

Liver and Intrahepatic Bile Duct Cancer in West Virginia

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Hepatitis Landscape in West Virginia
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- 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.
 - Non-malignant brain and central nervous system tumors became reportable January 1, 2002.
- Exceptions include basal and squamous cell carcinomas of the skin, and carcinoma in situ of the cervix.

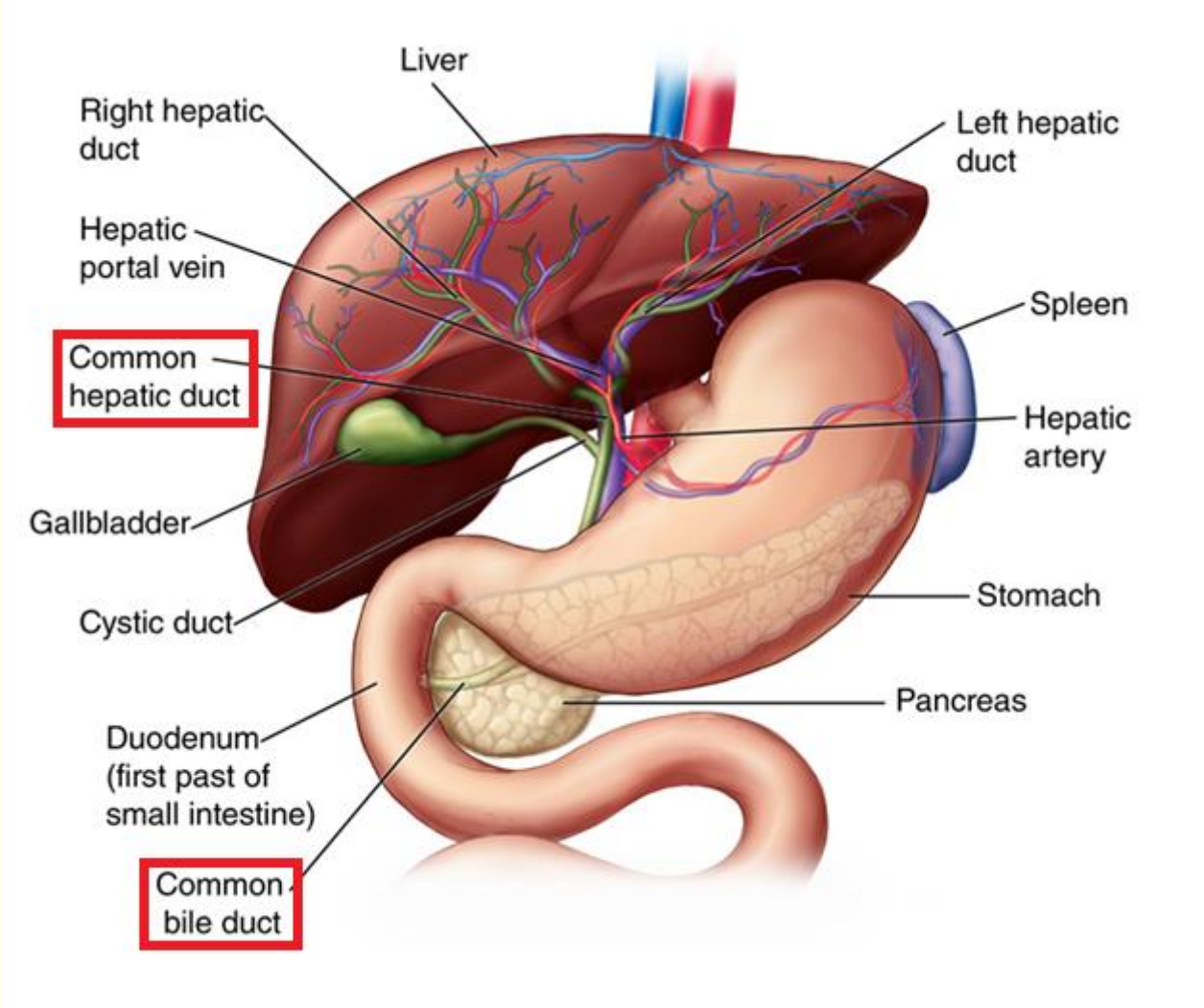
Reporting Requirements

- Cancer cases are to be reported within six months of diagnosis.
- If you diagnose or treat cancer under one of the following categories, you must report cases to the WVCR:
 - Healthcare Facility – Hospitals, nursing homes, clinics, cancer treatment centers, laboratories, any other facility which provides healthcare or diagnostic services.
 - Healthcare Provider – Physicians, dentists, nurses, or other individual who provides medical, dental, nursing, or other healthcare services of any kind.
- WVCR receives cases through interstate data exchanges when West Virginia residents are diagnosed or treated in other states.

Cancer Basics

- Cancer is a group of over 100 different diseases that involves the uncontrolled growth of abnormal cells and the potential to spread to other parts of the body.
- Genetic abnormalities in a cell's DNA are what causes cancer.
- Lifestyle habits, inherited genes, exposure to cancer-causing agents in the environment, and random mutations can cause these genetic abnormalities.
- There is usually no obvious cause.

The Liver and Intrahepatic Bile Duct



Functions of the Liver

- The liver functions as a bodily filter and stores certain chemicals used by the body.
- Examples:
 - Production of bile, proteins for blood plasma
 - Conversion of glucose to glycogen
 - Filter blood of drugs, poisons, bacteria, and other harmful organisms
 - Processes hemoglobin
 - Regulation of amino acids in the blood
- It has the ability to regenerate cells.
- It does not contain nerves.

Liver and Intrahepatic Bile Duct Cancer

- Cancer that starts in the liver is called primary liver cancer.
- Common Liver and Intrahepatic Bile Duct (IBD) Histologies:
 - **Hepatocellular Carcinoma (HCC)** –
 - Most common form of liver cancer in adults.
 - Two common growth patterns.
 - About 80% of all cases of HCC are associated with viral hepatitis.
 - Cirrhosis is present in 80-90% of patients with HCC.
 - **Intrahepatic cholangiocarcinoma** – bile duct cancer

- Factors that increase risk of liver cancer:
 - Gender
 - Race/ethnicity
 - Inherited metabolic diseases
 - Lifestyle habits – tobacco use, obesity
 - Type 2 diabetes
 - Certain rare diseases (Tyrosinemia, Alpha-1-antitrypsin Deficiency, Porphyria Cutanea Tarda, etc.)
 - Aflatoxins
 - Vinyl chloride and thorium dioxide (Thorotrast)
 - Anabolic steroids

Chronic Viral Hepatitis

- Hepatitis B virus (HBV)
 - Most common in Asia and other developing countries.
 - 2 in 3 people with HBV do not know they are infected.
 - Effective vaccine available.
- Hepatitis C virus (HCV)
 - More common in the United States.
 - Estimated 2.4 million people living with HCV in the United States.
 - No vaccine.

