

Case Statement

# Lung Cancer

Update for 2006



THE  
AUSTRALIAN  
**LUNG**  
FOUNDATION

Australia



We are pleased to present to you The Australian Lung Foundation's 2006 Case Statement Update on Lung Cancer in Australia.

Much of the information contained in the original Case Statement remains relevant and has been reproduced in this document. However, there are areas that required updating as a result of new research or practice. Changes have been made to the body of the text that reflect more recent data. In addition, further substantive changes have been highlighted by a shaded box entitled "2006 Update".

Lung cancer is the leading cause of cancer death. The number of cases has been steadily rising and about 8,000 Australian men and women have been diagnosed with the disease each year. The number of men affected by lung cancer appears to be plateauing but women are increasingly diagnosed with the disease. Survival rates five years after diagnosis are still less than 15%.

Tobacco smoking causes the vast majority of lung cancers. Both current smokers and former smokers are at risk. Many of those who are currently being diagnosed with lung cancer began smoking when they were teenagers, at a time when smoking rates were high. The addictive properties of cigarettes make it difficult to stop smoking early enough to prevent cancer development.

Individual and community attitudes to lung cancer have tended to be negative, partly because of the association with smoking. We need to recognise that people with lung cancer may feel they have a self-inflicted illness and that they are perhaps less worthy of medical attention than others even though they may have quit smoking many years before diagnosis. Furthermore, health care providers should take care not to be inappropriately judgemental and we should demand continuing improvements in lung cancer knowledge and care for our patients.

There is now a renewed interest in lung cancer. Lung cancer is largely preventable given effective tobacco control and smoking prevention and cessation strategies. There have been incremental advances in the clinical management of lung cancer, such as the development of the new national lung cancer guidelines and more are expected including novel therapies and treatment approaches. Given the currently poor outcomes from lung cancer, there remains considerable scope for improvement.

The Australian Lung Foundation is committed to reducing the large burden of disease and impact of lung cancer. It is a challenge that will require a collaborative effort from the community, research institutions, health professionals, government and other stakeholders. In order to influence health outcomes, the effort to combat lung cancer will have to be sustained and it will likely be costly. However the costs of inaction, both individually and for the community, mandates this concerted approach.

Lung cancer needs our serious attention. We strongly encourage you to support The Australian Lung Foundation lung cancer initiatives.

Dr Bob Edwards FRACP  
National Chairman  
The Australian Lung Foundation

Dr Kwun Fong MBBS FRACP PhD  
Chairman  
The Australian Lung Foundation Lung  
Cancer Consultative Group

November 2005

© The Australian Lung Foundation 2005



# contents

<b>Foreword</b>	<b>2</b>
<b>Lung Cancer in Australia</b>	<b>3</b>
<b>What is lung cancer?</b>	<b>4</b>
How does lung cancer develop?	4
The clinical course of lung cancer	4
<b>Who develops lung cancer?</b>	<b>5</b>
Risk factors	5
Genetic susceptibility	5
<b>The size of the problem</b>	<b>6</b>
A global epidemic	6
Mortality, morbidity & burden of disease	6
Changing patterns of disease	7
Lung cancer in indigenous Australians	8
<b>Cost to the community</b>	<b>9</b>
Direct costs	9
Indirect costs	9
Lung cancer in the context of tobacco-related diseases	9
Impact on the individual	9
<b>What issues does the lung health community believe to be important?</b>	<b>10</b>
<b>Prevention</b>	<b>10</b>
Smoking	10
Other risk factors	11
<b>Early detection</b>	<b>11</b>
<b>Management</b>	<b>11</b>
Recent advances	11
Issues to be resolved	12
<b>Closing the funding gap</b>	<b>13</b>
<b>What is being done about lung cancer?</b>	<b>13</b>
Global response	13
Local response	13
What is the Government's current view of lung cancer?	14
<b>Action by The Australian Lung Foundation</b>	<b>14</b>
<b>Lung cancer - where do we want to go?</b>	<b>15</b>
<b>References</b>	<b>16</b>
<b>Acknowledgements</b>	<b>17</b>



## FOREWORD

A century ago, primary lung cancer was very rare and some experts seriously argued that it did not exist at all. It is now the leading cause of cancer deaths in Australia and worldwide. Despite treatment advances, survival after the diagnosis of lung cancer is less than with any other common tumour. Sadly, our level of support and investment towards strategies to improve this situation have not been commensurate with the impact lung cancer has on affected individuals, their families and the broader community.

