

Mesothelioma in Ohio

August 2025



Department of
Health

Key Findings

- An average of 110 new cases of mesothelioma were diagnosed and an average of 103 deaths from mesothelioma occurred each year in Ohio from 2018 through 2022.
- The mesothelioma incidence rate in Ohio was 0.7 per 100,000 population, the same as the U.S. rate.
- Mesothelioma occurs more often in males than females in Ohio and the United States.
- White people have higher incidence rates of mesothelioma than Black people in Ohio and the United States.
- Mesothelioma was most frequently diagnosed among older Ohio adults in the 75-84 age group (34.5%) and the 65-74 age group (32.5%).
- Rates of new cases of mesothelioma among men decreased an average of 8.0% per year from 2014 to 2022, while rates among women were relatively stable from 1996 to 2022.
- In Ohio, county-level mesothelioma incidence rates in Ohio ranged from 0.3 to 2.3 per 100,000 population during the 27-year period 1996-2022.
- Approximately 42.3% of mesotheliomas in Ohio were diagnosed at a distant (late) stage in Ohio from 2018 to 2022.
- Overall, only 11% of Ohioans diagnosed with mesothelioma survive five years or more after diagnosis.

New Cases

Mesothelioma is a type of cancer that forms in the thin layer of tissue that covers organs in the chest or abdomen. Mesothelioma is a rare cancer, making up only 0.2% of all newly diagnosed (incidence) cancer cases in Ohio, as reported to the Ohio Cancer Incidence Surveillance System (OCISS) from 2018 through 2022.¹ An average of 110 cases of mesothelioma were diagnosed each year in Ohio during the five-year period 2018-2022. The average annual age-adjusted incidence rate for mesothelioma in Ohio was 0.7 per 100,000 population, the same as the national incidence rate. The incidence rate among Ohio men diagnosed with mesothelioma (1.2 per 100,000) was three times higher than the rate among Ohio women (0.4 per 100,000). White people had a higher rate of mesothelioma (0.8 per 100,000) than Black people (0.3 per 100,000) in Ohio from 2018 to 2022 (Table 1).

Deaths

An average of 103 deaths from mesothelioma occurred each year in Ohio from 2018 through 2022. The average annual age-adjusted mortality rate for mesothelioma in Ohio was 0.7 per 100,000 population. The mortality rate was higher for men (1.2 per 100,000) than women (0.3 per 100,000), and higher for White Ohioans (0.7 per 100,000) than Black Ohioans (0.3 per 100,000) (Table 1).

¹ Due to the complexity of the cancer data collection and quality control process, there is typically a 24-month delay between the time a new cancer is diagnosed and the time the data is ready for analysis. Therefore, the most recent incidence data presented in this report is for cancer cases diagnosed through Dec. 31, 2022.

Table 1. Average Annual Number and Age-Adjusted Rates of Mesothelioma Cases and Deaths per 100,000 Population by Sex, Race, and Ethnicity, Ohio and the United States, 2018-2022

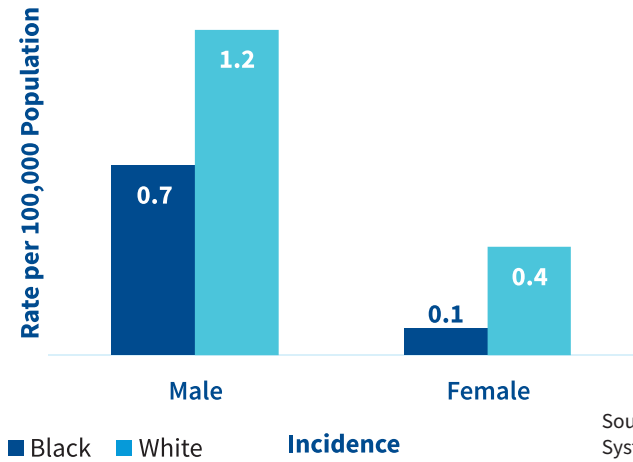
		Incidence			Mortality		
		Ohio Cases	Ohio Rate	U.S. Rate	Ohio Deaths	Ohio Rate	U.S. Rate
Total		110	0.7	0.7	103	0.7	0.6
Sex	Male	79	1.2	1.2	77	1.2	1.0
	Female	31	0.4	0.4	26	0.3	0.3
Race	White	103	0.8	0.8	98	0.7	0.7
	Black	5	0.3	0.4	4	0.3	0.3
Ethnicity	Hispanic	1	0.5	0.7	<2	*	0.4