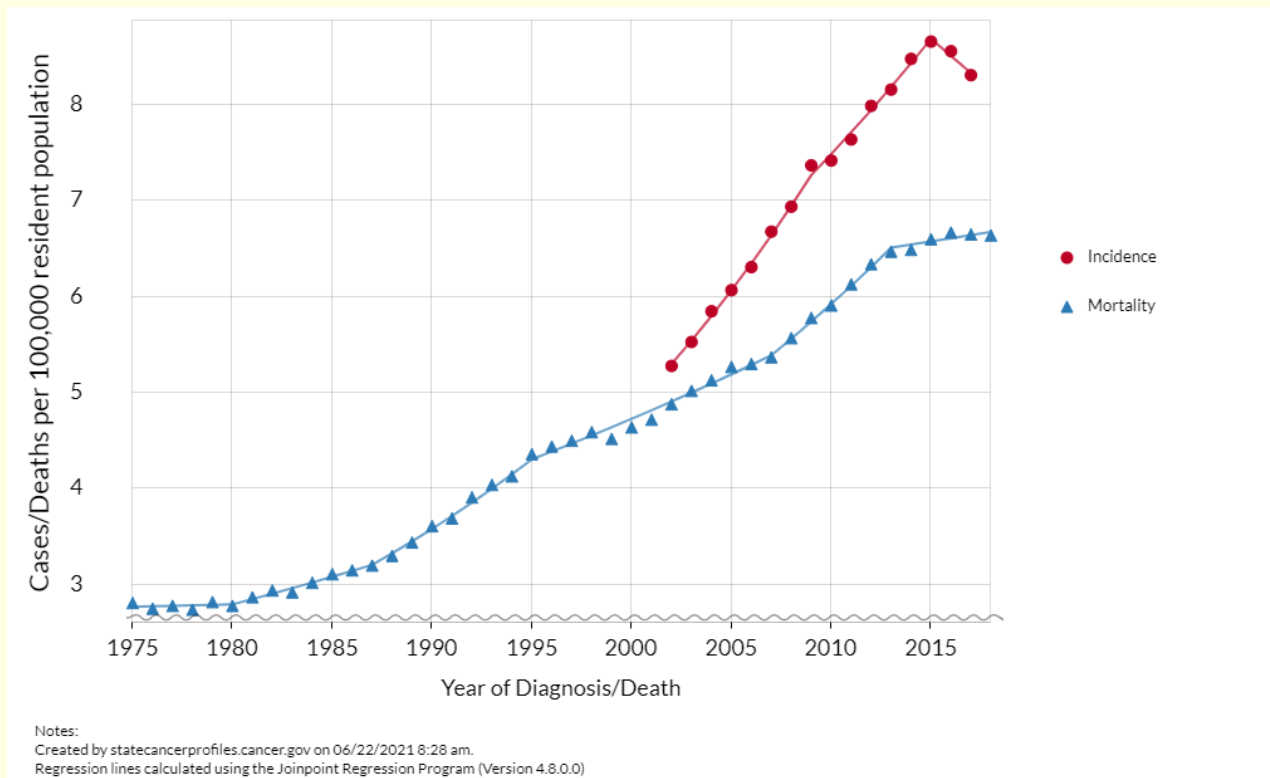
Cirrhosis

- Occurs when liver cells become damaged and are replaced with scar tissue.
- Most cases in the United States are caused by alcohol abuse or chronic HBV or HCV infections.

