16)	49	6.16 (4.88–7.66)	89	8.33 (6.49–10.54)	76	5.6 (3.3–8.0)*
Chinese	4.60 (3.99–5.28)	215	4.63 (4.15–5.15)	340	5.64 (5.19–6.11)	602	6.73 (6.12–7.39)	455	1.8 (1.1–2.6)*
Japanese	6.73 (5.72–7.87)	179	6.99 (6.13–7.95)	245	9.53 (8.58–10.55)	388	9.08 (7.80–10.53)	205	1.8 (0.6–2.9)*
Filipino	5.59 (4.86–6.4)	229	4.67 (4.15–5.24)	303	6.23 (5.72–6.77)	581	6.92 (6.23–7.66)	394	1.4 (0.5–2.4)*
Korean	6.20 (4.83–7.82)	84	5.94 (4.92–7.09)	132	7.52 (6.60–8.52)	255	9.56 (8.24–11.03)	195	2.1 (1.1–3.2)*
South Asian	3.33 (1.88–5.36)	23	3.14 (2.28–4.19)	52	4.49 (3.66–5.43)	120	5.30 (4.21–6.58)	93	2.7 (0.3–5.1)*
Vietnamese	6.36 (4.75–8.28)	64	6.73 (5.62–7.98)	147	6.35 (5.54–7.25)	238	6.81 (5.76–7.99)	160	-0.4 (-1.5 to 0.8)
Other SE Asian	5.49 (3.41–8.28)	30	4.74 (3.26–6.62)	39	5.54 (4.17–7.16)	66	6.15 (4.43–8.28)	52	0.4 (-1.8 to 2.7)

*Indicates statistical significance at 95% confidence level.

AAIR indicates Age-adjusted incidence rate; AAPC, Average annual percent change; CI, Confidence intervals.

SUPPLEMENTAL TABLE 3. Demographic and Tumor Characteristics of Invasive Exocrine Pancreatic Cancer Cases by Race/Ethnicity, California, 1988-2015

Characteristics	NH White n = 43,336	NH Black n = 5109	Hispanic n = 10,281	NH API n = 6248	NH AIAN n = 239	Chinese n = 1612	Japanese n = 1017	Filipino n = 1507	Korean n = 666	South Asian n = 288	Vietnamese n = 609	Other SE Asian n = 187
Sex, %												
Male	52.2	48.0	48.4	48.4	50.6	51.7	43.6	43.5	50.2	56.9	53.7	52.4
Female	47.8	52.0	51.6	51.6	49.4	48.3	56.4	56.5	49.9	43.1	46.3	47.6
Age groups, y, %												
00-39	0.7	1.3	2.3	1.4	3.4	0.8	0.9	1.1	2.0	3.5	1.0	7.0
40-49	4.3	6.6	7.9	5.6	8.4	5.1	2.2	5.9	6.3	6.9	8.2	10.7
50-59	14.6	21.0	17.6	15.1	24.7	15.0	9.1	15.3	17.0	13.5	19.4	17.7
60-69	27.5	30.7	29.2	27.4	26.4	23.3	26.1	28.3	30.8	36.1	29.1	28.3
70+	53.0	40.4	42.9	50.4	37.2	55.9	61.9	49.4	44.0	39.9	42.4	36.4
Socioeconomic status, %												
SES1 (lowest)	8.7	32.9	32.0	11.7	24.3	8.9	7.0	11.4	15.6	11.5	13.6	43.3
SES2	16.9	24.6	25.0	16.9	24.3	12.5	14.7	17.9	22.2	9.7	26.8	23.0
SES3	21.3	19.5	19.8	21.2	24.7	16.4	21.5	27.5	16.8	20.1	23.0	19.3
SES4	24.4	15.0	14.4	24.2	17.2	26.4	26.7	25.6	20.0	25.0	20.2	7.5
SES5 (highest)	28.7	8.0	8.7	25.9	9.6	35.9	30.2	17.7	25.4	33.7	16.4	7.0
Nativity, %												
US Born	55.5	60.6	28.2	11.1	62.8	5.6	40.6	4.0	2.3	2.4	1.2	1.6
Foreign Born	8.1	2.5	39.0	58.6	2.1	59.6	27.2	69.5	76.0	63.2	71.6	75.9
Unknown	36.4	36.9	32.9	30.3	35.2	34.8	32.2	26.5	21.8	34.4	27.3	22.5
Tumor stage, %												
Localized	8.2	7.4	7.6	7.9	7.1	7.6	8.5	7.7	7.7	10.8	9.7	5.4
Regional	34.5	31.9	33.2	35.5	33.9	37.2	36.8	32.0	39.9	33.0	33.3	32.6
Remote	50.5	53.9	53.5	50.5	54.0	49.4	47.3	54.6	46.4	52.4	50.9	54.6
Unknown	6.8	6.9	5.7	6.1	5.0	5.8	7.5	5.7	6.0	3.8	6.1	7.5

Data presented as frequencies (%).