If we were able to reduce smoking to very low levels, lung cancer rates would similarly decrease over time. However this will not happen in our lifetime for two reasons. Firstly, the current investment in tobacco control programs is inadequate. Secondly, many former smokers in our community will remain at increased risk of lung cancer for the rest of their lives. Consumers, health care providers and decision makers must all adopt a fresh approach to lung cancer.

We need greater optimism, but an optimism that is based on real commitment and real action. The elimination of lung cancer must be the aim, but in the meantime there will be many people with lung cancer who deserve improved standards of care and better health outcomes. For them, we all must work towards new curative therapy but also invest effort and funding in treatment and research that may lead to extension of life without cure or more effective symptom control without extension of life. This challenge - to determine the value that we put on the treatment of incurable disease - will be a great one.

There is an unfortunate and inappropriate stigma surrounding smoking-related diseases, as if people who made poor lifestyle choices in their youth have somehow elected to have a life-threatening disease. Nobody chooses or deserves to get lung cancer. Lung cancer is not and will never be an attractive disease. Lung cancer patients do not make the covers of glossy magazines. Those who are affected should have our sympathy for their immediate suffering and our reassurance that as a community we are doing all we can to find solutions.

Associate Professor Matthew Peters FRACP

NSW Chairman, Action on Smoking and Health

The Australian Lung Foundation representative and President, Global Lung Cancer Coalition

## LUNG CANCER IN AUSTRALIA

### LUNG CANCER: A CONSIDERABLE LONG-TERM BURDEN

Lung cancer is ranked 3rd in terms of burden of disease for males and 11th for females in 1996. By 2016, it is predicted to rank 4th in terms of burden of disease for males and 5th for females.<sup>1</sup>

The burden of disease is a measure of the healthy years lost due to an illness or injury. It includes not only an assessment of number of years lost due to premature mortality but also the number of years of healthy life lost due to disability.

#### 2006 Update:

The epidemiology of lung cancer in Australia reflects the historical trends in smoking prevalence in the past due to the lag time between smoking and cancer onset. For women, the number of new cases of lung cancer is projected to increase by 38% from 2,891 in 2001 to 4,001 in 2011 (95% prediction interval 3,762-4,241). For men, new cases of lung cancer is projected to increase by 17% from 5,384 in 2001 to 6,301 in 2011 (95% prediction interval 5,794-6,898).<sup>2</sup>

### WE NEED TO WORK NOW TO REDUCE THE BURDEN FROM LUNG CANCER IN THE FUTURE

- High prevalence – about 8,000 new cases each year
- High mortality - leading cause of cancer death
- Health costs: \$136 million p.a. and likely to rise
- Heavy emotional & economic burden on families
- Increasing health problem for women
- Negative perceptions
- Limited treatment options
- Smoking cessation strategies must be better implemented
- Limited attention from community, health professionals and government

## WHAT IS LUNG CANCER?

Lung cancer is a malignant tumour of the bronchi, the tubes through which air flows to the lungs, or a tumour of the spongy lung itself. The lungs can also be affected by so-called secondary lung tumours that have spread from elsewhere in the body such as the breast or bowel. Unchecked, primary lung cancer grows within the lung and spreads to other major organs including the brain, bones and liver. There are two main types of lung cancer, small cell lung cancer and non-small cell lung cancer.

### How does lung cancer develop?

All cancers are the result of normal cells undergoing a series of genetic changes that cause uncontrolled growth, invasion and disruption of normal tissue, and spread to other parts of the body. Our understanding of the cellular and molecular events that cause this uncontrolled growth is still developing but we know there is often a sequence of events involving changes in the genes of cells. It is believed that several different genes must be abnormal before a lung cancer develops.

Cancer-causing agents such as tobacco smoke can initiate and promote the transformation of healthy cells into malignant cells but other factors are also involved in the progression to a cancer.