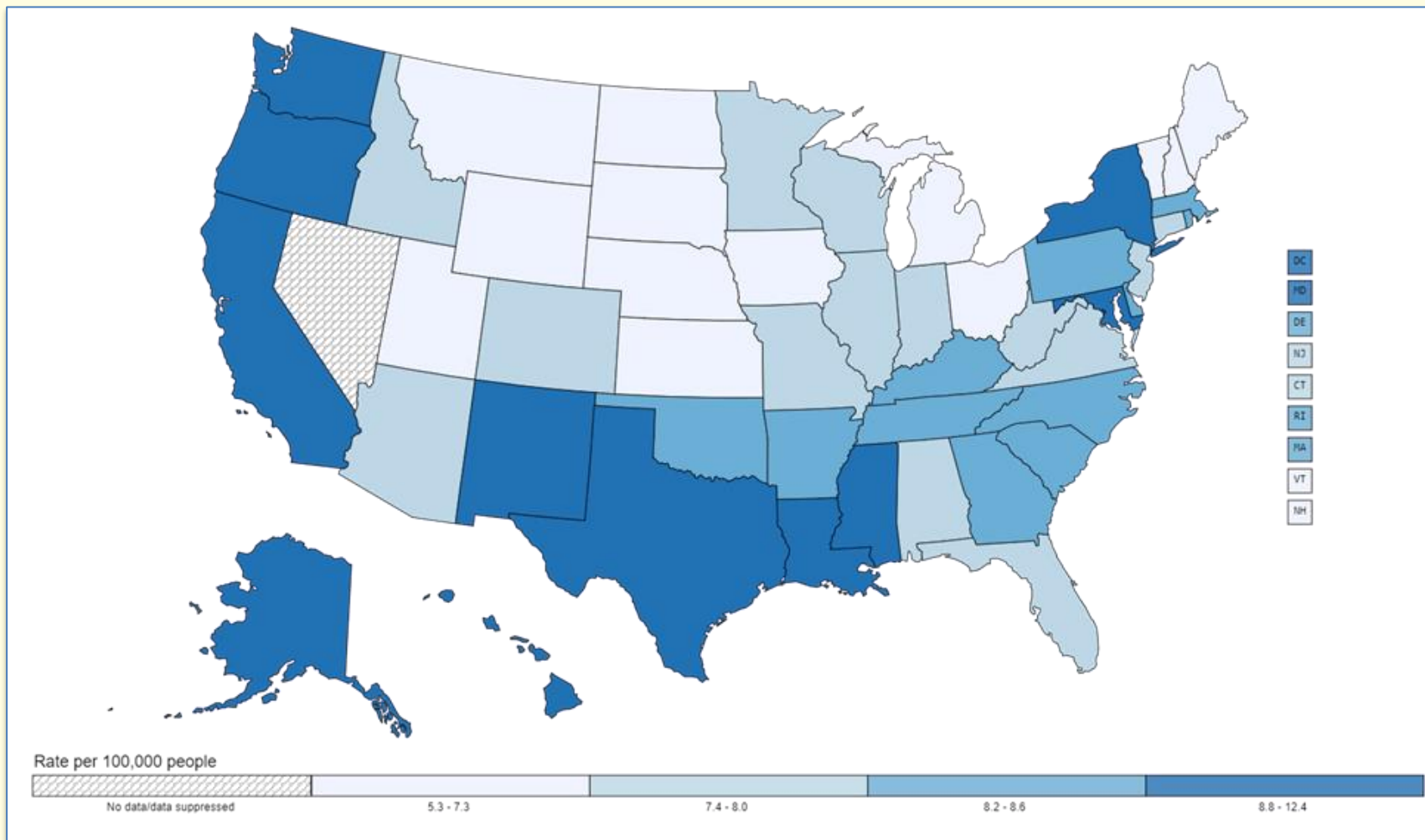


Liver and IBD Cancer: United States

- In 2018, over 34,000 new cases and 27,000 deaths from liver and IBD cancer were reported.
 - 14th most commonly diagnosed cancer.
 - 5th most common cause of cancer death.

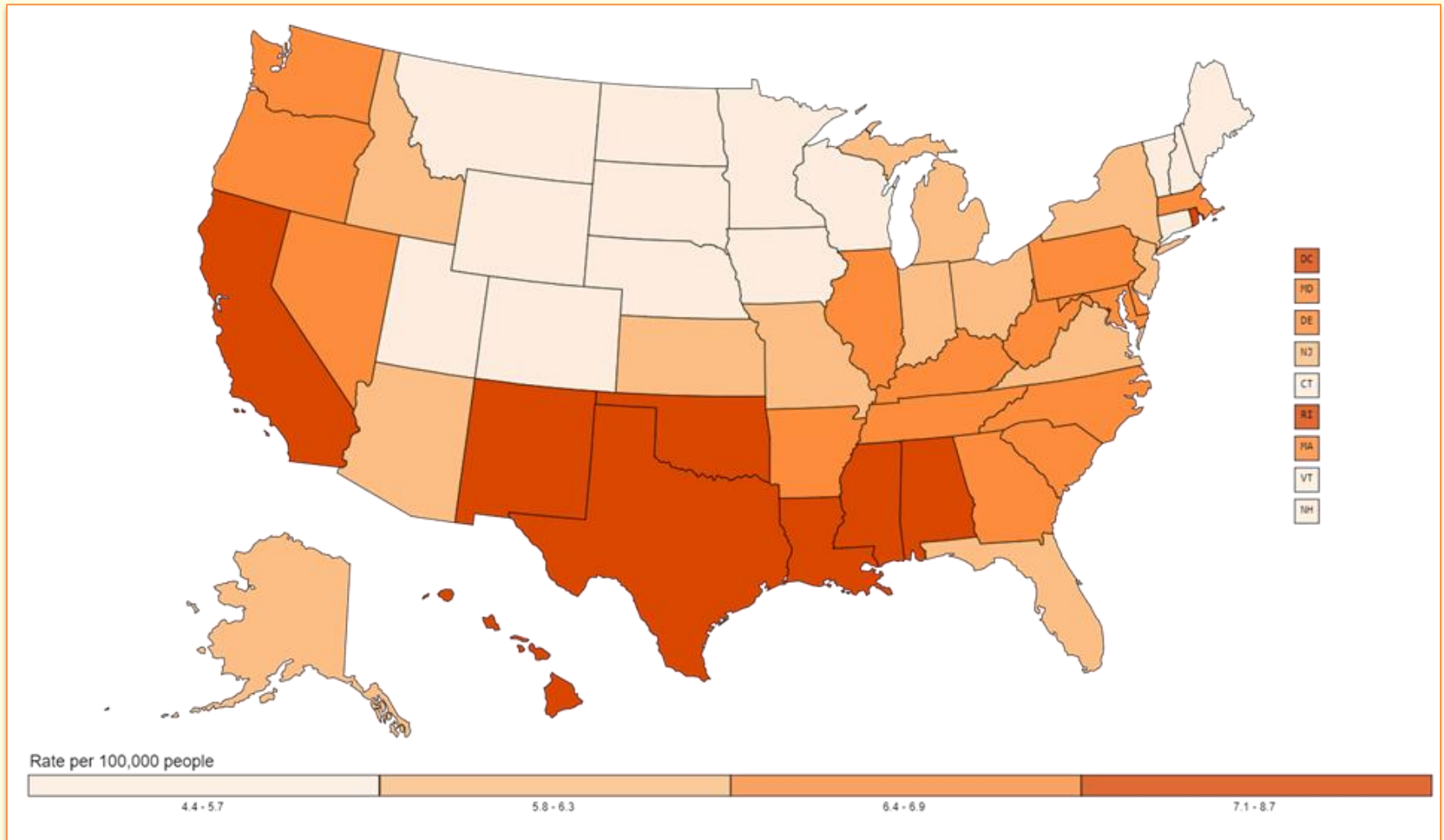


Liver and IBD Cancer Incidence: United States



U.S. Cancer Statistics Working Group. U.S. Cancer Statistics Data Visualizations Tool, based on 2020 submission data (1999-2018): 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 2021.

