

## Epidemiology and trends in mortality from liver cancer in Iran

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Received: 13/Sep/2015 Accepted: 14/Oct/2015

### INTRODUCTION

Liver cancer is the sixth most common cancer worldwide and the third leading cause of death from cancer. Liver cancer is more prevalent in countries in East Asia, Southeast Asia and the western Central Africa.<sup>1</sup> Liver cancer rates in North America and Western Europe, less than 10 cases per hundred thousand people in Asia and Africa between 50-150 cases per hundred thousand people.<sup>2</sup> The incidence of cancer in many countries such as the United States and Central America and Europe is on the rise because it is caused by the epidemic of obesity and increasing cases of HCV infection due to intravenous drug. In contrast, in high-risk areas, decreasing trend has been observed Because of widespread vaccination against HBV infection in adults and children.<sup>1</sup> The aim of this study was to estimate the level and trend of mortality from liver cancer in Iranian population during 2006-2010 .The overall view of the process as far as mortality due to these cancers in Iran is provided.

In this study, Data related to the number of deaths caused by Liver cancer during 2006 to 2010 in 29 provinces by the Network Management Centre, Department

of Information Management and Technology and Applied Research of the Ministry of health and Medical Education from various sources including government organizations, cemeteries, hospitals, homes and the Ministry of Health and Medical Education were collected.<sup>3</sup>

The results of calculation of mortality rates per hundred thousand people showed that the rate of death from liver cancer was 4.78 in 2006 to 5.37 in 2010. In Table 1, the mortality rate in all the years under the study suggests that liver cancer in men is more than in women.

The results show that the mortality of liver cancer has been increased; this trend is consistent with previous studies.<sup>4</sup> Deaths from cancer in the UK have increased by 2.6 per hundred thousand people.<sup>5</sup> Rates of liver cancer mortality in the age groups under the study show that it increases with the increasing age of the cancer death rate and most deaths have been reported in patients aged over than 70 years. Based on the results of the present study, death from liver cancer in men has more increases with age than in women.

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**Table 1:** Mortality from Liver cancer per hundred thousand people in the study group sex

| Year of Study | Mortality per hundred thousand |      |       | Crude mortality rate |      |       | Sex ratio (M/F) |
|---------------|--------------------------------|------|-------|----------------------|------|-------|-----------------|
|               | Woman                          | Man  | Total | Woman                | Man  | Total |                 |
| 2006          | 3.81                           | 5.72 | 4.78  | 1072                 | 1659 | 2731  | 1.54            |
| 2007          | 4.21                           | 5.85 | 5.04  | 1103                 | 1573 | 2677  | 1.42            |
| 2008          | 4.41                           | 5.84 | 5.13  | 1170                 | 1587 | 2757  | 1.35            |
| 2009          | 4.09                           | 6.06 | 5.09  | 1100                 | 1668 | 2769  | 1.51            |
| 2010          | 4.51                           | 6.12 | 5.37  | 1258                 | 1706 | 2964  | 1.35            |
| Total         |                                |      |       | 5703                 | 8193 | 13898 | 1.43            |

Because both hepatitis B and hepatitis C are the major causes of liver cancer, treatment can reduce the risk of cancer, although this effect is not clear. It is estimated that approximately 1.5 million people in the country are infected with hepatitis B of which more than 15% to 40% are at risk of developing cirrhosis or liver cancer.<sup>6</sup> The mass vaccination is a safe and easy way to control hepatitis B in the population, which can reduce infection rates by up to 95%. The universal vaccination against hepatitis B in Iran from 1993 to 2006 and applying it to more than 94% is reached.<sup>7</sup> It is expected that the effect of reducing the burden of developing liver cancer occurs in the next decade. Since that time an attention on the course of hepatitis B and liver cancer and the virus vaccination for infants is recommended. It is also recommended that screening be performed for people with hepatitis B to identify cases of liver cancer.

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**How to cite the article:** Mahdavi S, Amoori N, Salehiniya H, Enayatrads M. Epidemiology and trends in mortality from liver cancer in Iran. *Int J Epidemiol Res.* 2015; 2(4): 239-240.