

Victorian Cancer Registry

Cancer Facts

Number 11 - October 2017



Liver cancer in Victoria

There are several types of liver cancer, with the most common type, hepatocellular carcinoma (HCC or malignant hepatoma), accounting for almost three-quarters of primary liver cancers in Victoria. Most other liver tumours are cholangiocarcinoma (common bile duct carcinoma) with fewer than 2% being other types - sarcomas, other adult tumours or paediatric hepatoblastoma. The liver is also a very common site of metastatic disease from a primary cancer in another organ, most often the bowel, breast or stomach.

Liver cancer in this fact sheet refers only to HCC unless otherwise specified.

How common is liver cancer?

In 2015, there were 380 new diagnoses of liver cancer in Victoria - of these 78% were in men, and 58% in persons between the ages of 50 and 70 years (Figure 1).

Liver cancer has one of the fastest-increasing incidence rates of all cancers, with an average annual increase since 1982 of 4.6% in men and 4.7% in women (Figure 2). Similar patterns have been observed elsewhere, with rates in the UK having increased in both men and women by over 50% in the last decade¹.

Why is liver cancer becoming more common?

Increasing liver cancer incidence is largely associated with increasing numbers of migrants from regions where chronic hepatitis B & C are prevalent - Figure 3 over the page shows the incidence of liver cancer in various migrant groups in Victoria.

There is also a significant ageing cohort of Victorians with hepatitis C who are developing cirrhosis and are at increased risk of liver cancer - many of these are people who inject or have injected drugs.

Changing patterns of prevalence of other liver cancer risk factors, such as tobacco and alcohol use and obesity, may also contribute to this trend.

What are the outcomes for Victorians with liver cancer?

In 2015, liver cancer caused the deaths of 208 Victorians (162 male, 46 female).

Liver cancer survival remains low, with a five-year relative survival of 19% in 2011-2015. However, survival has steadily improved over time (from just 5% in 1986-1990), due to earlier detection through screening of those at risk, some improvements in treatment modalities, and to an increasing proportion of hepatitis C-related cancers which have better prognosis than those related to hepatitis B.

Liver cancer in Victorians born overseas

Figure 3 (over page) shows the incidence of liver cancer in Australian-born Victorian men and women compared with that for major migrant groups. Incidence is higher than the Australian-born

Figure 1: Liver cancer diagnoses by age and sex 2015

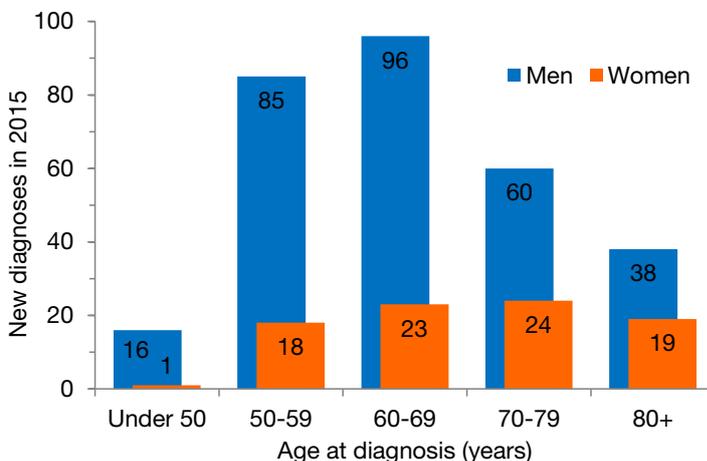
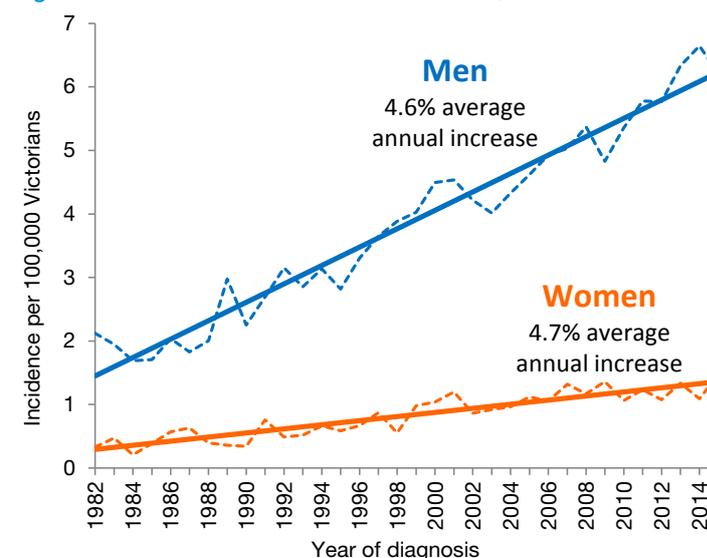


