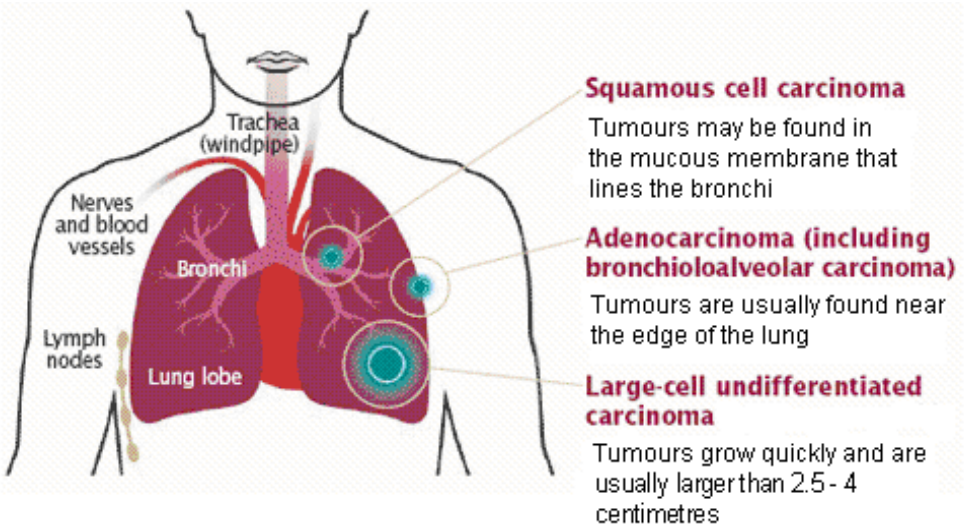
Lung cancer

What is lung cancer?

Lung cancer is characterised by the uncontrolled growth of abnormal cells inside the lung. There are two main forms of lung cancer: non small cell lung cancer* (NSCLC) and small cell lung cancer**. NSCLC is the most common form of lung cancer, accounting for approximately 85% of all cases[1]. Generally symptoms are not seen until the disease has spread to other parts of the body (metastasised), making lung cancer difficult to treat.



Prevalence

- Worldwide, lung cancer is the leading cause of cancer related death in men and the second leading cause of cancer related death in women[2].
- More than 1.5 million cases worldwide are diagnosed each year[2].
- Each day, more than 3,000 people die from lung cancer worldwide[2].

Risk factors

- Smoking is associated with 80% of cases in men and 50% of cases in women[3].
- Passive smoking: There is a 20% increase in the likelihood of developing lung cancer in spouses of smokers[4].
- A family history of lung cancer[5].
- Exposure to asbestos and radon gas[2].

Symptoms

Early stage*** lung cancer can often present without symptoms. However, symptoms of lung cancer include:

- Shortness of breath and / or wheezing.
- Chronic cough and / or repeated bouts of bronchitis.
- Hoarseness of voice, chest pain.
- Loss of weight and appetite for no apparent reason.

Management of NSCLC

Treatment options vary in accordance with the type and stage of the cancer – its size, position in the lung, whether it has spread to other parts of the body and the physical condition of the patient. In general the treatment options for NSCLC are:

- **Surgery:** Patients with early stage, localised NSCLC (that is cancer that has not spread to any surrounding tissue) may be successfully treated using surgery. Up to 70% of patients with early stage, localised NSCLC survive for at least five years after diagnosis if treated at this stage, with a proportion of these patients being cured[6].
- **Radiotherapy:** For patients whose cancer cannot be operated on, radiotherapy may be offered. Radiotherapy can be administered alone, or in combination with chemotherapy. In addition, radiotherapy also has a well established role in providing control and relief of the symptoms of lung cancer.
- **Chemotherapy:** The majority of NSCLC cases are diagnosed at an advanced stage[7] when the cancer has already spread to another part of the body and can no longer be successfully removed by surgery. In this instance chemotherapy is often used to treat patients. In spite of the use of chemotherapy as a first line treatment option, less than 5% of advanced NSCLC patients survive for five years[1].
- **Biologic therapies:** Avastin® (bevacizumab) and Tarceva® (erlotinib) are important therapies for NSCLC:
    - Avastin in combination with chemotherapy as first line treatment of NSCLC provides patients with outstanding survival time, and allows patients to remain free from progression of their disease for longer, without the side effects usually associated with chemotherapy such as hair loss, nausea and vomiting. Avastin is an antibody that specifically binds and blocks VEGF (vascular endothelial growth factor). VEGF is the key driver of tumour angiogenesis – an essential process of development and maintenance of blood vessels which is required for a tumour to grow and to spread to other parts of the body. Avastin's precise mode of action helps control tumour growth and metastases with only a limited impact on side effects of chemotherapy. By inhibiting angiogenesis, the outlook for patients with lung cancer can be substantially improved.
    - Tarceva is the first and only epidermal growth factor receptor (EGFR) oral targeted agent with a proven and significant survival and symptom benefit in a broad range of patients with advanced lung cancer, without the toxic side effects of chemotherapy. Tarceva identifies and targets tumour cells with a limited effect on normal cells, unlike chemotherapy drugs, which kill both healthy and cancerous cells. Tarceva improves a patient's quality of life by targeting

their cancer cells, reducing their symptoms of cancer and extending the time they survive without their cancer progressing.

* Non small cell lung cancer is a term used to describe a number of distinct forms of lung cancer, including squamous cell carcinoma, adenocarcinoma and large cell carcinoma
** Small cell lung cancer is a more aggressive form of lung cancer that is associated with smoking
*** Early stage refers to cancer that that hasn't spread to the lymph nodes and / or other parts of the body

End

To download images and videos relating to non small cell lung cancer please visit: www.thenewsmarket.com

References

1. Allen J et al. J Natl Compr Canc Netw 2008; 6 (3): 285-93.
2. Garcia M et al. Global Cancer Facts & Figures. Atlanta, GA: American Cancer Society, 2007.
3. Mackay J et al. The Cancer Atlas. Atlanta: American Cancer Society, 2006.
4. Dobson R. Brit Med J 2004; 10: 328-70.
5. Amos CI et al. Recent Results Canc Res 1999; 151: 3-12.
6. West H et al. UpToDate.com Patient information. Last accessed 15 September 2009 at http://www.uptodate.com/patients/content/topic.do?print=true&topicKey=cancer/2461&view=print.
7. University of Colorado Cancer Care. Setting the Gold Standard. Last accessed 15 September 2009 at http://www.uccc.info/for-healthcare-professional/cancer-center/news-publications/c3/c3-spring2009/c3-spring2009-collaboration.aspx.