We do not know exactly which of the 4,000 chemical substances in tobacco smoke cause the genetic changes that are important for lung cancer. Importantly however, the growing lung in childhood and adolescence may be especially vulnerable to genetic injury. It is clear that the younger the age at commencement of smoking, the higher the later risk of lung cancer.

### The clinical course of lung cancer

At present the majority of lung cancer patients die within 12 months of their diagnosis. However treatment options and the outcome of lung cancer depend on the cell type, the extent of the disease, the person's overall health and their suitability for surgery.

Only about 25% of patients have tumours diagnosed early enough for curative surgery to be attempted. However other treatment strategies including chemotherapy, radiotherapy and laser therapy can relieve symptoms and prolong life when a cure is not possible.

Data from New South Wales shows five-year survival with localised lung cancer to be 23.2% compared with 1.0% of cases where the disease had spread to distant organs<sup>3</sup>. Overall national five-year survival is about 12% and survival 7 years after diagnosis was only 9.7% for males and 12.0% for females in 1992-1997, the most recent period for which such survival data are available.<sup>4</sup>

Better combinations of chemotherapy and radiotherapy have improved survival one to two years after diagnosis but the long-term benefit is uncertain and the response rarely meets a patient's initial hopes or expectations. Unfortunately, most patients with lung cancer will have advanced disease at the time of diagnosis and their cancer will progress in spite of the best available treatment.

## WHO DEVELOPS LUNG CANCER?

**Smoking causes nearly all lung cancer.**

**Half of the people currently being diagnosed with lung cancer are former smokers.**

### Risk factors

Up to 90% of lung cancer is related to active cigarette smoking. Risk is related to the pattern of smoking and increases with:

- earlier age of commencement
- longer duration of smoking
- greater number of cigarettes smoked

Which smoker will develop lung cancer cannot be predicted. People who successfully stop smoking reduce their subsequent risk of lung cancer but remain at higher risk than those who have never smoked. About half of the people currently being diagnosed with lung cancer are former smokers but it is likely that their cancer would have developed at a younger age had they continued to smoke. With regard to lung cancer risks, quitting at any age is beneficial, and the largest reduction in lung cancer risk occurs in those who quit the earliest.<sup>5</sup>

Pipe and cigar smoking also increase lung cancer risk but at a lower level than cigarette smoking. Cannabis (marijuana) contains many of the same carcinogens as tobacco and may also increase the risk of lung cancer. Inhalation of environmental tobacco smoke (passive smoking) has been shown to cause lung cancer especially for people heavily exposed in workplaces such as bars and restaurants.

Smokers with other lung disease such as chronic obstructive pulmonary disease (COPD) and diffuse lung fibrosis have a greater risk of lung cancer. Asbestos is the most important occupational risk factor and the risk increases with the level of exposure. Any asbestos-associated risk is greatly increased by smoking. Silica exposure, also common in Australia, is carcinogenic but the effect is less than smoking or asbestos and the interaction with smoking is uncertain.

### Genetic susceptibility

There is growing evidence that women may be more susceptible to the cancer-causing effects of smoking than men. They develop lung cancer at a younger age than men who have been smoking for the same length of time.

There may be other examples of variability in the genetic susceptibility to smoking but more research is needed.

Risk factors for lung cancer

- tobacco smoking**
- inhalation of environmental tobacco smoke (passive smoking)**
- history of previous lung disease**
- medical radiation**
- occupational exposure to dusts and fibres e.g. asbestos, silica**

smoking responsible  
for up to 90% of  
lung cancers

other factors share remaining 10%



## THE SIZE OF THE PROBLEM

**Lung cancer is the leading cause of cancer death.**

**More than half of all lung cancer patients die within the first year after diagnosis**

### A global epidemic

Currently about 1.3 million people worldwide are affected by lung cancer and millions more people are at risk. Yet 100 years ago lung cancer was a rare disease. It was not even classified as a separate disease entity until 1930. Dr Alton Ochsner, a thoracic surgeon, was one of the first US figures to associate smoking with the increasing incidence of lung cancer.