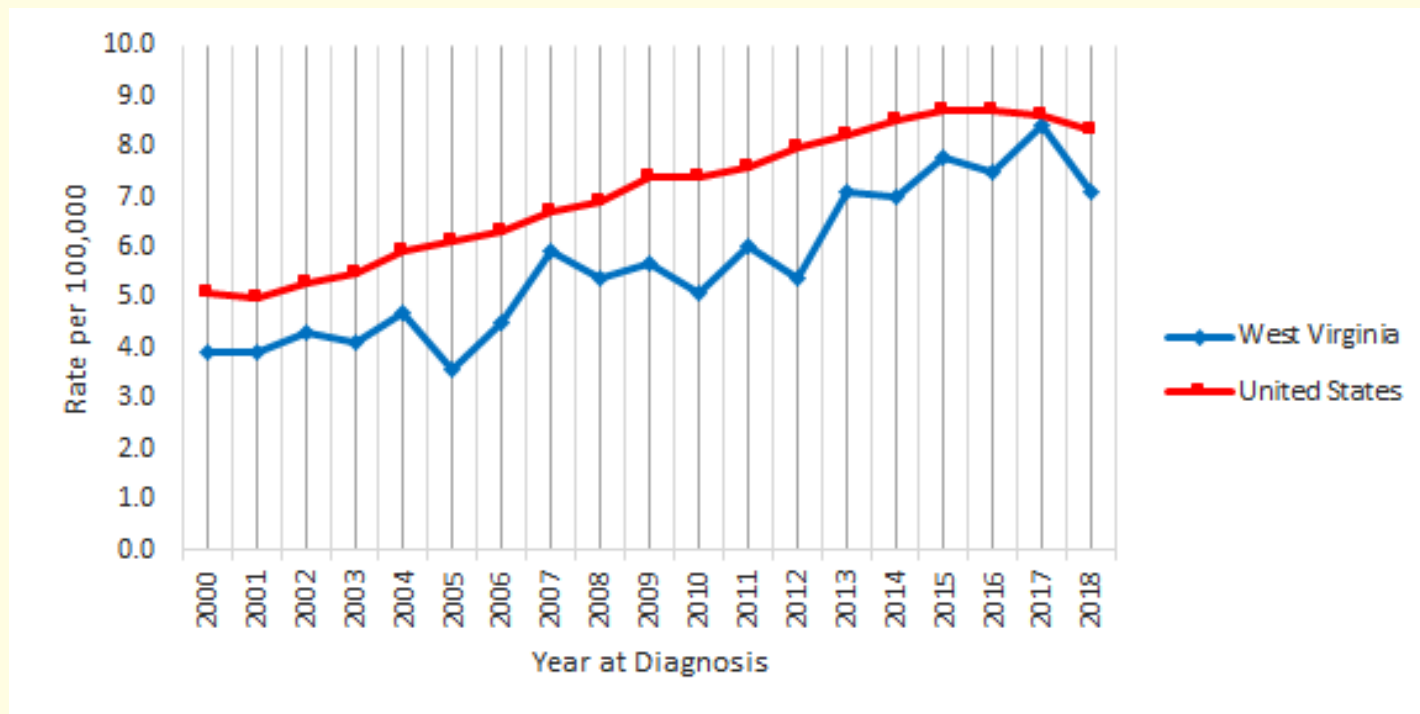
Liver and IBD Cancer Mortality: United States



U.S. Cancer Statistics Working Group. U.S. Cancer Statistics Data Visualizations Tool, based on 2020 submission data (1999-2018): 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 2021. 12

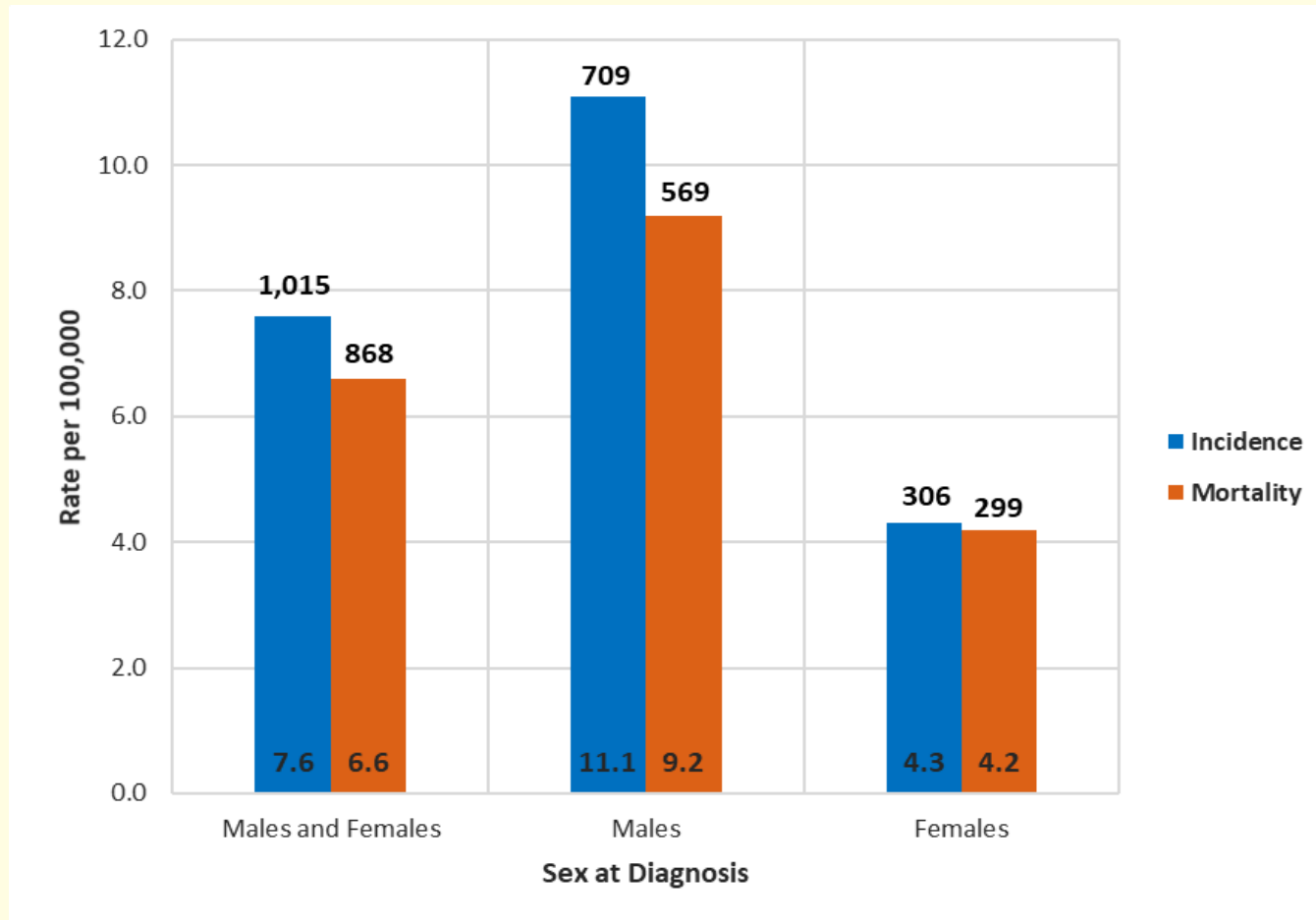
Liver and IBD Cancer in West Virginia

- Between 2014-2018, **1,015** new cases and **868** deaths from liver and IBD cancer were reported.
- 14th in incidence, 8th in mortality.



