

# CANCER

## What is this?

**Cancer is an abnormal growth of cells which may result in the invasion of normal tissues and/or may spread to other parts of the body (metastasis).**

## Why is it important?

Cancer is the leading cause of death in New Zealand, with nearly 1 death in 3 due to cancer (8566 in 2008). Cardiovascular Diseases as a group kill more New Zealanders (around 40%).

There were more than 20,317 cancers registered in New Zealand in 2008.<sup>1</sup> There are a wide range of health behaviours that impact cancer rates and are noted in the section below on 'connections with other issues'.

Cancer also touches on the lives of many others as they support those through their journey with cancer.

## Data

Data on registrations and deaths in this section is based on the most recent publication for the Ministry of Health<sup>2</sup>. The data in the tables is based on provisional 2009 data from the NZ Cancer Registry<sup>3</sup>.

While registration rates have risen in the past decade when the rates of registration are adjusted for age and population growth (by calculating age-standardised rates), the registration rate decreased slightly from 1998-2008 from 351.4 per 100,000 population to 344.0 (a drop of 2 percent).

There were 20,317 new cancer registrations in New Zealand in 2008.

- Breast cancer, melanoma, and bowel cancer are the most common sites in non-Maori women.
- Breast cancer, lung cancer, and bowel cancer are the most common sites in Maori women.
- Prostate cancer, bowel cancer, and melanoma are the most common sites in non-Maori men.
- Prostate cancer, lung cancer, and bowel cancer are the most common sites in Maori men.

Although the total number of cancer deaths increased from 1998 to 2008, when adjusted for population growth and New Zealand's ageing population (by age-standardisation), cancer death rates decreased by 13% during this period.

- Breast cancer, bowel cancer and lung cancer are the most common causes of cancer death for both Maori and non-Maori women
- Lung cancer, bowel cancer, and prostate cancer are the most common causes in non-Maori men



<sup>1</sup> Ministry of Health. Cancer: new registrations and deaths 2008. Wellington: Ministry of Health, 2011. [http://www.moh.govt.nz/moh.nsf/pages/mh/10718/\\$File/cancer-new-registrations-deaths-2008.pdf](http://www.moh.govt.nz/moh.nsf/pages/mh/10718/$File/cancer-new-registrations-deaths-2008.pdf)

<sup>2</sup> Ibid.

<sup>3</sup> New Zealand Cancer registry, Ministry of Health, unpublished data

- Lung cancer, prostate cancer, and bowel cancer are the most common causes in Maori men

### Breast cancer

Breast cancer is the most common cause of cancer registration for New Zealand women, with 2,713 women diagnosed in 2008. It is most common in women aged 50-70 years. Although it is very unusual, men can develop breast cancer; it accounts for approximately 1% of all breast cancer.

**Table 1 Female breast cancer registration 25+ years, age-standardised rate per 100,000, 2008 and 2009, provisional data**

	2008	2009
Canterbury DHB	91.3	88.0
New Zealand	93.2	93.0

There are some recognised risk factors for breast cancer. The most important are that a woman's chance of getting breast cancer increases as she gets older, if she has had previous breast cancer, a family history of breast cancer, and benign (non cancerous) breast conditions.<sup>4</sup> Other risk factors include alcohol intake (more than one glass per day), taking Hormone Replacement Therapy (HRT) for more than 5 years, and increased weight after menopause. Protective factors include giving birth to at least one child, earlier age at first birth (<25 years vs >29 years), breastfeeding for at least 12 months duration (4-5% risk reduction), and number of births (4 or more vs 1).<sup>5</sup>

### Prostate cancer

Prostate cancer is the most common cause of cancer registration for New Zealand men. Prostate cancer occurs mainly in men aged over 50 years. In 2008 2,939 men were diagnosed with prostate cancer. Some types of prostate cancer grow very slowly, while others grow more rapidly.