“When I was a junior medical student in 1919, the two senior classes were asked to witness the autopsy of a man having died of carcinoma of the lung because ... the Professor of Medicine thought that we might never see another such case as long as we lived. Being young and impressionable this impressed me very much. It was not until 1936, 17 years later, that I saw my next case of bronchogenic carcinoma and then, in a period of 6 months, I saw 9 cases... . All the patients were men, heavy smokers and had begun smoking at the beginning of World War 1.”

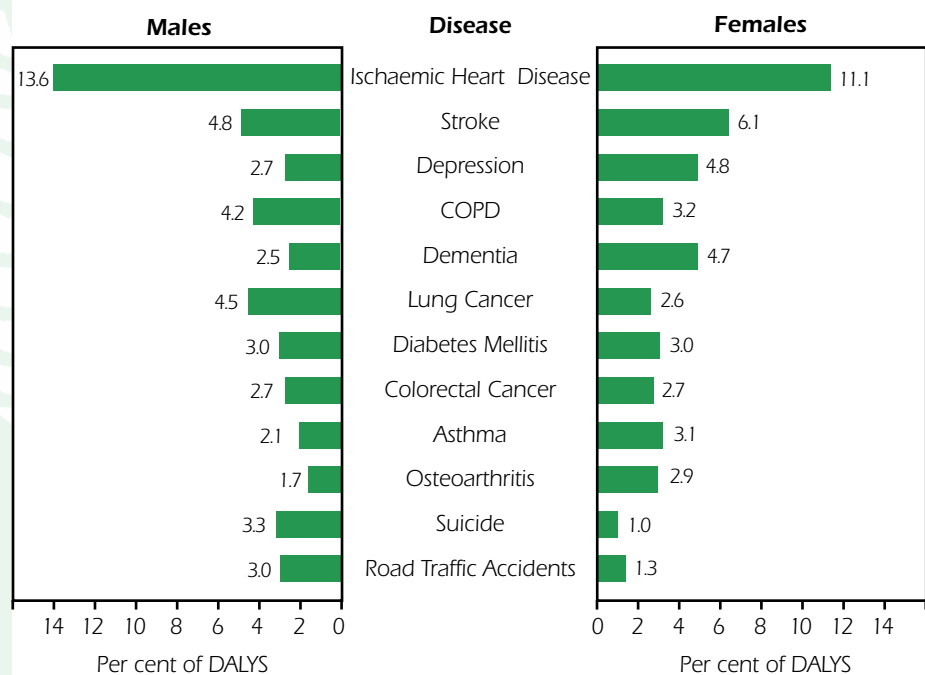
Alton Ochsner, *Chest* 1971; 59:358-9.

The impact of lung cancer will escalate worldwide as smoking rates increase in the populous nations of Asia and Africa. It is estimated that 500 million people presently alive will die of smoking-related disease and about 30% of these will be from lung cancer.

### Mortality, morbidity & burden of disease

The major impact of lung cancer is through premature mortality rather than as a cause of long-term illness. Each year in Australia lung cancer is responsible for about 30,000 years of life lost in males and 15,000 years of life lost in females before the age of 75.<sup>6</sup>

### Leading causes of Disease Burden by Sex, Australia 1996



**Note:** DALYs are disability adjusted life years. Proportions of total DALYs for each sex are shown.

**Source:** Mathers C, Vos T, Stevenson C 1999. The burden of disease and injury in Australia. AIHW cat.no PHE 17. Canberra: AIHW.