Sources: Ohio Cancer Incidence Surveillance System, Ohio Department of Health, 2025; Surveillance, Epidemiology, and End Results (SEER) Program, SEER 21 registries, National Cancer Institute, 2025; Rate of Cancer Deaths in Ohio and the United States: USCS Data Visualizations, Centers for Disease Control and Prevention and National Cancer Institute, 2024. (Mortality rates by race are for non-Hispanic White and non-Hispanic Black.)*Rate not calculated when the total death count for 2018-2022 is less than 10 (i.e., the average annual count is less than two).

Incidence by Sex and Race

White males had the highest mesothelioma incidence rate in Ohio (1.2 per 100,000), based on data from 2018 to 2022. Both White and Black females had the lowest incidence rates for mesothelioma in Ohio during this period (Figure 1).

Figure 1. Average Annual Age-Adjusted Incidence Rates of Mesothelioma per 100,000 Population by Sex and Race, Ohio, 2018-2022



Source: Ohio Cancer Incidence Surveillance System, Ohio Department of Health, 2025.

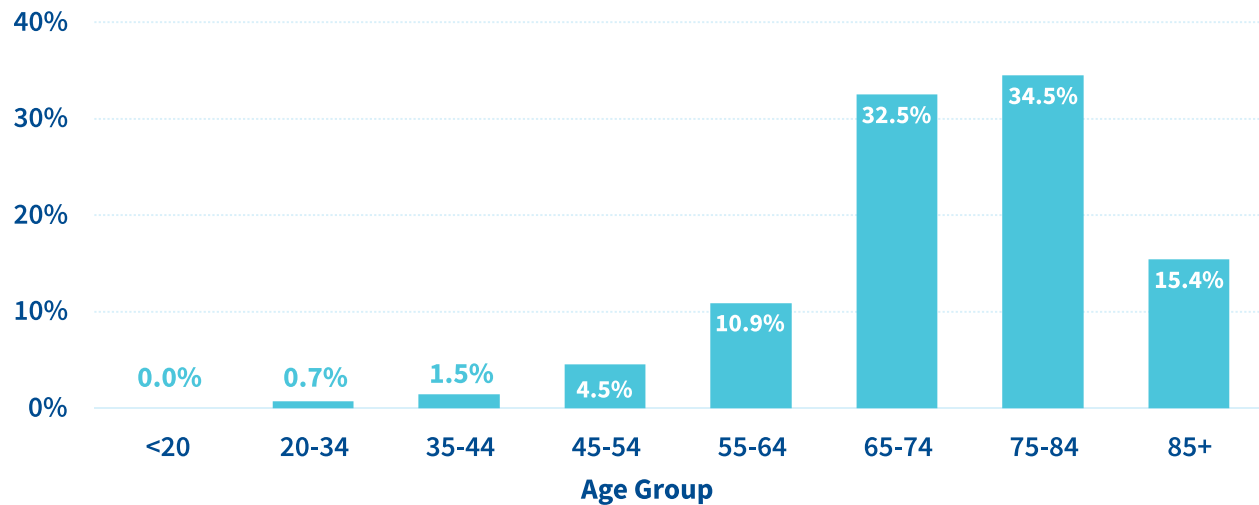
Incidence by Site

Most cases (77%) of mesothelioma diagnosed in Ohio from 2018 to 2022 were found in the pleura, a thin layer of tissue that covers the lungs and lines the interior wall of the chest cavity. About 15% of mesothelioma cases in Ohio were found in the peritoneum, the tissue that lines the abdominal wall and covers most of the organs in the abdomen.

Incidence by Age Group

Nearly 96% of mesotheliomas in Ohio were diagnosed among people 50 years old and older. Mesothelioma was most frequently diagnosed among older Ohio adults in the 75-84 age group (34.5%), followed by those in the 65-74 age group (32.5%) (Figure 2).

