Liver Cancer and Hepatitis B: An overview

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One of the most common cancers in the world
- 5th most common for men
- 8th most common for women

Deadly cancer: 5 year survival rate < 10%

Rates are higher in developing countries
- Asia
- Parts of South America and Africa

Ethnic disparities in liver cancer rates in U.S.

Liver Cancer Incidence Rates by Ethnicity in the U.S.

CAUSES OF LIVER CANCER: CONTRIBUTION OF HEPATITIS B & C

- 75-80% of all cases of liver cancer worldwide due to viral hepatitis (Bosch et al., 2005)
  - Hepatitis B (50-55%)
  - Hepatitis C (25-30%)
- Hepatitis B particularly important in some ethnic groups (80% of liver cancer in Asians)
- Other contributions such as obesity may play an increasingly important role over time
# LIVER CANCER RISK FACTORS DIFFER BY GEOGRAPHIC REGION

<table>
<thead>
<tr>
<th>RISK FACTORS</th>
<th>U.S. &amp; Europe</th>
<th>Africa &amp; Asia</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>% attributed</td>
<td>% attributed</td>
</tr>
<tr>
<td>Hepatitis B</td>
<td>22</td>
<td>60</td>
</tr>
<tr>
<td>Hepatitis C</td>
<td>60</td>
<td>20</td>
</tr>
<tr>
<td>Alcohol</td>
<td>45</td>
<td>Variable</td>
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<tr>
<td>Tobacco</td>
<td>12</td>
<td>22</td>
</tr>
<tr>
<td>Aflatoxin</td>
<td>Limited</td>
<td>Important</td>
</tr>
<tr>
<td>Other factors (nutrition, physical activity)</td>
<td>&lt;5</td>
<td>&lt;5</td>
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</tbody>
</table>

Other Modifiable Risk Factors

- Liver cancer
- Obesity, physical activity, diet
- Alcohol use
- Tobacco use
GLOBAL IMPACT OF HEPATITIS B

World population
6 billion

2 billion with past/present Hep B infection

15-40% develop cirrhosis, liver failure or liver cancer

350–400 million with chronic hepatitis B

~1 million die per year from Hep B associated liver disease

Geographic Prevalence of Chronic Hepatitis B May Be Impacted by Migration

Immigration numbers summed by continent from 1996-2002

~2 million Asians
~930,000 Africans
~350,000 Europeans
~400,000 South Americans

Hep B Prevalence
- High
- Intermediate
- Low

Slide from Hepatitis B & Infectious Disease Training Program, 2007, Liver Research Consortium, LLC
Strategies to Address Burden of Liver Cancer & Hepatitis B

- Liver Cancer is a vaccine preventable cancer
- Simple blood test can identify those infected
- Effective treatments are now available
- Continued focus on lifestyle factors needed
  - Sexual behavior, household transmission, obesity, tobacco, alcohol