Figure 2: Trends in incidence of liver cancer, Victoria 1982-2015



- 380 Victorians were diagnosed with, and 208 died from, liver cancer (HCC) in 2015
- Liver cancer has one of the fastest-rising incidence rates, largely due to increasing numbers of migrants from regions where chronic hepatitis B & C are prevalent
- Five-year survival from liver cancer remains low (19%) but has steadily increased over the past 25 years
- Globally, viral hepatitis accounts for over 80% of liver cancers - hepatitis B is vaccine-preventable, and, in those affected, appropriate treatment can reduce the risk of liver cancer by up to 75%. The Cancer Council Victoria's Hepatitis and Liver Cancer Program² is working to increase early diagnosis and access to monitoring and treatment

for men and women born in Southern Europe, the Middle East & North Africa, and South-East and North-east Asia, and for women from South America. For migrants from the four countries with at least 10 liver cancers per year, rates were higher for men and women born in Italy, Vietnam and China (including Hong Kong, Macau and Taiwan), and for men born in Greece.

In Figure 4, liver cancer (all types) incidence rates for selected countries in 2012 are shown. Rates in Victorian migrants correspond closely to the incidence in their countries of origin. Vietnam and China have very high rates and the Netherlands very low rates, as do migrants to Victoria from those countries.

What do we know about the causes of liver cancer?

Globally, viral hepatitis is responsible for 80% of liver cancers. The majority of primary liver cancers follow untreated chronic hepatitis B or C infection.

In Australia, 58% of liver cancer in men and 44% in women is attributed to modifiable causes, with over a third estimated to be associated with viral infections⁶.

There are around 1/4 million Australians with chronic hepatitis B infection⁴, most of these originating from countries with a high prevalence of hepatitis B who were infected at birth or in childhood. Without medical intervention, 1 in 4 people living with chronic hepatitis B infection will die from liver cirrhosis or liver cancer.

There are also approximately 230,000 people in Australia living with chronic hepatitis C infection. Most new infections are related to the sharing of injecting drug equipment; less than 2% of people with hepatitis C have access to treatment. Between 1–5% of those with chronic infection will be diagnosed with liver cancer. New direct-acting antiviral treatments are available which have 90-95% cure rates for hepatitis C, resulting in significantly reduced risk of developing liver cancer.

Prevalence of both hepatitis B and C are higher, and liver cancer incidence is nearly three times higher for Aboriginal than non-Aboriginal Australians⁵. The small Aboriginal population in Victoria (0.7% of all Victorians) makes it difficult to assess these differences locally.

Other factors known to increase the risk of liver cancer include:

- Tobacco smoking: in Australia, an estimated 24% of liver cancer in men and 11% in women is linked to smoking⁶.
- Alcohol consumption: heavy consumption is linked to 15% of liver cancers in men and 5% in women in Australia⁶.
- Both alcohol consumption and hepatitis C infection have a synergistic effect with smoking on liver cancer risk.
- Long-term exposure to Aflatoxins, and some types of ionising radiation and occupational exposures cause liver cancer.
- Overweight and obesity, family history, and certain medical conditions, including diabetes and HIV/AIDS and other immuno-suppressive conditions, may also relate to higher liver cancer risk.

Figure 3: Liver cancer incidence by birthplace, 2011-2015.

The figures below show the average annual incidence of liver cancer (age-standardised to the Segi World Standard Population) with 95% confidence intervals in the Australian-born (blue band), and by birth regions (blue symbols), and individual countries (orange symbols for countries for which there are ≥10 liver cancers per year).