Figure 2. Percent of New Cases of Mesothelioma by Age Group, Ohio, 2018-2022

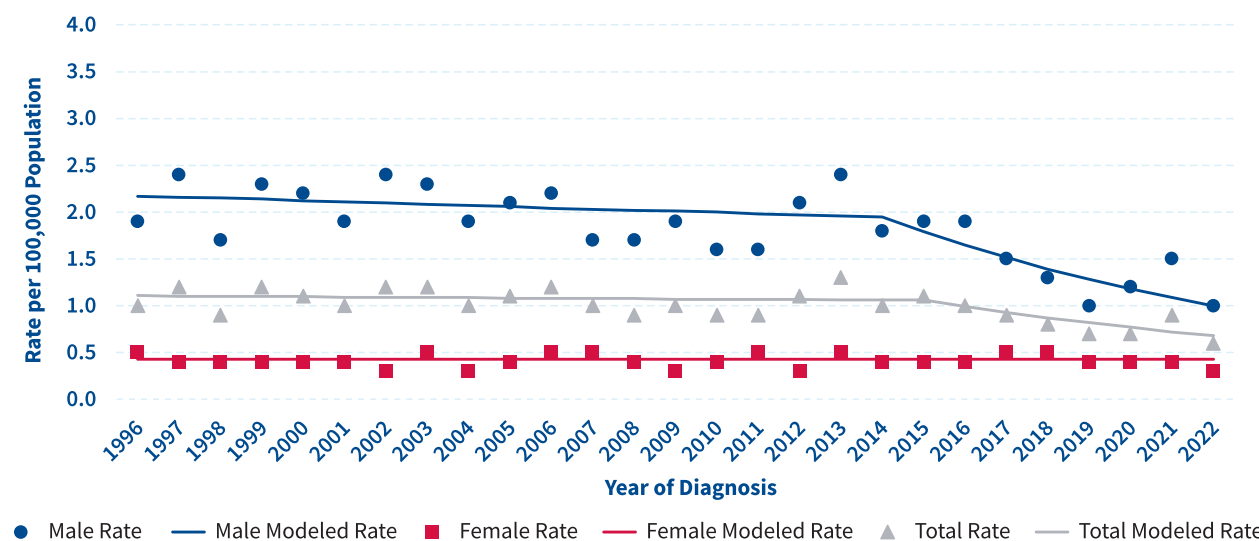


Source: Ohio Cancer Incidence Surveillance System, Ohio Department of Health, 2025.

Trends

Rates of new cases of mesothelioma among Ohio men decreased an average of 8.0% per year from 2014 to 2022, while rates among Ohio women were relatively stable from 1996 to 2022 (Figure 3).

Figure 3. Trends in Age-Adjusted Incidence Rates of Mesothelioma per 100,000 Population by Sex, Ohio, 1996-2022

