Does the incidence of primary liver cancer vary between ethnic groups in England?

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Objectives

The aim of this study was to describe the variation in incidence of primary liver cancer between ethnic groups in England for patients diagnosed between 2001 and 2007.

Methods

Data on patients with primary liver cancer (ICD10 C22) diagnosed in England between 2001 and 2007 were extracted from the National Cancer Dataset Repository. Ethnicity information was obtained from the Hospital Episode Statistics dataset and the following seven ethnic groups were analysed: White, Indian, Pakistani, Bangladeshi, Black Caribbean, Black African and Chinese. Age-standardised incidence rate ratios (IRRs) were calculated for both males and females using the White ethnic groups as the baseline.

Results

Ethnicity data were available for 75% (13,139/17,458) of primary liver cancer patients. Compared with the White male baseline, Chinese males had the highest IRR at 3.9 [95% CI 2.6-6.0]. This was followed by the Black African (3.3[2.1-5.1]), Bangladeshi (3.1[1.9-5.2]) Pakistani (2.8[2.1-3.7]) and Indian males (1.4[1.2-1.7]) with statistically significant high IRRs. The Black Caribbean males had a similar incidence rate to the White males (1.2[1.0-1.5]).

In comparison with White females, Pakistani females showed the highest IRR at 3.5 [2.3-5.3]. The Bangladeshi females came next (2.9[1.3-6.4]), followed by the Chinese (1.9[1.1-3.5]), Black African (1.8[1.1-3.2]) and the Indian groups (1.5[1.1-2.0]). As similarly observed in males, Black Caribbean females (1.3[1.0-1.8]) had an incidence rate close to that of White females.

Conclusion

This study has found large variation in incidence of primary liver cancer between ethnic groups, possibly due to high prevalence of established risk factors such as hepatitis B and C infection in some, but not all ethnic groups.