**Table 2 Prostate cancer registration 25+ years, age-standardised rate per 100,000, 2008 and 2009, provisional data**

	2008	2009
Canterbury DHB	111.8	125.4
New Zealand	103.2	114.1

The causes of prostate cancer are not yet fully understood, but the risk increases with age. The risks are also higher if other family members have developed this cancer. There is some evidence to suggest that a diet high in animal fat increases the chances of developing prostate cancer. While it is not possible to make clear recommendations about a particular diet, a lower fat, high fruit and vegetable diet is linked with a reduced risk of chronic diseases and is an overall recommendation towards improving health.<sup>6</sup>

<sup>4</sup> Cancer Society of New Zealand Inc. 2007. Understanding Cancer. Breast Cancer: A guide for people with breast cancer. Auckland: Cancer Society of New Zealand Inc.

<sup>5</sup> The New Zealand Breast Cancer Foundation. 2010. Breast Health Education Kit. Risk and Risk Reduction Factors for Breast Cancer. The New Zealand Breast Cancer Foundation.

<sup>6</sup> Cancer Society of New Zealand Inc. 2008. Understanding Cancer. Prostate Cancer: A guide for people with prostate cancer. Auckland: Cancer Society of New Zealand Inc.

## Bowel cancer

Bowel cancer is the second most common cause of cancer registration, with 2,801 registrations in 2008. It is the second most common cause of cancer death in New Zealand. Age-standardised bowel cancer incidence rates are lower for Māori than for non-Māori and for females than for males.

Although bowel cancer incidence overall is forecast to decline in New Zealand, the absolute number of people with bowel cancer is expected to increase, because the growth and ageing of the population will more than offset the decline in incidence.<sup>7</sup>

**Table 3 Bowel cancer registration, 25+ years, age-standardised rates per 100,000 2008 and 2009, provisional data**

		2008	2009
Canterbury DHB	Female	41.5	39.9
	Male	53.6	48.9
	Total	47.1	44.3
New Zealand	Female	39.6	39.4
	Male	49.7	49.3
	Total	44.3	44.1

Bowel cancer incidence increases with age and significantly after 50. The following factors may increase the risk of developing bowel cancer:

- Lifestyle: A diet high in fat and protein and low in fruit and vegetables, alcohol consumption, weight gain particularly around the waist and low rates of physical activity.
- Family History of bowel cancer: having a parent, brother, sister or child who has had bowel cancer. (Up to 90% of bowel cancer is not inherited).
- Health History: Having Crohn's disease or ulcerative colitis for more than 10 years may increase the risk.<sup>8</sup>

## Lung cancer

Lung cancer is the most common cause of cancer death overall in New Zealand. Twice as many men as women die from lung cancer, but the disease is increasing among women. It is expected to be the most common cancer among women in the next decade.<sup>9</sup>

**Table 4 Lung cancer registration, 25+ years, age-standardised rates per 100,000, 2008 and 2009, provisional data**

		2008	2009
Canterbury DHB	Female	18.8	27.4
	Male	28.6	27.0
	Total	23.2	27.1
New Zealand	Female	27.0	25.9
	Male	33.5	34.8
	Total	29.7	29.8

<sup>7</sup> Ministry of Health. 2002. Cancer in New Zealand: trends and projections. Public Health Intelligence Occasional Bulletin 15. Wellington: Ministry of Health.

<sup>8</sup> Cancer Society of New Zealand Inc. 2009. Understanding Cancer. Bowel Cancer: A guide for people with bowel cancer. Auckland: Cancer Society of New Zealand Inc.

<sup>9</sup> Cancer Society of New Zealand Inc. 2005. Understanding Cancer. Lung Cancer: A guide for people with lung cancer. Auckland: Cancer Society of New Zealand Inc.

Up to 90% of lung cancer is caused by smoking. It occurs most often in adults between the ages of 40-70 for those who have smoked for the last 20 years, and were likely to have started as teenagers. Second hand (passive smoking) may also cause lung cancer. Occupational exposure to asbestos is associated with an increased risk of asbestosis, mesothelioma and lung cancer<sup>10</sup>.

### Skin cancer

New Zealand has one of the highest rates of skin cancer in the world. It is diagnosed most often in older adults and only occasionally in teenagers<sup>11</sup>.

In 2008, melanoma for 25 – 44 year old males was the most common form of cancer registration and death and for 25-44 year old females it was the second most common form of cancer registration.

