

# West Virginia Cancer Registry

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Roanoke, WV



# West Virginia Cancer Registry (WVCR)



- The WVCR is a population-based registry that maintains data on cancer among those who have a West Virginia address at the time of their diagnosis
- Any case of cancer diagnosed after December 31, 1992, where the primary tumor is determined to be malignant or carcinoma in situ, is to be reported
- Exceptions include basal and squamous cell carcinomas of the skin, and carcinoma in situ of the cervix
- WVCR operates with both state funds and a cooperative agreement with the Centers for Disease Control and Prevention's National Program of Cancer Registries
- Non-malignant brain and central nervous system tumors became reportable January 1, 2002

# Cancer Reporting Requirements

- Cancer cases are to be reported within six months of diagnosis
- Anyone who diagnoses or treats cancer must report cases to the WVCR
  - Health Care Facility - Any hospital, nursing home, clinic, cancer treatment center, laboratory, or any other facility which provides health care or diagnostic services
  - Health Care Provider - Any physician, dentist, nurse, or other individual who provides medical, dental, nursing, or other health care services of any kind
- WVCR receives cases through interstate data exchanges when West Virginia residents are diagnosed or treated in other states

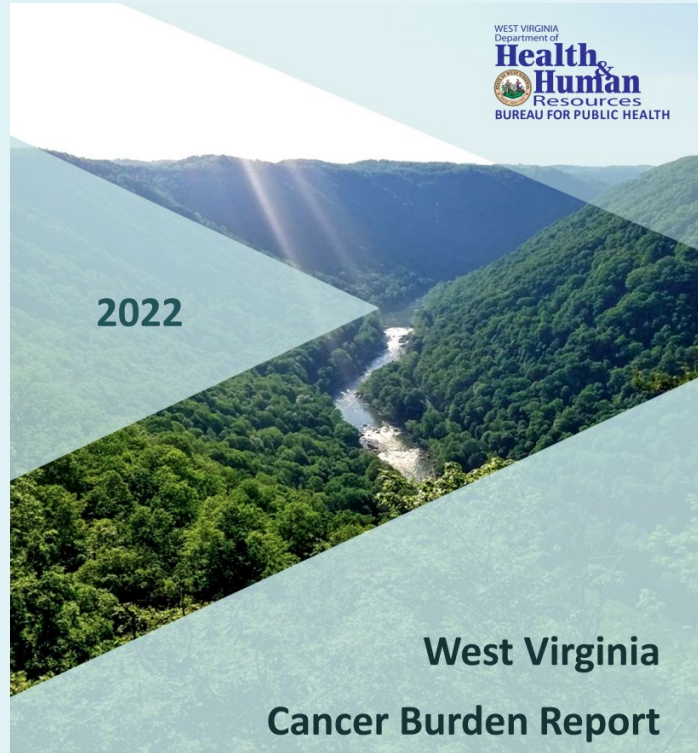
- Program Director
- Administrative Assistant
- Data Manager
- 8 Field staff (Oncology data specialists, quality control, training)
- 2 Epidemiologists

- Collect, distribute, and evaluate data on cancer in West Virginia to reduce the burden of cancer for the state and its residents

## Examples:

- Provide baseline cancer rates to the Mountains of Hope cancer coalition to assess the effects of cancer reduction efforts
- Provide late-stage breast cancer rates by county to Bonnie's Bus to target underserved areas of the state
- Provide case counts to hospitals and healthcare systems to assist patient needs planning
- Provide case counts to legislators for projecting costs for expanded insurance coverage (Oral Health and Cancer Rights Act)
- Provide data to researchers to help improve our understanding of the development of cancers and treatment effectiveness
- Investigate cancer concerns from the public, the media, and medical professionals

# WVCR Publications – Cancer Burden Report

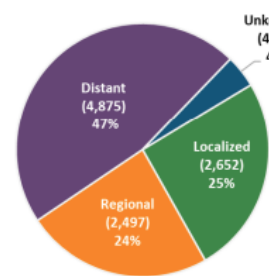


WEST VIRGINIA  
Department of  
**Health & Human  
Resources**  
BUREAU FOR PUBLIC HEALTH