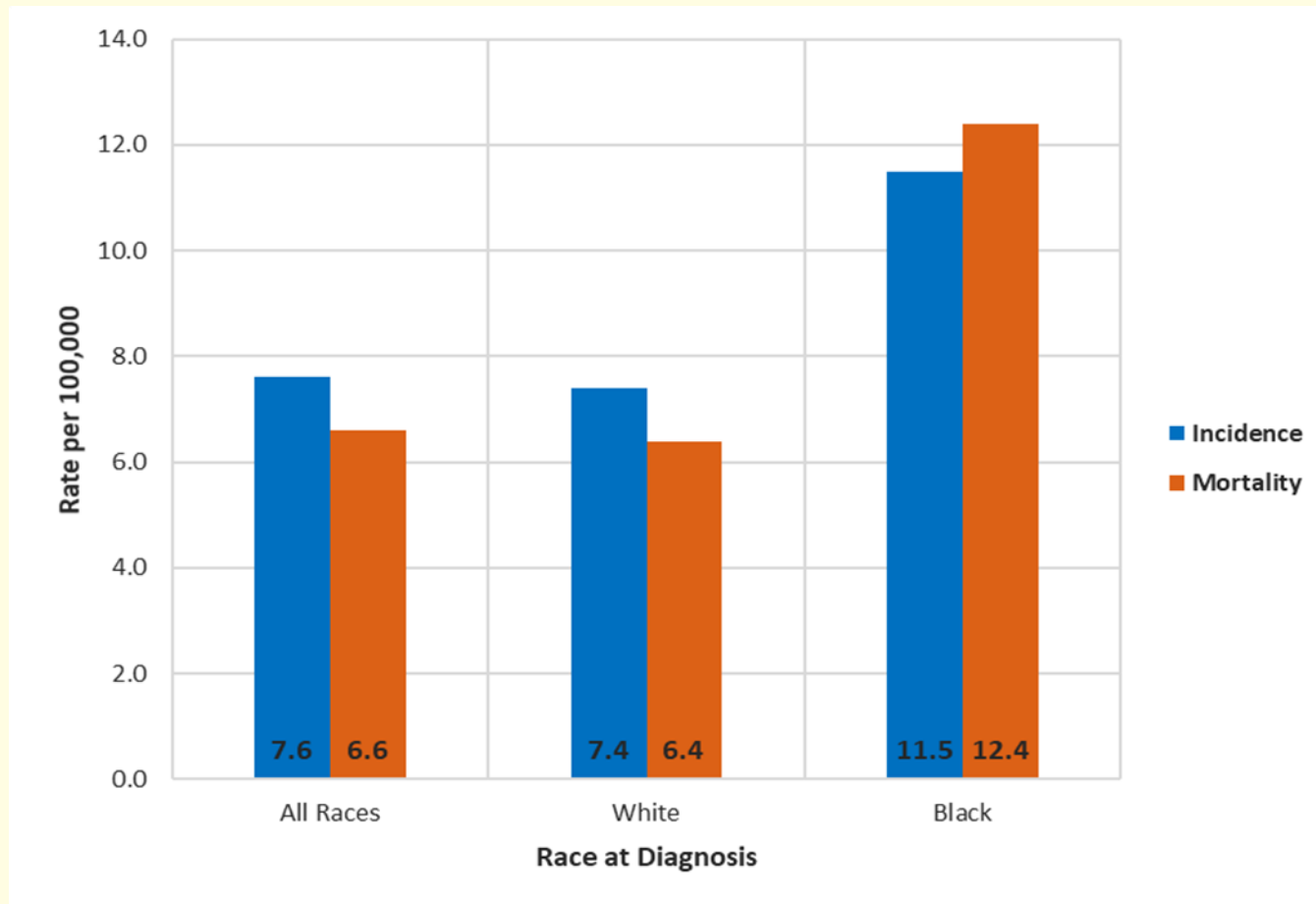
Liver and IBD Cancer by Sex

- **709** men and **306** women were diagnosed with liver and IBD cancer (2014-2018).