SES indicates socioeconomic status.

SUPPLEMENTAL TABLE 4. Tumor Stage Distribution by Race/Ethnicity and Time Period, Invasive Pancreatic Exocrine Cancer, California, 1988–2015

Race/Ethnicity	Stage	Time Period, %			
		1988–1995	1996–2003	2004–2011	2012–2015
NH White	Localized	8.09	6.81	8.80	9.28
	Regional	36.12	32.24	34.15	35.89
	Remote	43.66	52.09	53.52	52.01
	Unknown	12.13	8.86	3.54	2.82
	Total	100.00	100.00	100.00	100.00
NH Black	Localized	6.78	6.26	7.98	8.32
	Regional	34.84	29.35	32.02	31.45
	Remote	45.44	56.10	55.73	57.55
	Unknown	12.95	8.29	4.27	2.67
	Total	100.00	100.00	100.00	100.00
Hispanic	Localized	9.57	6.92	6.85	8.19
	Regional	36.09	32.27	32.14	33.81
	Remote	44.28	52.50	57.14	54.75
	Unknown	10.07	8.32	3.87	3.25
	Total	100.00	100.00	100.00	100.00
NH API	Localized	6.12	5.65	8.76	9.50
	Regional	38.35	34.82	35.03	35.27
	Remote	42.82	49.96	52.13	52.54
	Unknown	12.71	9.57	4.09	2.69
	Total	100.00	100.00	100.00	100.00
NH AIAN	Localized	12.00	6.12	5.62	7.89
	Regional	24.00	36.73	37.08	31.58
	Remote	48.00	53.06	55.06	55.26
	Unknown	16.00	4.08	2.25	5.26
	Total	100.00	100.00	100.00	100.00
Chinese	Localized	4.65	7.35	8.80	7.69
	Regional	45.58	35.29	33.39	39.78
	Remote	36.74	48.82	53.49	50.33
	Unknown	13.02	8.53	4.32	2.20
	Total	100.00	100.00	100.00	100.00
Japanese	Localized	7.26	5.71	9.79	10.24
	Regional	41.34	35.51	36.08	35.61
	Remote	40.78	46.12	49.48	50.24
	Unknown	10.61	12.65	4.64	3.90
	Total	100.00	100.00	100.00	100.00
Filipino	Localized	6.99	4.29	9.29	8.38
	Regional	32.75	34.32	33.22	27.92
	Remote	46.72	53.47	54.22	60.66
	Unknown	13.54	7.92	3.27	3.05
	Total	100.00	100.00	100.00	100.00
Korean	Localized	5.95	6.06	5.88	11.79
	Regional	41.67	34.09	42.75	39.49
	Remote	44.05	50.76	45.10	46.15
	Unknown	8.33	9.09	6.27	2.56
	Total	100.00	100.00	100.00	100.00
South Asian	Localized	4.35	7.69	11.67	12.90
	Regional	39.13	34.62	33.33	30.11
	Remote	43.48	50.00	53.33	54.84
	Unknown	13.04	7.69	1.67	2.15
	Total	100.00	100.00	100.00	100.00
Vietnamese	Localized	9.38	6.80	10.08	11.88
	Regional	28.13	35.37	31.93	35.63
	Remote	45.31	48.30	54.62	50.00
	Unknown	17.19	9.52	3.36	2.50
	Total	100.00	100.00	100.00	100.00

(Continued on next page)

TABLE 4. *(Continued)*

Race/Ethnicity	Stage	Time Period, %			
		1988–1995	1996–2003	2004–2011	2012–2015
Other SE Asian	Localized	0.00	0.00	7.58	9.62
	Regional	33.33	35.90	24.24	40.38
	Remote	56.67	51.28	62.12	46.15
	Unknown	10.00	12.82	6.06	3.85
	Total	100.00	100.00	100.00	100.00

Data presented as frequencies (%).