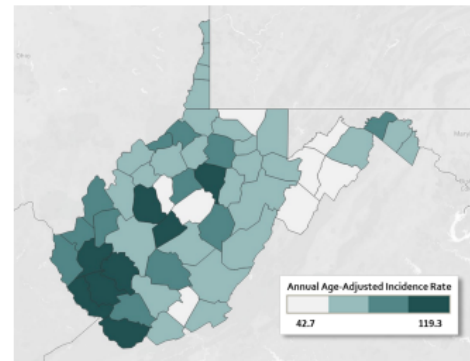
Lung and Bronchus Cancer Incidence and Mortality Rate (per 100,000) and Counts, West Virginia, 2015-2019

|         | Incidence |        | Mortality |        |
|---------|-----------|--------|-----------|--------|
|         | Rate      | Cases  | Rate      | Deaths |
| Both    | 77.9      | 10,438 | 51.5      | 6,897  |
| Males   | 89.1      | 5,562  | 64.1      | 3,917  |
| Females | 69.2      | 4,876  | 41.6      | 2,980  |

Percentage of Lung and Bronchus Cancer Cases by Stage at Diagnosis, West Virginia, 2015-2019

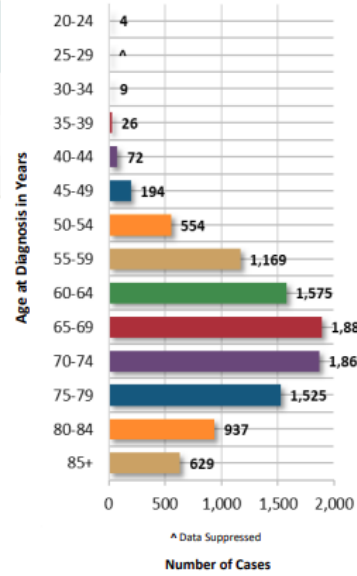


Average Annual Age-Adjusted Lung and Bronchus Cancer Incidence Rates by County West Virginia, 2015-2019