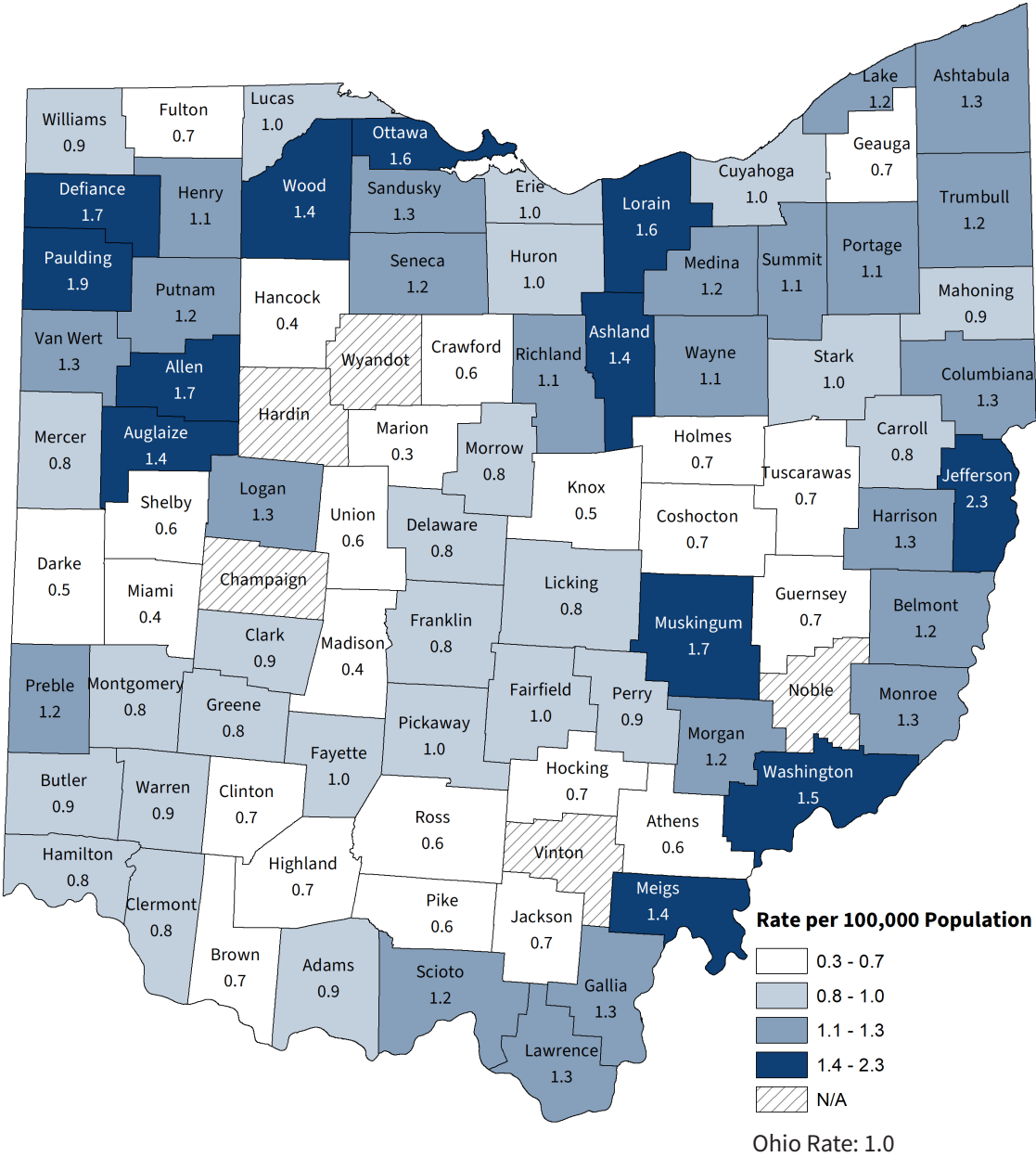


Source: Ohio Cancer Incidence Surveillance System, Ohio Department of Health, 2025. Modeled trend lines were calculated using [Joinpoint Trend Analysis Software](#), National Cancer Institute, 2025.

Mesothelioma by County

Figure 4 shows 1996-2022 average annual age-adjusted mesothelioma incidence rates by county of residence. Because mesothelioma is rare, 27 years of data were combined to calculate county-level incidence rates; however, these rates may still be unstable due to small case counts and should be interpreted with caution. Rates were not calculated or presented when the total case count for a county was less than five. County-specific mesothelioma incidence rates in Ohio ranged from 0.3 to 2.3 per 100,000 population, compared with Ohio’s rate of 1.0 per 100,000 during this period. The following six counties had the highest incidence rates, in decreasing order: Jefferson, Paulding, Allen, Defiance, Muskingum, and Lorain.

Figure 4. Average Annual Age-Adjusted Incidence Rates of Mesothelioma per 100,000 Population by County of Residence, Ohio, 1996-2022

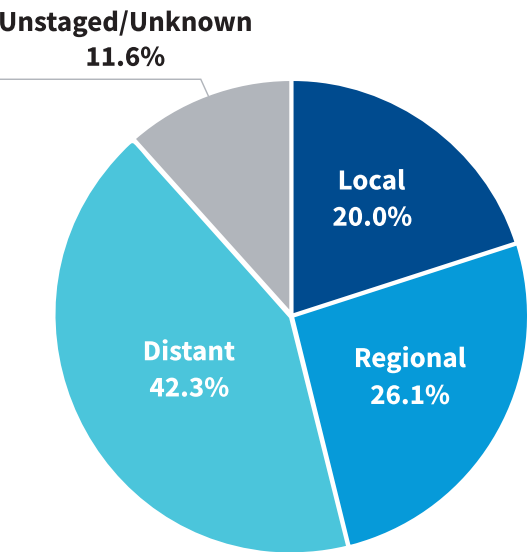


Source: Ohio Cancer Incidence Surveillance System, Ohio Department of Health, 2025.
N/A: Rate not calculated when the case count for 1996-2022 was less than five.

