

International Liver Cancer Incidence Trends—Letter

Katherine A. McGlynn¹ and W. Thomas London²

We were gratified to read that the informative article by Center and Jemal (1) on global trends in liver cancer incidence arrived at conclusions very similar to our own on this topic (2). Both articles examined the data from Cancer Incidence on Five Continents (3) and reported that liver cancer incidence has increased in many low-risk areas, such as North America, but decreased in some risk areas, such as Eastern Asia. Both articles also noted that the male-to-female ratio in incidence is no greater in many high-risk areas than it is in medium-risk areas.

In their article, Center and Jemal noted that the favorable trends in incidence in China overall may not extend to more rural areas of the country, such as Qidong City (formerly Qidong County). It should be emphasized, however, that the most current data in Cancer Incidence in Five Continents from the Qidong registry were for the years 1993–1997. More recent data from the Qidong registry, reported by Chen and colleagues, may point to a different conclusion (4). Between 1993–1997 and 1998–2002, liver cancer incidence among males in Qidong City declined from 82.4 to 78.2 per 100,000 whereas rates among females declined from 26.0 to 23.0 per 100,000. Chen and colleagues' age-specific examination of incidence found that rates declined most notably among persons aged 15 to 34 years, although some decline in rates is also evident among persons aged 35 to 44 years. In support of this trend in Qidong City is the reported decline in hepatocellular carcinoma mortality in Haimen City, located directly adjacent to Qidong City in Jiangsu Province (5). As liver cancer rates have been higher in rural than in urban areas of China (6), these reported

declines in incidence in rural areas are certainly cause for optimism. More than 50% of liver cancer cases in the world occur in China, thus a decline in incidence in that single country could have a major impact on the global incidence rate of liver cancer.

Unfortunately, there is less cause for optimism when examining the liver cancer rates in China's northern neighbor, Mongolia. Mongolia was not discussed in the article by Center and Jemal because it is not included in Cancer in Five Continents (3). On the basis of data from Globocan (7), however, Mongolia now has the highest liver cancer incidence in the world (94.4/100,000), far exceeding the incidence in China (25.7/100,000). Incidence rates at all ages in Mongolia are notably higher than rates in the rest of Eastern Asia. These sobering liver cancer data from Mongolia are reportedly the result of high rates of mono- and co-infection with hepatitis B and C viruses, as well as co-infection of hepatitis B virus carriers with hepatitis D virus (8). While the prevalence of hepatitis B virus infection may be curtailed by childhood vaccination initiated in 1991, the continued high rate of hepatitis C virus infection in Mongolia may result in liver cancer incidence rates continuing to increase in the near future (9). Alcohol consumption rates have also been reported to be higher in Mongolia than in many Asian populations, a factor which may contribute to the liver cancer burden (10).

We concur with the overall conclusions reached by Center and Jemal (1) that further study is required to understand better why liver cancer trends are going in opposite directions in high-risk and low-risk countries.

Disclosure of Potential Conflicts of Interest

No potential conflicts of interests were disclosed.

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Authors' Affiliations: ¹Division of Cancer Epidemiology and Genetics, National Cancer Institute, Bethesda, MD; ²Fox Chase Cancer Center, Philadelphia, PA

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