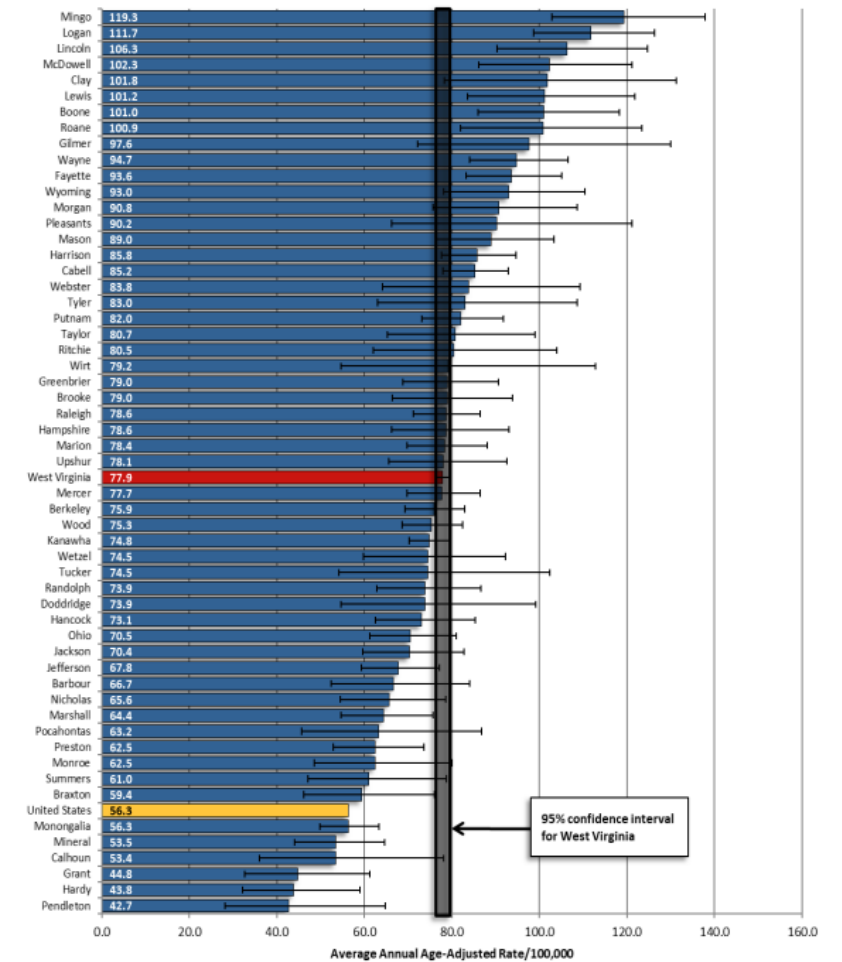


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Lung and Bronchus Cancer Case Counts by Age Group, West Virginia, 2015-2019



Lung and Bronchus - Average Annual Age-Adjusted Cancer Incidence Rates and 95% Confidence Intervals by County, West Virginia, 2015-2019



U.S. Cancer Statistics Working Group. U.S. Cancer Statistics Data Visualizations Tool, based on 2021 submission data (1999-2019); U.S. Department of Health and Human Services, Centers for Disease Control and Prevention and National Cancer Institute; www.cdc.gov/cancer/dataviz, released in June 2022.



# WVCR Publications – County Cancer Profiles

## Barbour County

2022-2023



### Summary

- Between 2015 and 2019, Barbour County reported:
  - 512 new cancer cases (approximately 102 new cancer cases per year)
  - 210 cancer deaths (approximately 42 cancer deaths per year)
- The cancer incidence rate during this time for all cancer sites in Barbour county is 461.5 per 100,000
- Barbour county ranks 38th out of 55 counties in cancer incidence.
- The cancer mortality rate during this time for all cancer sites in Barbour county is 179.2 per 100,000
- Barbour county ranks 28th out of 55 counties in cancer mortality.

|        | Incidence            |                     |         |         | Mortality            |                     |         |         |
|--------|----------------------|---------------------|---------|---------|----------------------|---------------------|---------|---------|
|        | Barbour County Cases | Barbour County Rate | WV Rate | US Rate | Barbour County Cases | Barbour County Rate | WV Rate | US Rate |
| Total  | 102                  | 461.5               | 487.4   | 449.4   | 42                   | 179.2               | 180.1   | 152.4   |
| Male   | 50                   | 461.9               | 517.7   | 488.3   | 23                   | 212.0               | 213.6   | 181.4   |
| Female | 52                   | 465.0               | 467.4   | 423.3   | 19                   | 152.4               | 154.2   | 131.1   |

Table 1. Average Annual Number and Age-Adjusted Cancer Incidence and Mortality Rates by Sex in Barbour County, West Virginia, and the United States, 2015-2019

Source: West Virginia Cancer Registry, 2022; U.S. Cancer Statistics Working Group, U.S. Cancer Statistics Data Visualizations Tool, based on 2021 submission data (1999-2019); U.S. Department of Health and Human Services, Centers for Disease Control and Prevention and National Cancer Institute, www.cdc.gov/cancer/data, released in June 2022.

### Incidence Over Time

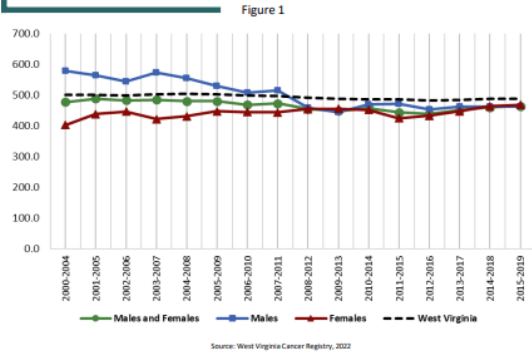


Figure 1: Age-Adjusted Cancer Incidence Rates in Barbour County and West Virginia by Sex and 5-Year Group, 2000-2019