Stage at Diagnosis

Cancer stage at diagnosis, which refers to the extent or spread of a cancer in the body, is used to select appropriate treatment and is an important determinant of survival. If cancer cells have penetrated beyond the original layer of tissue, the cancer has become invasive and is categorized as local, regional, or distant based on the extent of spread.

Figure 5. Proportion of Mesothelioma Cases (%) by Stage at Diagnosis, Ohio, 2018-2022



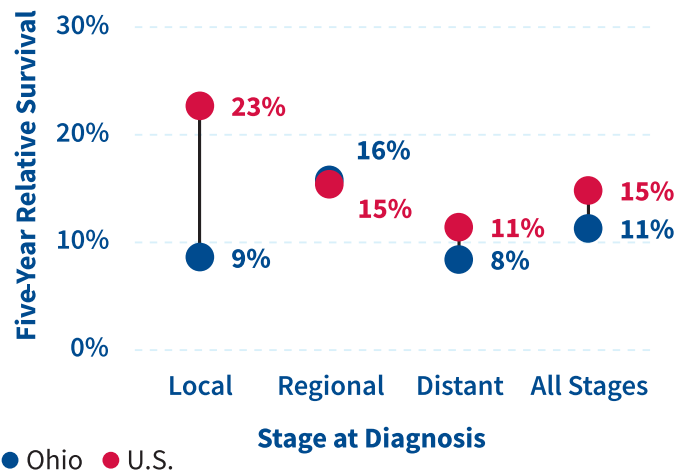
In Ohio from 2018 to 2022, 20.0% of mesothelioma cases were diagnosed at a local stage, 26.1% were regional stage, 42.3% were distant stage, and 11.6% were unstaged or had unknown stage information (Figure 5). *In situ* (noninvasive cancer) is not applicable for mesothelioma.

Source: Ohio Cancer Incidence Surveillance System, Ohio Department of Health, 2025.

Survival

Relative survival is the percentage of people who are alive at a designated time period (usually five years) after a diagnosis divided by the percentage expected to be alive in the absence of a diagnosis based on normal life expectancy.

Figure 6. Five-Year Relative Survival (%) for Mesothelioma by Stage at Diagnosis, Ohio and the United States, 2015-2021



The overall five-year relative survival for mesothelioma in Ohio is 11%, based on Ohio cases diagnosed from 2015 through 2021 and followed through 2022, compared with 15% nationally. The estimated five-year relative survival for mesothelioma in Ohio was 9% at the local stage, 16% at the regional stage, and 8% at the distant stage, compared with national statistics of 23%, 15%, and 11%, respectively (Figure 6).

Source: Ohio Cancer Incidence Surveillance System, Ohio Department of Health, 2025; Surveillance, Epidemiology, and End Results (SEER) Program, SEER*Explorer, SEER 21 registries, National Cancer Institute, 2025.

Note: Survival data for mesothelioma cases in Ohio should be interpreted with caution due to small numbers.

Risk Factors

Anything that increases the chance of getting a disease is called a risk factor. Having one or more risk factors does not mean that a person will develop the disease. Below are some of the risk factors for mesothelioma.

Asbestos: The main risk factor for pleural mesothelioma is exposure to asbestos, a group of minerals that take the form of tiny fibers. Most cases of pleural mesothelioma have been linked to high levels of asbestos exposure, usually in the workplace. People at risk for asbestos exposure in the workplace include some miners, factory workers, insulation manufacturers and installers, railroad and automotive workers, ship builders, gas mask manufacturers, plumbers, and construction workers.

Zeolites: Zeolites are minerals chemically related to asbestos. An example is erionite, which is common in the rocks and soil in parts of Turkey. High mesothelioma rates in these areas are believed to be caused by exposure to this mineral. In the United States, erionite has been detected in Nevada, Oregon, Utah, Arizona, Montana, and South Dakota.

Radiation: A few published reports indicate that people exposed to high doses of radiation to the chest or abdomen as treatment for another cancer may develop mesothelioma; however, this cancer is still rare in these patients.

Age: The risk of mesothelioma increases with age. Mesothelioma can occur in young people (even children), but it's rare in people younger than age 45.