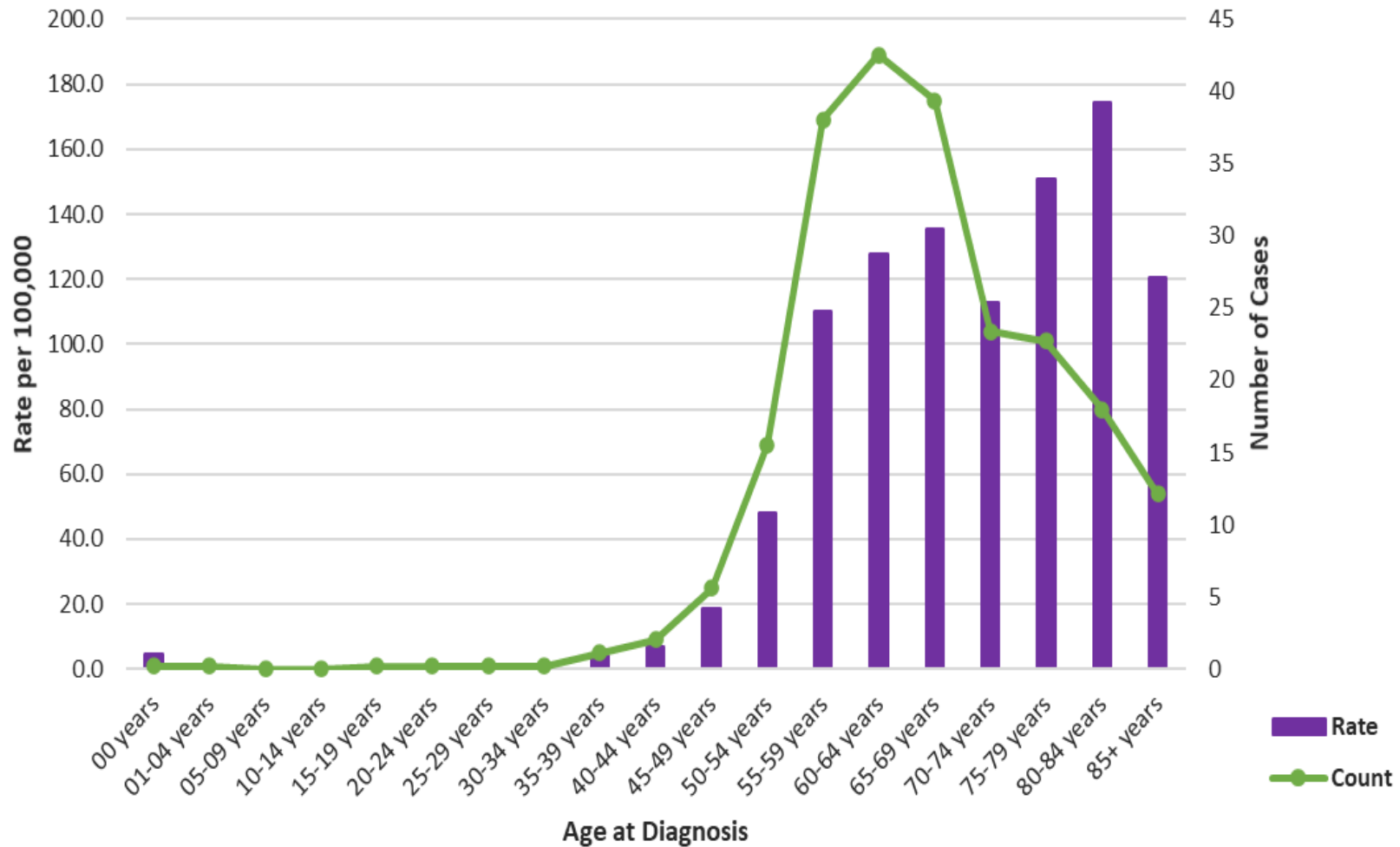


Liver and IBD Cancer by Race

- **949** white West Virginians and **52** black West Virginians were diagnosed with liver and IBD cancer (2014-2018).

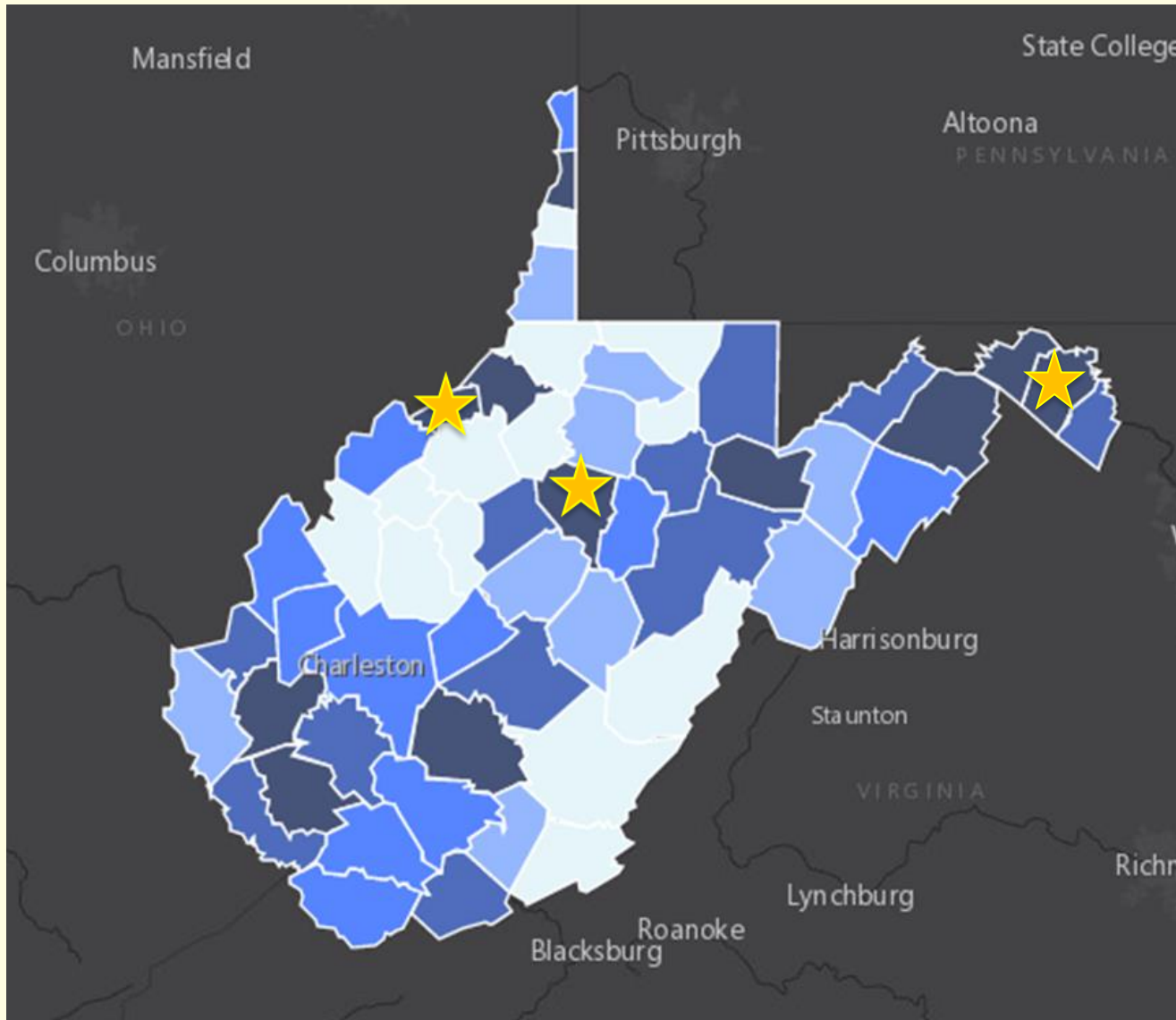


Liver and IBD Cancer by Age*



*Data was drawn from the 2013-2017 data submission

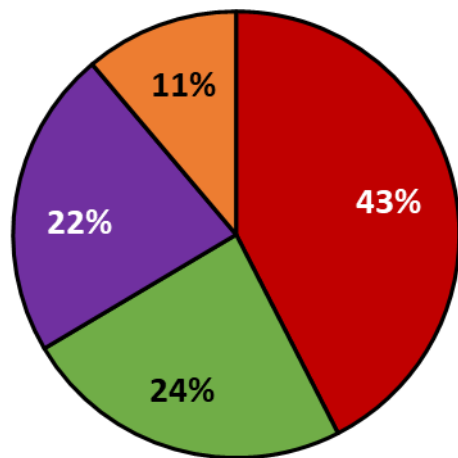
Liver and IBD Cancer by County



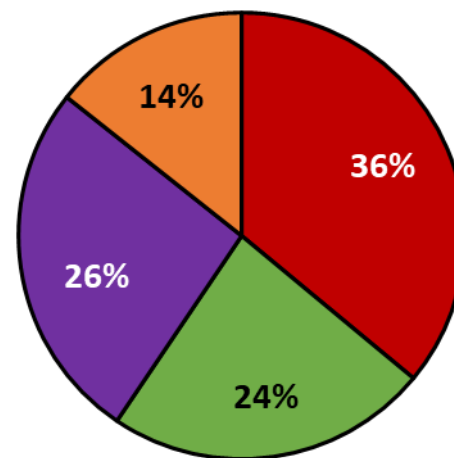
★ = Significantly higher than state average