Source: West Virginia Cancer Registry, 2022

## Barbour County

2022-2023

### Top Cancer Sites

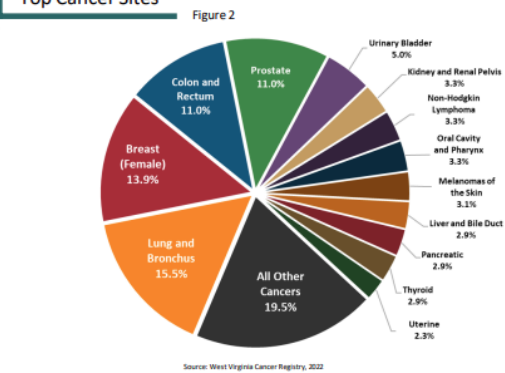


Figure 2: Percent distribution of newly diagnosed cancers in Barbour county, West Virginia (2015-2019)

Source: West Virginia Cancer Registry, 2022

### Late-Stage

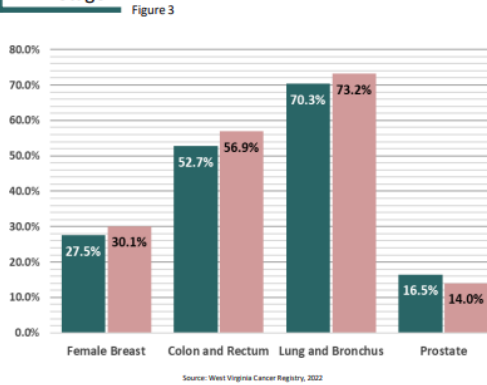


Figure 3: Percentage of Late-stage cancers for select cancers in Barbour county and West Virginia (2015-2019)

Source: West Virginia Cancer Registry, 2022

## Barbour County

2022-2023

### Early Detection

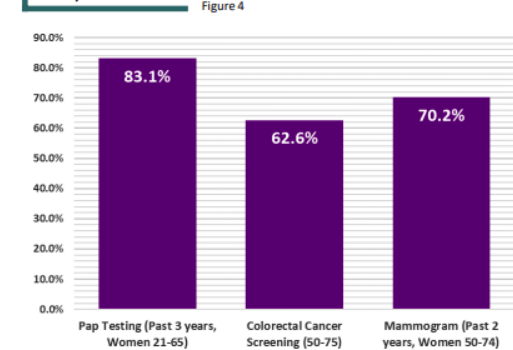


Figure 4: Prevalence of adults who reported having a recommended Cancer Screening Test in Barbour County, West Virginia (2018)

Source: U.S. Cancer Statistics Working Group, U.S. Cancer Statistics Data Visualizations Tool, based on 2021 submission data (1999-2019); U.S. Department of Health and Human Services, Centers for Disease Control and Prevention and National Cancer Institute, www.cdc.gov/cancer/data, released in June 2022.

### Cancer Risk Factors

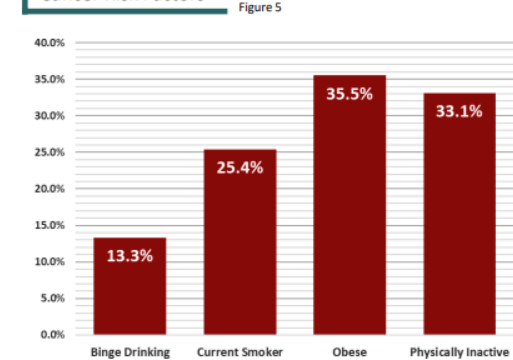
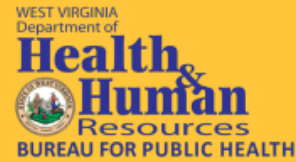


Figure 5: Prevalence of adults who reported being current smokers, obese (BMI > 30 kg/m<sup>2</sup>), physically inactive (no leisure time physical activity in 30 days), and/or binge drinking in Barbour County, West Virginia (2019)

Source: U.S. Cancer Statistics Working Group, U.S. Cancer Statistics Data Visualizations Tool, based on 2021 submission data (1999-2019); U.S. Department of Health and Human Services, Centers for Disease Control and Prevention and National Cancer Institute, www.cdc.gov/cancer/data, released in June 2022.