**Table 5 Melanoma registration, 25+ years, age-standardised rates per 100,000, 2008 and 2009, provisional data**

		2008	2009
Canterbury DHB	Female	47.5	33.6
	Male	49.9	52.4
	<i>Total</i>	<i>48.3</i>	<i>41.0</i>
New Zealand	Female	36.2	33.1
	Male	42.4	41.9
	<i>Total</i>	<i>38.8</i>	<i>33.1</i>

The total number of melanoma and non-melanoma skin cancers diagnosed is around 80% of new cancers each year. Melanoma and other skin cancers generally develop because of overexposure to UV radiation from the sun and other sources (such as sun lamps). The most important years for sun protection are during childhood.<sup>12</sup> Risk factors for melanoma include:

- Fair skin
- One or more severe sunburns especially in childhood
- Large numbers of moles
- Previous melanoma
- A family history of melanoma

### ***Impact on inequalities***

Overall, age-standardised cancer incidence and death rates were significantly higher for Maori than for non-Maori during 1998-2008. Age-standardised cancer incidence and death rates were significantly higher for people in the most deprived quintile than for those in the least deprived quintile during 1998-2008.

Because cancer is not a single disease, a global statement about inequalities and cancer may not apply to all cancers. Some cancers show a particular association with socioeconomic status or ethnic group (for example lung cancer is strongly related to ethnic group, with higher incidence in Maori) while others show the opposite pattern (for instance melanoma incidence is higher for non-Maori than for Maori).

<sup>10</sup> Ibid.

<sup>11</sup> Cancer Society of New Zealand Inc. 2005. Skin Cancer Facts and Figures. [www.cancernz.org.nz/reducing-your-cancer-risk/sunsmart/about-skin-cancer/skin-cancer-facts-and-figures/](http://www.cancernz.org.nz/reducing-your-cancer-risk/sunsmart/about-skin-cancer/skin-cancer-facts-and-figures/) Accessed 10.5.11

<sup>12</sup> Cancer Society of New Zealand Inc. 2005. Understanding Cancer. Melanoma: A guide for people with melanoma. Auckland: Cancer Society of New Zealand Inc.

## ***Solutions***

Reducing the incidence and impact of cancer in New Zealand will require a planned, systematic and co-ordinated approach to a range of activities across those factors that can be attributed to increasing the risk of cancer. Cancer control activities and services are undertaken by a wide range of government and non-government agencies and involve both a paid and a volunteer workforce. Their activities range from reducing our risk of developing cancer, to the care of those who will ultimately die from the disease.

The New Zealand Cancer Control Strategy is the first phase in the development and implementation of a comprehensive and co-ordinated programme to control cancer in New Zealand.<sup>13</sup> The overall purposes of the New Zealand Cancer Control Strategy are to reduce the incidence and impact of cancer, and to reduce inequalities with respect to cancer.

Cancer may be prevented (for instance if people do not smoke), detected early (for instance BreastScreen Aotearoa is a national screening programme to detect breast cancer early), or treated. Cancer may be treated by surgery, chemotherapy (drug treatment), immunotherapy, hormone treatment, or radiation treatment. It can be treated by either one or a combination of those treatments.<sup>14</sup>

## ***Data limitations***

The information provided in the tables is provisional data from the New Zealand Cancer Registry. The age standardised rates may change slightly once final data are published.

## ***Connections with other issues***

Smoking, Access to Primary Healthcare, Food Security, Activity Levels/Exercise, Breastfeeding, Green Prescriptions, Open spaces/Green spaces.

## ***Impact of the earthquakes***

As noted above the potential risk factors for cancers are broad and difficult to assess at this time due to the impact of the earthquakes. Some suggestion that smoking has increased in the population would identify a direct risk factor for lung cancer.

Prepared by Community and Public Health.

---

<sup>13</sup> Ministry of Health and the New Zealand Cancer Control Trust. The New Zealand Cancer Control Strategy. Wellington: Ministry of Health, 2003 <http://www.moh.govt.nz/moh.nsf/indexmh/nz-cancer-control-strategy>

<sup>14</sup> Cancer Society of New Zealand Inc. 2009. *Understanding Cancer. Bowel Cancer: A guide for people with bowel cancer.* Auckland: Cancer Society of New Zealand Inc.