**Lung cancer is no longer a disease confined to older men. Women are increasingly affected.**

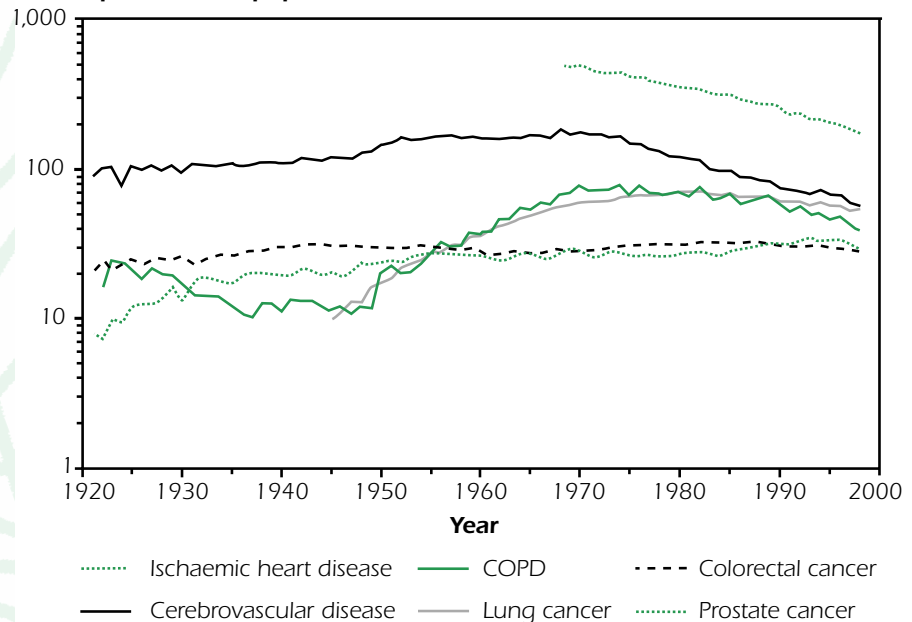
### Changing patterns of disease

In 1997, 5,333 Australian males and 2,500 females were diagnosed with lung cancer.<sup>7</sup> In 2000, lung cancer caused the deaths of 4,587 men and 2,291 women. This gender pattern reflects smoking behaviour decades ago when men were almost twice as likely to smoke as women.

However smoking behaviour has changed and lung cancer statistics provide evidence of the benefits of lower smoking rates. Lung cancer incidence in men has been falling by 1.5% per annum and mortality in men by 2.1% per annum. The decline in incidence has been most marked in younger men.<sup>8</sup> Meanwhile, the incidence of lung cancer in females is increasing by approximately 1.9% per annum and mortality by 1.4% per annum. It is no longer unusual for doctors to see relatively young women with young families affected by lung cancer.

### Trends in major causes of death, males, 1921 to 1998

#### Deaths per 100,000 population



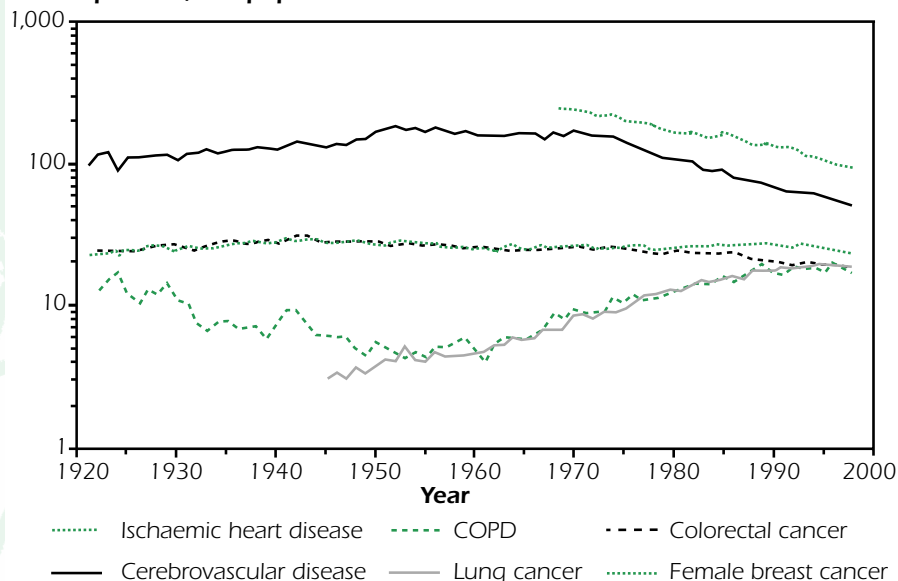
#### Notes

1. The time series for ischaemic heart disease begins in 1968 due to coding changes between the ICD-8 and previous versions of the ICD.
2. The time series for chronic obstructive pulmonary disease (COPD) breaks at 1979 due to coding changes between the ICD-9 and previous versions of the ICD.