## Melanoma Skin Cancer in West Virginia



### Melanoma Quick Facts:

- There are three primary types of skin cancer: basal cell, squamous cell, and melanoma. Melanoma, while more uncommon, is the most dangerous of the three.<sup>1</sup>
- Incidence of melanoma skin cancer has increased about 38% between 2000 and 2019 (Figure 1).<sup>2</sup>
- Between 2015-2019:
  - \* 2,638 melanomas were diagnosed in West Virginia, which is about 528 diagnoses per year.<sup>2</sup>
  - \* The counties with the highest rates of melanoma skin cancer were Summers, Putnam, Ohio, Grant, and Mineral. The counties with the lowest rates were Hardy, Barbour, Clay, Tucker, and McDowell.<sup>2</sup>
  - \* Melanoma is the 6th most commonly diagnosed cancer in West Virginia.

For more information, please contact the West Virginia Cancer Registry.

[oepe.wv.gov/cancer](https://oepe.wv.gov/cancer)

(304) 356-4463

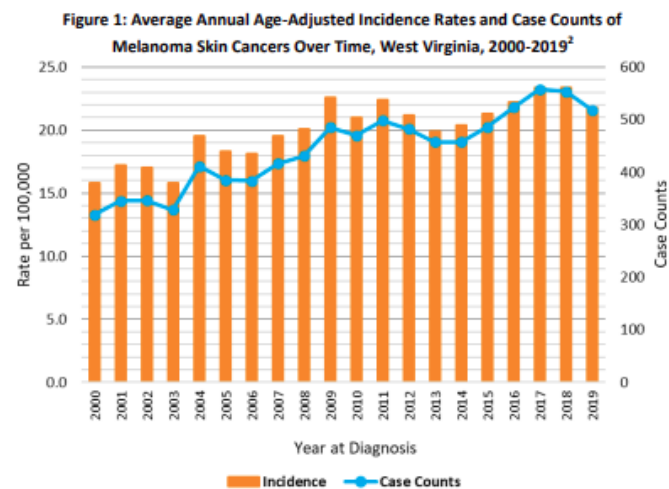
### What is melanoma?

Melanoma is a serious type of skin cancer that develops in melanocytes, skin cells that produce the pigment that gives skin its color. Melanomas can occur anywhere on the skin, but are most often found on the chest and back in men, and on the legs in women. Other common sites include the neck and face. Melanoma is very treatable if caught early, but can be fatal if not treated early enough.<sup>1</sup>

A change in your skin is the most common sign of skin cancer. This could be in the form of a new growth, a sore that won't heal, or a change in a mole.<sup>3</sup>

A simple way to remember the warning signs of melanoma is to remember the **A-B-C-D-Es** of melanoma:<sup>3</sup>

- A** — **Asymmetry**: Does the mole/spot have an irregular shape with two parts that look different?
- B** — **Border**: Is the border irregular or jagged?
- C** — **Color**: Is the color uneven?
- D** — **Diameter**: Is the spot larger than the size of a pea?
- E** — **Evolving**: Has the spot grown or changed in the past few weeks or months?

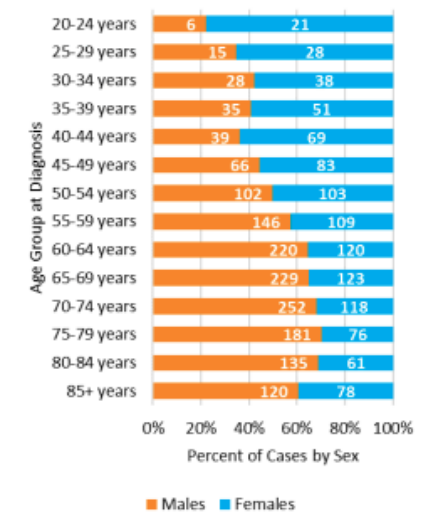


## Melanoma Skin Cancer In West Virginia

### Melanoma Risk Factors:<sup>4</sup>

- **Ultraviolet Light** — Exposure to UV rays from sources such as sunlight, tanning beds, and sun lamps can increase risk.
- **Moles** — Having many moles or atypical moles increases risk.
- **Fair Skin, Freckling, and Light Hair** — Risk is higher for those with red or blonde hair, blue or green eyes, and/or fair skin that freckles.
- **Age and Sex** — Risk of developing melanoma varies by age and sex: risk is higher in women before age 50, while risk is higher for men after age 50 (Figure 2).

