United States Cancer Statistics

NOVEMBER 12, 2024

Incidence of Malignant Mesothelioma

WHAT TO KNOW

Mesothelioma is a cancer that forms in the tissue that lines many internal organs. The rate of new mesothelioma cases is going down because fewer people are exposed to asbestos.

Overview

Mesothelioma is a cancer that forms in the mesothelium, the thin tissue that lines many internal organs. Mesothelioma is a rare cancer—2,803 cases were reported in the United States in 2021. Exposure to asbestos causes most cases of mesothelioma.

Asbestos was used in many consumer products, automobile parts, and building materials in the 20th century before scientists learned about its dangers to health. The potential for asbestos exposure in the United States peaked in the 1970s but has since declined as U.S. asbestos mines were closed and asbestos-containing products and materials were withdrawn from the market.

The decline in asbestos exposure is reflected by declines in mesothelioma incidence rates. However, people can still be exposed to asbestos in some consumer products and older buildings.

How mesothelioma is defined

The *International Classification of Diseases for Oncology, Third Edition* (ICD-O-3) defines mesothelioma with the following histology:

- 9050 (mesothelioma).
- 9051 (fibrous mesothelioma).
- 9052 (epithelioid mesothelioma).
- 9053 (mesothelioma, biphasic).
- 9055 (multicystic mesothelioma).

Mesothelioma is also defined by the part of the body it is found in, using ICD-O-3 anatomic site codes. The most common site is in the tissue around the lungs, called the pleura (ICD-O-3 anatomic site code C38.4). Mesothelioma may also form in:

- the tissue in the abdomen (peritoneum; C48.0 to C48.8).
- the tissue around the heart (pericardium; C38.0).
- the tissue around the testicles (tunica vaginalis; C63.7).

Table and figures

Table 1. Number and percentage[a] of new malignant mesothelioma cases[b] by sex and type[c], United States, 1999–2021

	Male		Female		Total	
Site	Count	Percentage	Count	Percentage	Count	Percentage
All cases (ICD-3-O anatomic site code)	53,885	100.0%	16,825	100.0%	70,710	100.0%
Pleura (C38.4)	45,515	84.5%	12,067	71.7%	57,582	81.4%
Peritoneum (C48.0-C48.8)	4,093	7.6%	3,320	19.7%	7,413	10.5%

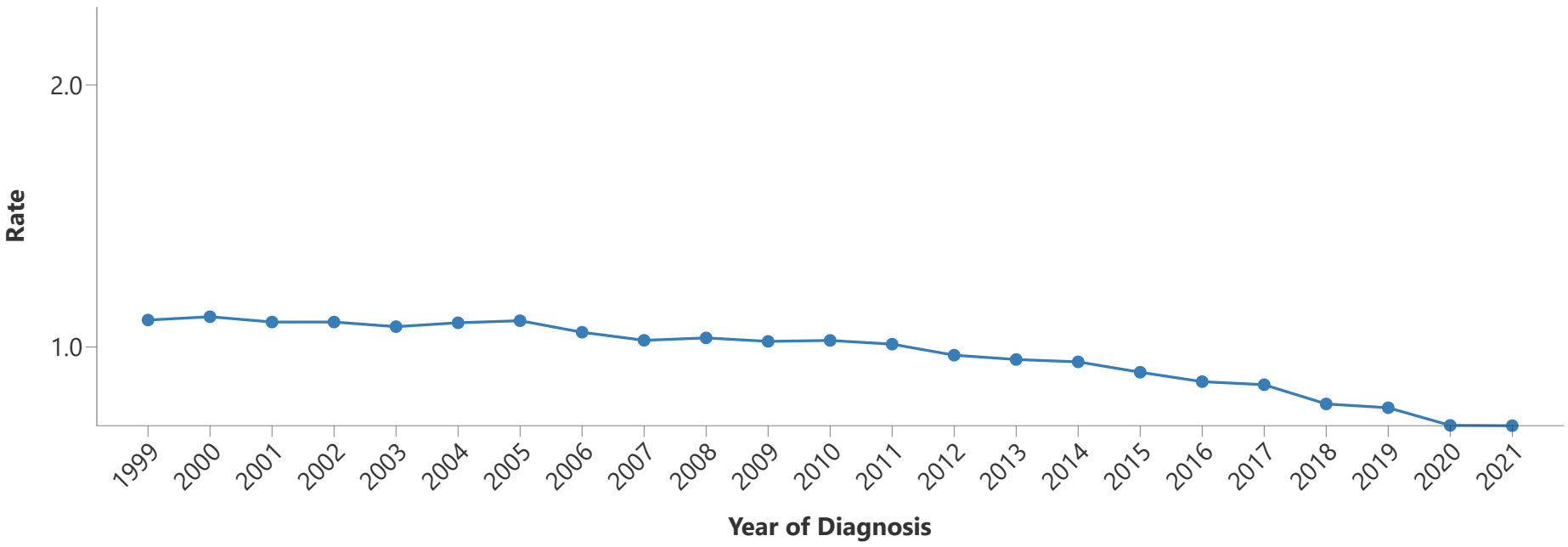
Site	Male		Female		Total	
	Count	Percentage	Count	Percentage	Count	Percentage
Pericardium (C38.0)	69	0.1%	50	0.3%	119	0.2%
Tunica vaginalis (C63.7)	118	0.2%	0	0.0%	118	0.2%
Other	4,090	7.6%	1,388	8.2%	5,478	7.7%

