Liver Cancer Diagnoses and Deaths Are Rising but Major Disparities Persist

The majority of cases are preventable, for example through early detection and treatment, hepatitis B vaccination and hepatitis C treatment.

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Liver cancer is an increasingly prominent scourge in the United States, both in terms of new diagnoses and related deaths. A new analysis of related trends highlights considerable racial and regional disparities in the disease and finds that such differences are largely driven by variations in liver cancer risk factors, such as hepatitis C virus (HCV) rates.

Among U.S. men and women, liver cancer is the fifth and eighth leading cause of cancer death, respectively, accounting for approximately 41,000 and 29,000 deaths in 2017, respectively. Additionally, the death rate for liver cancer is increasing at a faster rate than for any other cancer and has been rising since at least the mid-1970s. This upward trend is expected to continue through 2030 or later, driven in large part by the high prevalence of hep C among baby boomers, (those born between 1946 and 1965). Increasing rates of obesity and type 2 diabetes likely also contribute to the upward trend.

Because of the relatively young age at which individuals are diagnosed with liver cancer—a median 63 years old—the disease causes an average loss of 19 years of life.

Publishing their findings in CA: A Cancer Journal for Clinicians, researchers analyzed 1990 to 2014 data from the Surveillance, Epidemiology and End Results (SEER) Program and the National Center for Health Statistics to develop an overview of liver cancer diagnosis rates (known as incidence), death rates and survival rates and related trends. The investigators also relied on national survey data from the Centers for Disease Control and Prevention (CDC) to develop estimates of the prevalence of major liver cancer risk factors.

Liver cancer diagnosis rates per 100,000 people between 2009 and 2013 were: 7.7 overall, 6.3 for whites, 10.2 for Blacks, 15.2 for Native Americans and Alaskans (hereafter Native Americans), 13.5 for Asians and Pacific Islanders (hereafter Asians) and 13.0 for Latinos.

Liver cancer death rates per 100,000 people between 2010 and 2014 were: 6.3 overall, 5.5 for whites, 8.4 for Blacks, 11.9 for Native Americans, 9.8 for Asians and 9.1 for Latinos.
Rates of five-year survival following a liver cancer diagnosis between 2006 and 2011 were: 21.0 percent overall, 20.1 percent for whites, 16.3 percent for Blacks, 16.2 percent for Native Americans, 27.1 percent for Asians and 20.7 percent for Latinos.

National liver cancer diagnosis and death rates were two to three times higher in men than in women for each of the five racial groups—a pattern that held true in most individual states.

With increasing age, death rates rose up to 80 to 84 years of age in all racial groups except Blacks, among whom mortality peaked in the 60-to-64 age bracket.

Both liver cancer incidence and death rates have followed an upward trajectory for decades, with diagnosis rates increasing since at least 1975 and mortality rates increasing since 1980. Between 1990 and 2013, death rates rose 57 percent among Blacks, 69 percent among Latinos and 82 percent among whites, while more than doubling among Native Americans and declining slightly among Asians.

As for the five-year survival rate, there was little disparity based on sex. Encouragingly, the overall rate has been rising since at least 1992 for all races except for Native Americans, who show an inconsistent trend, likely owing to insufficient data. Compared with whites, the survival rate has been increasing more rapidly among Asians while increasing more sluggishly among Blacks. The rate of increase in survival rates between whites and Latinos has been similar.

Most states had racial disparities in liver cancer death rates, including those with lower levels of poverty and lower liver cancer death rates. In those latter states, a group that includes Minnesota and Utah, low death rates among whites masked much higher death rates among racial minorities.

Among states with available data, liver cancer death rates were significantly higher among Black men than among white men in all states except for Mississippi, New Mexico, Arkansas and South Carolina.

States with the highest liver cancer death rates—at least 8 per 100,000 people—between 2010 and 2014 included the District of Columbia, Hawaii, Louisiana and Texas. Those with the lowest rates—less than 5 per 100,000—included Montana, South Dakota, Nebraska, Utah, Vermont and North Dakota. The statewide death rate was generally higher in states with a lower proportion of white residents. In states with a higher proportion of whites, residents with worse poverty tended to have higher liver cancer death rates.

Statewide liver cancer diagnosis rates generally followed similar patterns to the death rates.

Previous researchers have estimated that about 60 percent of liver cancer cases in the United States are caused by potentially modifiable risk factors, such as excess body weight, diabetes, HCV, hepatitis B virus (HBV), excessive alcohol consumption and smoking.

In the new paper, much of the variations in liver cancer rates by sex, age group, state and race were driven by differences in the prevalence of major risk factors for liver cancer. For example, the
higher liver cancer death rate among Latinos in Texas (who are predominantly of Mexican origin) compared with Latinos in Florida (the majority of whom have Cuban or Puerto Rican ancestry) may be a result of higher rates of hepatitis C, excess body weight and nonalcoholic fatty liver disease among Mexican Americans compared with those of Cuban or Puerto Rican descent.

“Despite some improvements in localized and regional disease survival rates in the two most recent decades of available data, the overall prognosis for liver cancer remains poor,” the study authors concluded. “However, most liver cancers are potentially preventable, and interventions to curb the rising burden of liver cancer and reduce racial/ethnic disparities should include the target application of existing knowledge in prevention, early detection and treatment, including improvements in HBV vaccination, screening and treatment of HCV, maintaining a healthy body weight, access to high-quality diabetes care, prevention of excessive alcohol drinking, and tobacco control.”

To read the study, click here.