**Figure 2: Distribution and Percentage of Melanoma Skin Cancer Diagnoses by Age Group and Sex, West Virginia, 2015-2019<sup>2</sup>**



### Ways to Prevent Melanoma:<sup>5</sup>

- **Sunscreen** — Use sunscreen that provides broad spectrum protection from UVA and UVB rays, with a sun protection factor (SPF) of at least 30. Sunscreen should be applied generously (about 1 ounce), with reapplication every 2 hours. You may need to reapply more often due to sunscreen washing off when you sweat, swim, or dry off with a towel.
- **Protective Clothing** — Wear clothing such as long-sleeved shirts, long pants or dresses, a wide-brimmed hat, and UV-blocking sunglasses to block UVA and UVB rays.
- **Shade** — Seek shade when possible; the sun's rays are strongest between 10 am and 4 pm, so limit the amount of time you spend in direct sunlight during those hours.
- **Avoid Tanning Beds and Sun Lamps** — Tanning bed use has been linked with an increased risk of melanoma, since they give out UVA and UVB rays like sunlight. If you want a tan, an option is to use sunless tanning lotion.

### References:

- 1) Centers for Disease Control and Prevention. What is Skin Cancer?. [https://www.cdc.gov/cancer/skin/basic\\_info/what-is-skin-cancer.htm](https://www.cdc.gov/cancer/skin/basic_info/what-is-skin-cancer.htm). Accessed May 2023.
- 2) West Virginia Cancer Registry
- 3) Centers for Disease Control and Prevention. What Are the Symptoms?. [https://www.cdc.gov/cancer/skin/basic\\_info/symptoms.htm](https://www.cdc.gov/cancer/skin/basic_info/symptoms.htm). Accessed May 2023
- 4) American Cancer Society. Risk Factors for Melanoma Skin Cancer. <https://www.cancer.org/cancer/types/melanoma-skin-cancer/causes-risks-prevention/risk-factors.html>. Accessed May 2023.
- 5) American Cancer Society. How Do I Protect Myself from Ultraviolet (UV) Rays?. <https://www.cancer.org/cancer/risk-prevention/sun-and-uv/uv-protection.html>. Accessed May 2023



- Lung cancer – data are used to support local clean indoor air regulations
- Liver cancer – work with Viral Hepatitis group to project cancers that could be prevented through hepatitis B vaccination and hepatitis C treatment
- Cervical cancer and others – work with Division of Immunization Services to promote HPV vaccination as effective cancer prevention
- Patient-level data supplied to researchers for medical monitoring of those in the Parkersburg area exposed to C-8 in the water supply
- Analyzed patterns of cancer to evaluate risk from ethylene oxide exposure in Kanawha County

## Immunization as Cancer Prevention

Steve Blankenship, MS  
Epidemiologist  
West Virginia Immunization Network Summit  
June 9, 2023



## Evaluation of Ethylene Oxide-related Cancers in Kanawha County, West Virginia

Updated 6/9/2022

Steve Blankenship, MS  
Division of Cancer Epidemiology  
Office of Epidemiology and Prevention Services



# Search Terms

- West Virginia Cancer Registry
- West Virginia Cancer Burden Report
- West Virginia County Cancer Profiles
- Mountains of Hope Cancer Coalition
- Bonnie's Bus
- Oral Health and Cancer Rights Act

# Contact Information



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Website: [www.cancerregistry.wv.gov](http://www.cancerregistry.wv.gov)

*Funding:*

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