Figure 1. Rate[d] of new malignant mesothelioma cases by sex and type, United States, 1999–2021

Make a selection from the filters to change the visualization information.

Sex Overall

Cases All



Data Table

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	20
Rate	1.1029	1.1155	1.0953	1.0953	1.0776	1.0924	1.1003	1.0563	1.0255	1.0347	1.0215	1.0250	1.0109	0

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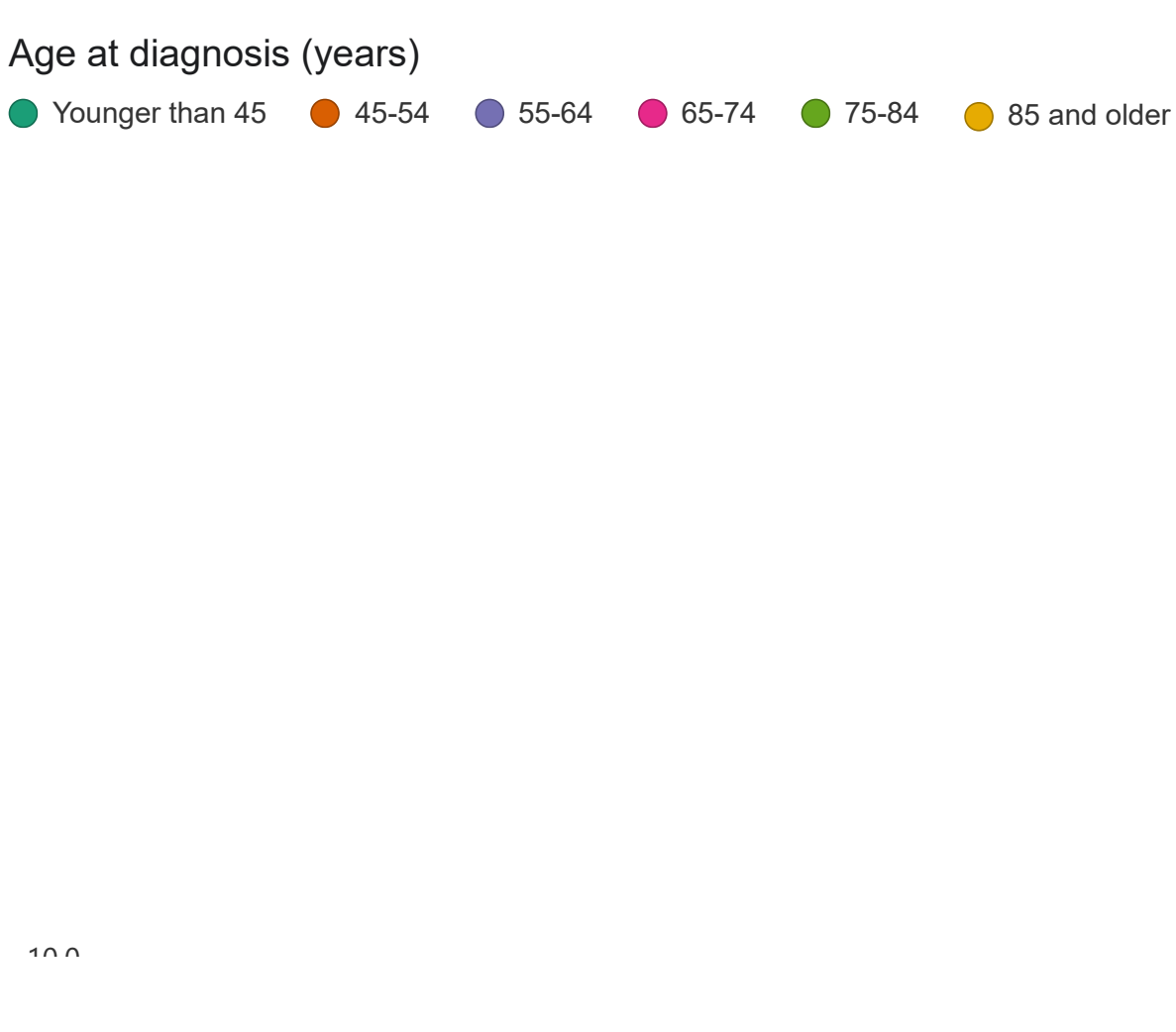
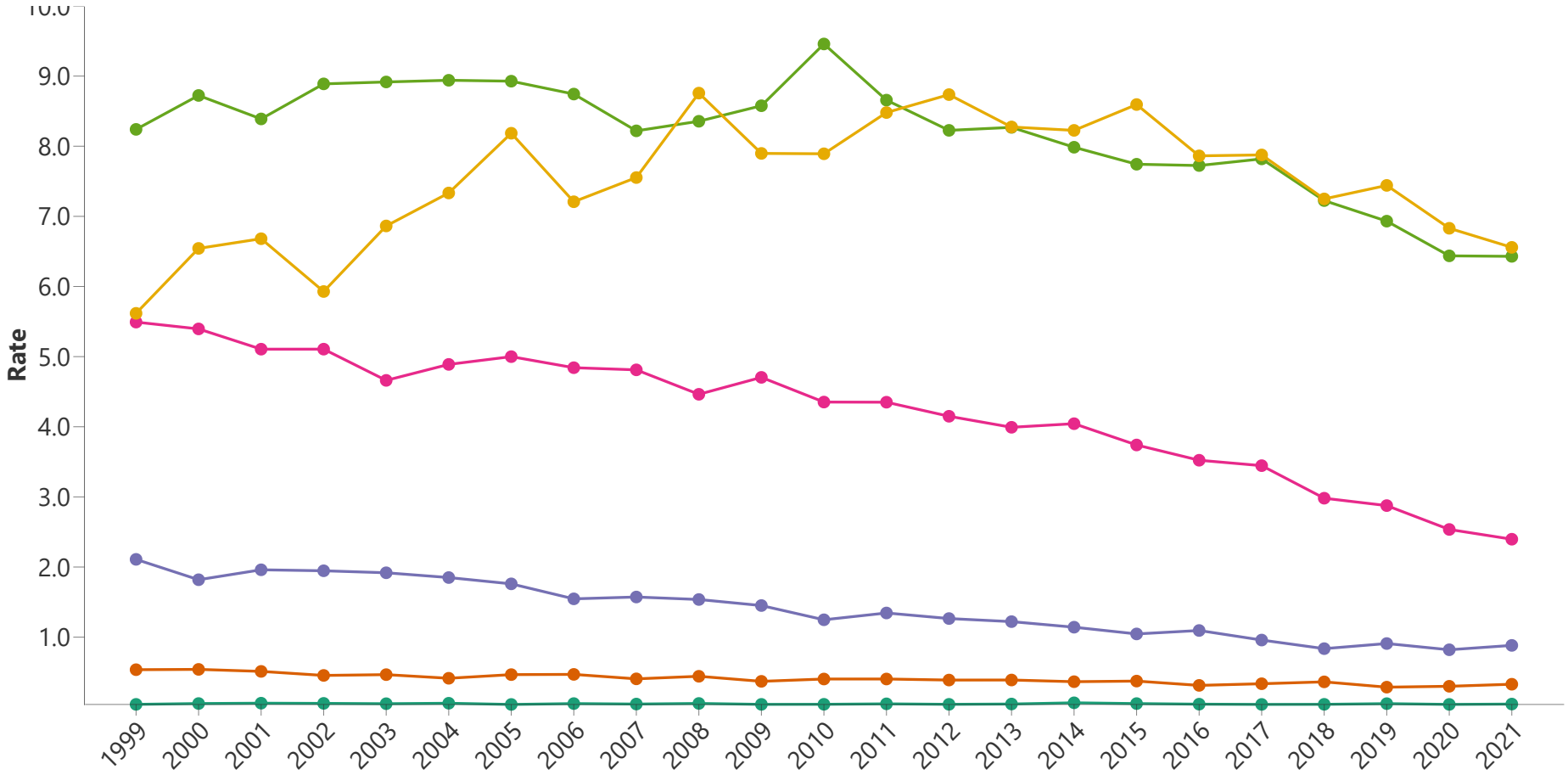
Figure 2. Rate[d] of new malignant mesothelioma cases by age at diagnosis, United States, 1999–2021





