

## Hepatocellular carcinoma in hispanics

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### Abstract

**Background:** To our knowledge, no detailed analysis exists of the incidence and mortality of hepatocellular carcinoma (HCC) among Hispanics in the United States. In previous studies, the rates for Hispanics have not been reported separately from other racial or ethnic groups. **Methods:** We used information on patients diagnosed as having HCC from 13 registries in the Surveillance Epidemiology and End Results (SEER) database of the National Cancer Institute to calculate race-specific, age-adjusted incidence rates (AIR) between 1992 and 2002. We also used California and Texas state death records from between 1979 and 2001 to calculate race-specific, age-adjusted mortality rates for liver cancer excluding intrahepatic cholangiocarcinoma. For Hispanics and Asians/Pacific Islanders, the rates were calculated for native-born subjects and immigrants separately. **Results:** In SEER, the yearly AIRs were higher by 1.2-fold in Hispanics than in blacks (6.3 vs 5.0 per 100 000 person-years of the underlying US population) and by 2.7-fold than in non-Hispanic whites (2.4 per 100 000 person-years) but lower than in Asians/Pacific Islanders (10.8 per 100 000 person-years). The median age at HCC diagnosis in Hispanics (64 years) was intermediate between whites (the oldest) and blacks (the youngest). Between the periods 1992-1995 and 2000-2002, there was a 31% increase in the incidence of HCC in Hispanic men and a

63% increase in Hispanic women. The race-specific, age-adjusted mortality rates were remarkably similar in California and Texas and were highest in immigrant Asian/Pacific Islanders followed by native Hispanics. The rates for native Hispanic men were more than twice as high as those for immigrant Hispanic men. For Texas, the rates for native Hispanic men were 65% higher than those for immigrant Hispanic men. **Conclusion:** Hispanics in the United States have high rates of HCC that are second only to Asians/Pacific Islanders.

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**Key words:** Hepatocellular carcinoma, liver, cirrhosis, sorafenib.

### Comment

El-Serag et al.<sup>1</sup> analyzed the database of the National Cancer Institute of the United States (US) to calculate race-specific mortality for hepatocellular carcinoma (HCC). They found a 31% increase in the incidence of HCC in Hispanic men and a 63% increase in Hispanic women in the period of 2000-2002 compared with that of 1992-1995. Hispanic women had the fastest increase in HCC incidence compared with other groups. Interestingly, rates for native-born Hispanic men were found to be twice as high as those from immigrant Hispanic men. Authors suggest that «*hepatitis C infection, heavy alcohol consumption, or nonalcoholic steatohepatitis... are presumably more important among native Hispanics than among immigrant Hispanics and thus may explain the higher HCC rates in the native group*».

Mortality Data from the National System of Information on Health of Mexico (SINAIS, Spanish acronyms) reports a HCC incidence of 4.5 cases per 100,000 persons during 2005.<sup>2</sup> This number is similar to that reported by El-Serag et al. in the period 1992-1995 in Hispanics living in the US (5 cases per 100,000 persons), but much lower to that of 2000-2002 (7 cases per 100,000 persons).<sup>1</sup> Liver disease prevalence trends analysis based on SINAIS records have shown a «*crescendo*» tendency in HCC incidence in Mexico, with a projected 73% increase from 2005 to 2050.<sup>3</sup>

The role of nonalcoholic fatty liver disease (NAFLD) as a cofactor in chronic liver disease has been widely highlighted in recent years.<sup>4</sup> Mendez-Sanchez et al. have

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El-Serag HB, Lau M, Eschbach K, Davila J, Goodwin J. Epidemiology of hepatocellular carcinoma in hispanics in the United States. *Arch Intern Med.* 2007; 167: 1983-9.

#### Abbreviations

HCC, hepatocellular carcinoma; NAFLD, nonalcoholic fatty liver disease; SINAIS, National System of Health Information (Spanish acronyms); US, United States.

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shown changes in the prevalence of overweight and obesity in the past decade to be positively correlated with the increase in liver disease-related mortality,<sup>5</sup> making NAFLD a potential key player in the increasing incidence of HCC in Hispanic population.<sup>6</sup>

The prevalence of NAFLD in Hispanics living in Mexico have been shown to be 15.9%, according to an ultrasound-based positive predictive value-corrected study on 1,504 subjects (Zamora-Valdes et al. unpublished data). Interestingly, this figure has been found to be much higher in Hispanics living in the US, where a proton magnetic resonance spectroscopy-based study on 400 subjects found a prevalence of 45%.<sup>7</sup> Lifestyle adopted by these populations with similar genetical background may explain this remarkable variation in NAFLD prevalence, such as that observed in obesity and type 2 diabetes mellitus prevalence among Pima Indians living in Sonora (Mexico) and Arizona (US).<sup>8</sup>

We agree with El-Serag *et al.* on the effect of environmental and cultural factors in the incidence of HCC among Hispanics; in which NAFLD might play a major role. There is an undeniable need for widespread prevention programs, efficient screening and effective therapies as more and more cases are expected in the next years.

Unfortunately, current treatments do not have the desirable efficacy. Several drugs are now under intense research; one of the most promising being Sorafenib, an orally available, potent multikinase inhibitor. A double-blind, placebo-controlled trial recently exposed in

ASCO, shows that Sorafenib improves overall survival in patients with HCC, an exciting and promising result.<sup>9</sup>

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