Liver and IBD Cancer, Stage at Diagnosis By Sex

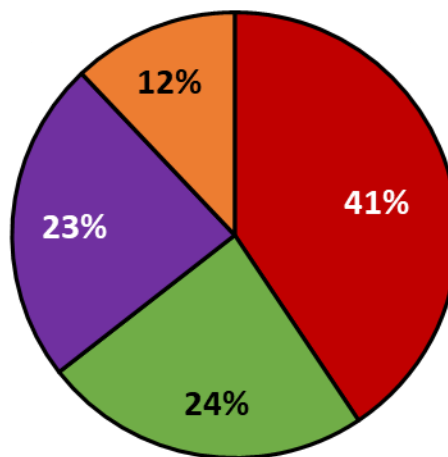
Males



Females

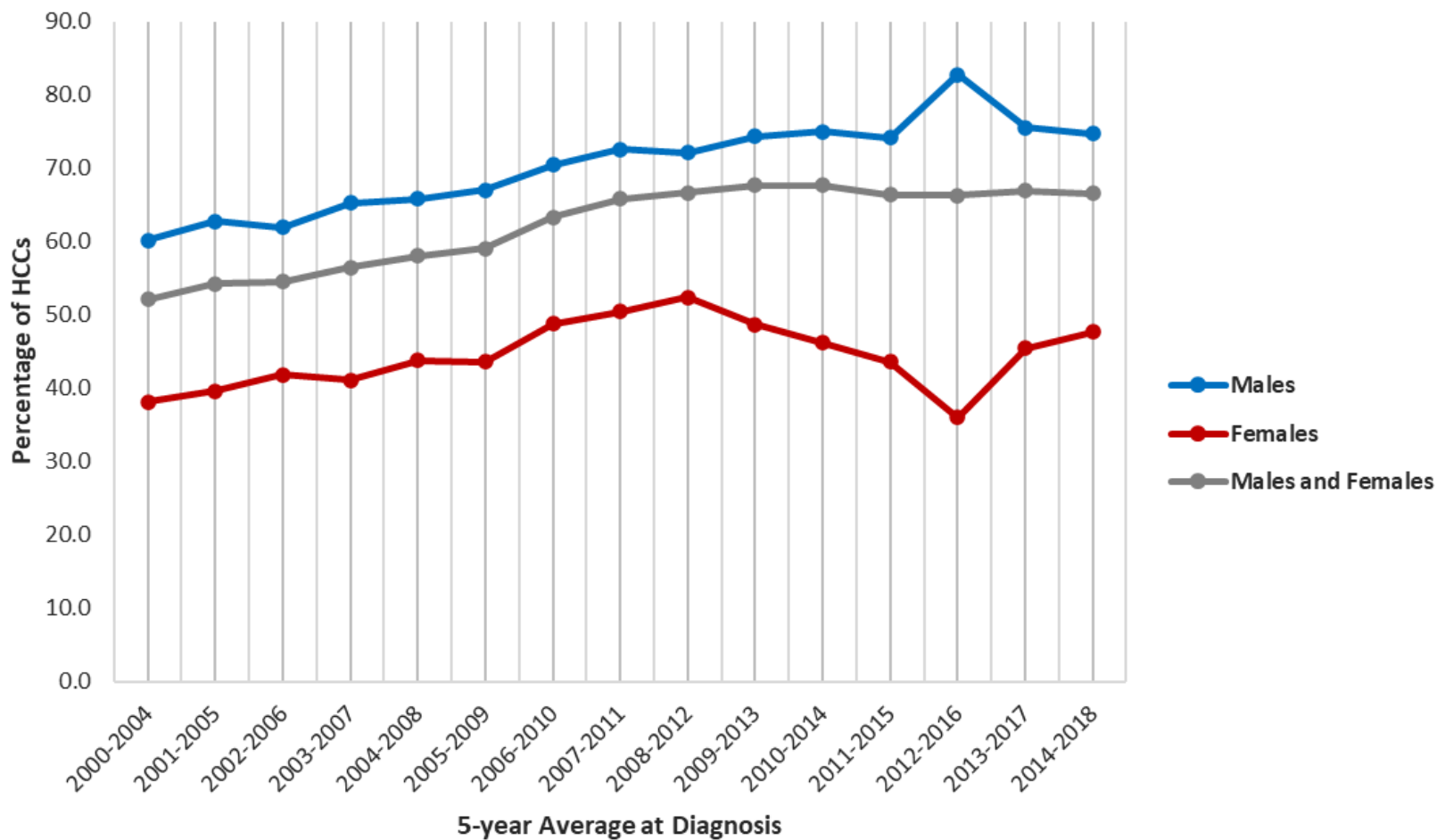


All Sexes

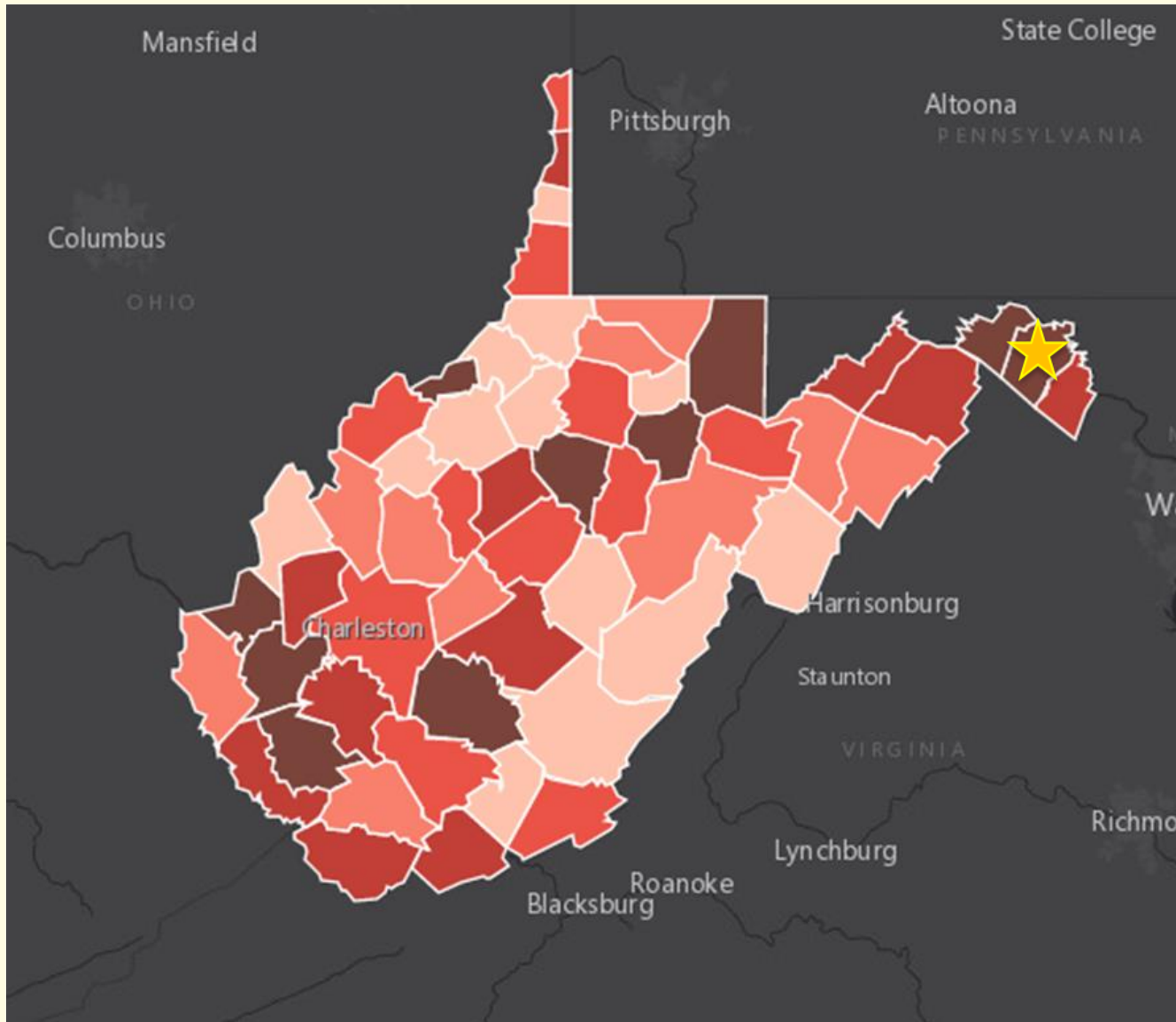


- Localized
- Regional
- Distant
- Unknown/Unstaged

HCC in West Virginia