Data Table

Year	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
Younger than 45	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0
45-54	0.5	0.5	0.5	0.5	0.5	0.4	0.5	0.5	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.3
55-64	2.1	1.8	2.0	1.9	1.9	1.9	1.8	1.5	1.6	1.5	1.5	1.2	1.3	1.3	1.2	1.1	1.0	1.1
65-74	5.5	5.4	5.1	5.1	4.7	4.9	5.0	4.8	4.8	4.5	4.7	4.4	4.4	4.1	4.0	4.0	3.7	3.5
75-84	8.2	8.7	8.4	8.9	8.9	8.9	8.9	8.7	8.2	8.4	8.6	9.5	8.7	8.2	8.3	8.0	7.7	7.7
85 and older	5.6	6.5	6.7	5.9	6.9	7.3	8.2	7.2	7.6	8.8	7.9	7.9	8.5	8.7	8.3	8.2	8.6	7.9

Download Data (CSV)

Data source

Data in this brief come from U.S. Cancer Statistics, the official federal cancer statistics. U.S. Cancer Statistics incidence data are from population-based registries that participate in CDC's National Program of Cancer Registries (NPCR) and/or the National Cancer Institute's Surveillance, Epidemiology, and End Results (SEER) Program and met high-quality data criteria during 1999–2021 for the 2023 data submission period, covering 97% of the U.S. population (excluding data from Indiana, Mississippi, and South Dakota).

The 2023 data submission, released in June 2024, includes new cancer cases diagnosed in 2020 and 2021, the first and second years of the COVID-19 pandemic. The missed cancer diagnoses resulting from disruptions in health services caused by the pandemic may have contributed to an observed decline in incidence for most cancer sites in 2020. The numbers of new cases diagnosed in 2021 are still a little lower than expected for some cancer types but have returned to pre-pandemic counts for other cancer types. Caution must be taken when examining trends to avoid incorrect interpretations of the effect of cancer prevention and early detection efforts. Observed downward trends may be due largely to the lower observed incidence in 2020.

Footnotes

[a] Percentages in Table 1 may not add to 100% due to rounding.

[b] Based on cases with ICD-O-3 histology codes 9050, 9051, 9052, 9053, or 9055. 94% of cases were based on microscopic confirmation.

[c] “Other” includes all other anatomic sites. The most common were lung and bronchus (C34.0 to C34.9; 66% of “other” cases); unknown primary site (C80.9; 14%); mediastinum (C38.1 to C38.3 and C38.8; 4%); soft tissue (C49.1 to C49.9; 4%); and testis (C62.0 to C62.9; 4%). Other sites made up less than 3% of “other” cases.

[d] New cancer cases per 100,000 standard population. Rates were age adjusted to the 2000 U.S. standard population.

SOURCES

CONTENT SOURCE:

National Center for Chronic Disease Prevention and Health Promotion; Division of Cancer Prevention and Control