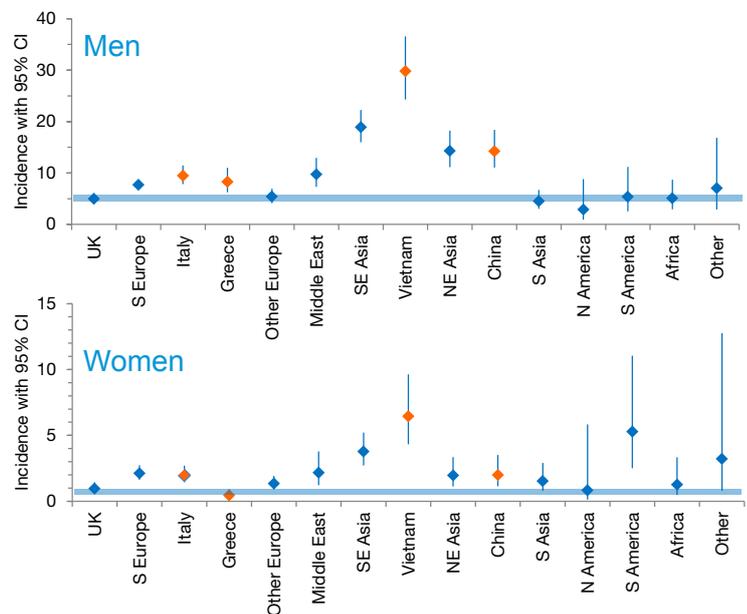
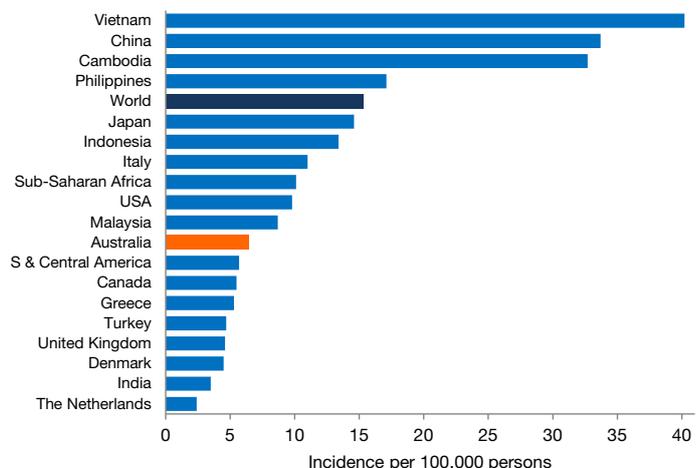


Figure 4: Liver cancer incidence worldwide 2012

Estimated age-standardised incidence of liver cancer (all types) for selected countries³



References:

1. Cancer Research UK, <http://www.cancerresearchuk.org/health-professional/cancer-statistics/statistics-by-cancer-type/liver-cancer/risk-factors#heading-Two>, Accessed May 2016
2. <http://www.cancervic.org.au/for-health-professionals/community-health-professionals/hepatitis-b-and-liver-cancer>
3. Ferlay J, Soerjomataram I, Ervik M, Dikshit R, Eser S, Mathers C, Rebelo M, Parkin DM, Forman D, Bray, F. GLOBOCAN 2012 v1.0, Cancer Incidence and Mortality Worldwide: IARC CancerBase No. 11 [Internet]. Lyon, France: International Agency for Research on Cancer; 2013. Available from: <http://globocan.iarc.fr>, accessed on 9/5/2016.
4. <http://www.hepatitisaustralia.com/fast-facts-on-hep-b/>
5. Australian Institute of Health and Welfare & Cancer Australia 2013. Cancer in Aboriginal and Torres Strait Islander peoples of Australia: an overview. Cancer series no.78. Cat. no. CAN 75. Canberra: AIHW.
6. Whiteman D et al. Cancers in Australia in 2010 attributable to modifiable factors: summary and conclusions. ANZJPH 2015; 39(5): 477-484

For more information about Victorian cancer statistics:

www.cancervic.org.au/about-our-research/registry-statistics/statistics-data
www.cancervic.org.au/about-our-research/registry-statistics/cancer-in-victoria

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