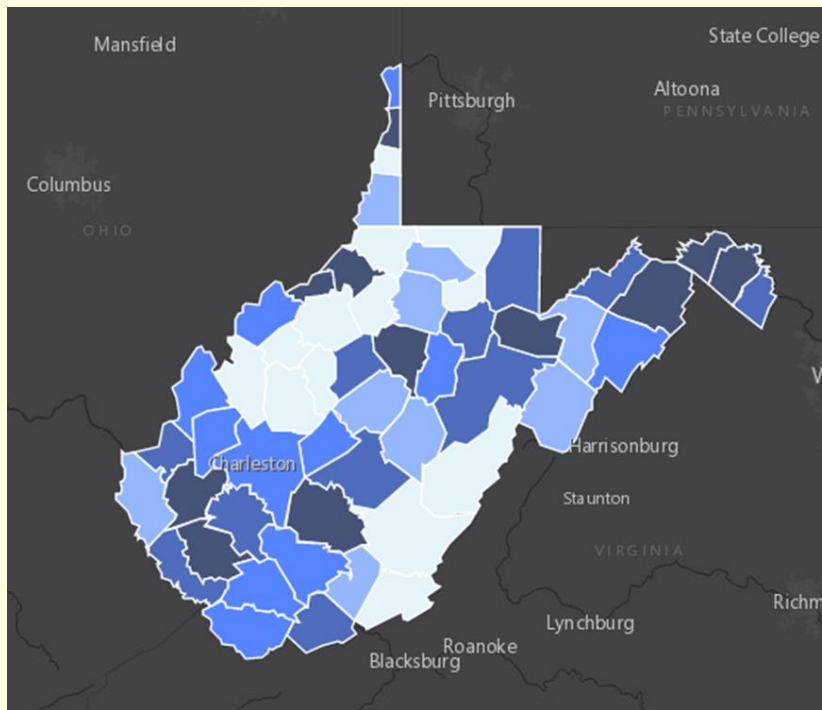
HCC in West Virginia (cont'd)



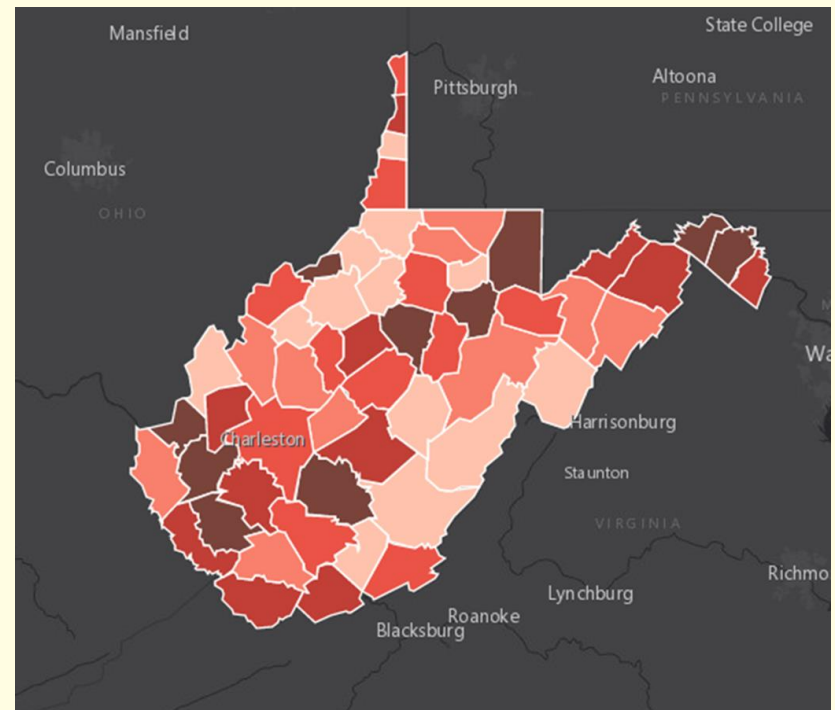
★ = Significantly higher than state average

HCC in West Virginia (cont'd)

Liver and IBD Cancer



Hepatocellular Carcinoma



Contact Information

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