

# Lung Cancer

## Fact Sheet

### What is lung cancer?

Lung cancer is a growth of abnormal cells inside the lung. These cells reproduce at a much faster rate than normal cells. When these cells grow out of control and form a mass, the mass is called a tumour. If the abnormal cells grow in the lung, this is known as a primary lung tumour.

### What are the two major types of lung cancer?

Cancers that begin in the lungs are divided into two major types - non-small cell lung cancer (NSCLC) and small cell lung cancer (SCLC) - depending on how the cells look under a microscope. NSCLC generally spreads to distant organs at a slower rate than SCLC. NSCLC is the most common type of lung cancer, accounting for almost 80 per cent of all lung cancers.

### What are the Canadian incidence and mortality rates of lung cancer?

- Lung cancer is the leading cause of death due to cancer in Canada.<sup>1</sup>
- Lung cancer is the second most frequently occurring cancer in Canada.<sup>2</sup>
- More than 21,000 Canadians (12,100 men and 9,200 women) were diagnosed with lung cancer in 2001.<sup>1</sup>
- Around 18,000 Canadians (10,700 men and 7,400 women) will die of it.<sup>1</sup>
- Approximately 45 per cent of lung cancer deaths occur among individuals under the age of 69.<sup>2</sup>

### Men

- Lung cancer represents one-third (33 per cent) of cancer deaths in men.<sup>1</sup>
- On average, 233 men will be diagnosed with lung cancer every week.<sup>1</sup>
- On average, 206 men will die of lung cancer every week.<sup>1</sup>
- During his lifetime, a man has a one in 11 chance of developing lung cancer and nearly a one in 12 chance of dying from it.<sup>1</sup>

### Women

- Almost one-quarter (25 per cent) of cancer deaths in women are due to lung cancer.<sup>1</sup>
- On average, 177 women will be diagnosed with lung cancer every week.<sup>1</sup>
- On average, 142 women will die of lung cancer every week.<sup>1</sup>
- During her lifetime a woman has a one in 19 chance of developing lung cancer and a one in 22 chance of dying from it.<sup>1</sup>

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## **Fact Sheet/2**

### **National trends**

Among women, lung cancer incidence and mortality rates continue their rapid increase and are now almost four times as high as they were 1972.<sup>2</sup> However, estimated rates for lung cancer incidence and mortality among women in 2001 is still much lower than for those in men.<sup>2</sup> Among men, lung cancer rates levelled off in the mid-1980s and have since consistently declined, reflecting men's drop in tobacco consumption beginning in the mid-1960s.<sup>2</sup> Following several decades of rapid increase, actual lung cancer incidence and mortality rates among women began to level off in 1992 reflecting a decline in smoking rates among women that began in the mid-1970s.<sup>2</sup>

### **What are the risk factors for lung cancer?**

- Tobacco smoking is thought to be responsible for nearly nine out of ten cases of lung cancer. The longer a person has smoked and the number of cigarettes smoked per day, the greater the risk. [If a person stops smoking before a lung cancer develops, the lung tissue slowly returns to normal. Smoking cessation at any age lowers the risk of lung cancer.]
- Workers exposed to industrial substances such as asbestos, radon, chromium compounds, arsenic, polycyclic hydrocarbons and chloromethyl have a significantly higher risk of developing lung cancer.
- Research demonstrates the link between passive smoking (second hand smoke) and lung cancer.

### **What are the symptoms of lung cancer?**

- Lung cancer is very difficult to detect at an early stage. Common symptoms include:
  - A new or changing cough, along with hoarseness or shortness of breath or increased shortness of breath during exertion.
  - Recurring episodes of lung infection, weight loss and swelling of the face or arms.

### **What are the treatment options for lung cancer?**

- The type of treatment provided is contingent upon many factors, including:
  - The type of cancer
  - Where the cancer first began growing in the body
  - What the cancer cells look like under a microscope
  - How far the cancer cells have spread, if at all
  - The general health of a patient.

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## Fact Sheet/3

There are various treatment options for lung cancer (with different aims), including:

- *Surgery* – An operation to remove all of the cancer. Depending on the type and stage of the cancer, surgery may be used to remove the tumour and some of the lung tissue around it (resection). If a lobe of the lung is removed, the surgery is called a lobectomy. If the entire lung is removed, the surgery is called a pneumonectomy.
- *Chemotherapy* – This is a course of anti-cancer drugs given to destroy cancer cells. They work by disrupting the growth of and killing cancer cells throughout the body.
- *Radiotherapy* – Involves the use of high-energy rays, given to kill or shrink the cancer cells. The radiation may come from outside the body (external radiation) or from radioactive materials placed directly in the tumour (internal or implant radiation). External radiation is most commonly used to treat lung cancer.
- *Photodynamic therapy (PDT)*– A type of laser therapy that involves the use of a special chemical that is injected into the bloodstream and absorbed by all cells. The chemical rapidly leaves normal cells but remains longer in cancer cells. A laser activates the chemical, killing the cancer cells that have absorbed it. It is used to control the cancer cells and unblock airways obstructed by a tumour. While it does not cure the cancer, it provides symptom relief.

### **What questions should be asked about any proposed treatment?**

When treatment is recommended, it is important to know whether the intention of this treatment is to cure or palliate. This decision is based on the cell type, the localization of the cancer cells, and whether it has spread beyond the lung tissue itself. It is also important to ask about risks or side effects from any proposed treatment so that the correct decisions regarding appropriate treatment can be made.

### **What is the outcome of lung cancer?**

The outcome of lung cancer depends on the cell type, how far it has spread, and the person's level of health and suitability for surgery.

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## **FOR ADDITIONAL INFORMATION, PLEASE CONTACT :**

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<sup>1</sup>Canadian Cancer Society, September 2001

<sup>2</sup> National Cancer Institute of Canada: Canadian Cancer Statistics 2001, Toronto, Canada, 2001