Sex: Mesothelioma is much more common in men than in women. This is probably because men have been more likely to work in jobs with heavy exposure to asbestos.

Gene changes: A mutation or change in the gene called BAP1 can be passed in families and has been linked to mesothelioma, but BAP1 mutations are rare.

Source: [Risk Factors for Mesothelioma](#), American Cancer Society.

Signs and Symptoms

Symptoms of mesothelioma can include:

- Trouble breathing.
- Cough.
- Pain under the rib cage.
- Pain or swelling in the abdomen.
- Lumps in the abdomen.
- Constipation.
- Problems with blood clots (clots form when they shouldn't).
- Weight loss for no known reason.
- Fatigue (feeling very tired).

It is possible that one or more of these signs and symptoms may be the result of other health problems. If you have any of these symptoms, you should consult with your healthcare provider.

Source: [Malignant Mesothelioma Treatment - NCI](#), National Cancer Institute.

Age-Adjusted Rate: A summary rate that is a weighted average of age-specific rates, where the weights represent the age distribution of a standard population (direct adjustment). The incidence and mortality rates presented in this report were standardized to the age distribution of the 2000 U.S. Standard Population. Using the direct method, the population was first divided into 19 age groups, i.e., <1, 1-4, 5-9, 10-14, 15-19...85+, and the age-specific rate was calculated for each age group. Each age-specific rate was then multiplied by the standard population proportion for the respective age group.

Average Annual Number: The number of cases or deaths diagnosed per year, on average, for the time period of interest (e.g., 2018-2022). Average annual numbers are calculated by summing the number of cases or deaths for a given time period, dividing by the number of years that comprise the time period, and rounding to the nearest whole number.

Incidence: The number of cases diagnosed during a specified time period (e.g., 2018-2022). Mesothelioma cases were defined by the International Classification of Diseases for Oncology, Third Edition (ICD-O-3), and categorized by histology types 9050-9055, in accordance with the Surveillance, Epidemiology, and End Results (SEER) Program of the National Cancer Institute.

Invasive Cancer: Cancer that has spread beyond the layer of tissue in which it developed and is growing into surrounding, healthy tissues. Invasive cancers consist of those diagnosed at the local, regional, distant, and unstaged/unknown stages. Only invasive cancers were included in the calculation of incidence rates in this document.

Mortality: The number of deaths during a specified time period (e.g., 2018-2022). Mesothelioma deaths were defined as follows: International Statistical Classification of Diseases and Related Health Problems, Tenth Edition (ICD-10), code C45.

Population Data: Population estimates were provided by the National Cancer Institute's SEER Program. The 1990-2022 county-level population estimates include 19 age groups and four expanded races by origin.

Rate: The number of cases or deaths per unit of population (e.g., per 100,000 population) during a specified time period (e.g., 2018-2022). Rates may be unstable and are not presented when the case count is less than five or the death count is less than 10.

Relative Survival: The percentage of people who are alive at a designated time period (usually five years) after a cancer diagnosis divided by the percentage expected to be alive in the absence of cancer based on normal life expectancy.

Stage at Diagnosis: The degree to which a tumor has spread from its site of origin at the time of diagnosis. A system of summary staging is often used to group cases into the following stages:

- **In situ** – Noninvasive cancer that has not penetrated surrounding tissue.
- **Local** – A malignant tumor confined entirely to the organ of origin.
- **Regional** – A malignant tumor that has extended beyond the organ of origin directly into surrounding organs or tissues or into regional lymph nodes.
- **Distant** – A malignant tumor that has spread to parts of the body (distant organs, tissues, and/or lymph nodes) remote from the primary tumor.
- **Unstaged/Unknown** – Insufficient information is available to determine the stage or extent of the disease at diagnosis.

Sources of Data and Additional Information

Ohio Cancer Incidence Surveillance System
[Ohio Cancer Incidence Surveillance System \(OCISS\)](#)

National Cancer Institute
[Malignant Mesothelioma – Patient Version](#)

American Cancer Society
[Mesothelioma Webpage](#)

To address comments and information requests:

Ohio Cancer Incidence Surveillance System (OCISS)

Ohio Department of Health

246 North High Street
Columbus, OH 43215

Phone: (614) 752-2689

E-mail: ociss@odh.ohio.gov

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Ohio Department of Health

Holly L. Sobotka, MS

John Kollman, MS

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