**Source:** AIHW National Mortality Database

**Trends in major causes of death, females, 1921 to 1998**

**Deaths per 100,000 population**

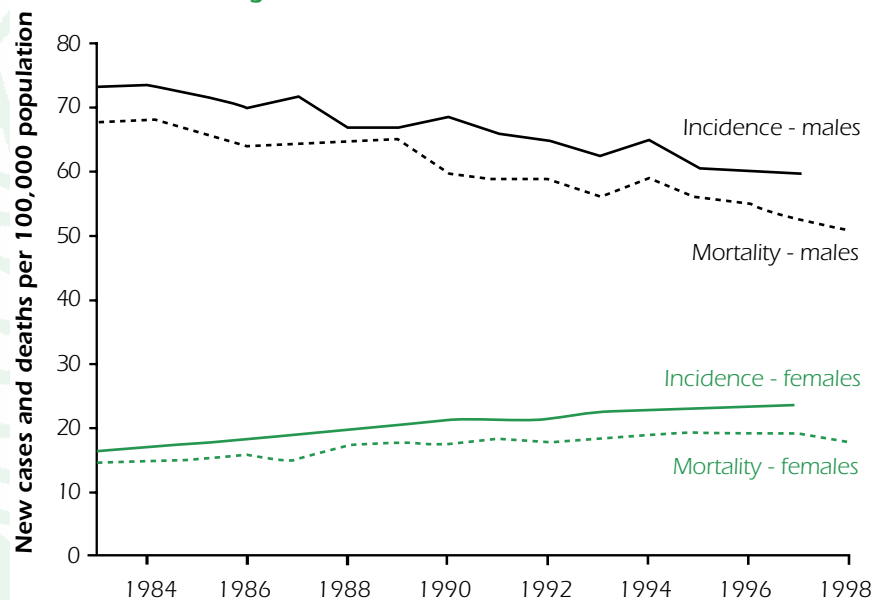


**Notes:**

- 1. The time series for ischaemic heart disease begins in 1968 due to coding changes between the ICD-8 and previous versions of the ICD.
- 2. The time series for chronic obstructive pulmonary disease (COPD) breaks at 1979 due to coding changes between the ICD-9 and previous versions of the ICD.

**Source:** AIHW National Mortality Database

**Trends in age-standardised incidence and mortality rates for cancer of the lung, Australia**



Source: Cancer in Australia 1997, AIHW & AACR 2000

**Lung cancer in indigenous Australians**

**Aboriginal smoking rates are twice that of the general population.**

About half (54% in males, 46% in females) of the adult Aboriginal population are smokers compared to about 17.4%<sup>9</sup> in the general community. With many smoking by 14 years of age, the age of uptake of smoking is also younger in Aboriginal communities compared to the general population.<sup>10</sup> However lung cancer is not the major smoking-related health issue for indigenous Australians. This is not to say it does not occur, but reflects the multitude of other health problems that cause illness and claim lives at a young age. Importantly, access to services is a major practical constraint for remote indigenous patients.



## COST TO THE COMMUNITY

**Health system expenditure on lung cancer was over \$107 million per annum in 1993-94. More money will have to be spent to increase survival with lung cancer.**

### Direct costs

The Australian Institute of Health and Welfare ranks lung cancer as the fourth most expensive cancer type behind skin, colorectal and breast cancers. Health system expenditure directed to lung cancer in 1993-94 was estimated at a total of \$107 million. More than three quarters of that expenditure was in the provision of hospital care.

Estimated direct costs of lung cancer	(\$million)
Hospital - public and private hospitals	81
Medical	7
Pharmaceutical	3
Other - includes prevention and research	17
<b>Total</b>	<b>107</b>

Two major factors reduce the costs associated with lung cancer. The first is that the lack of availability of effective treatment for the majority of patients limits expenditure to relatively cheap forms of supportive care. Secondly, survival from lung cancer is so short that costs are constrained. If the costs per death for lung cancer matched those for colon cancer, the \$107 million would blow out to over \$300 million.

### 2006 Update:

In 2000-2001, the total health expenditure on lung cancer was estimated by the Australian Institute of Health and Welfare to be \$136 million. This reflects the increasing numbers of lung cancer cases and a 16% increase in per case cost between 1993-4 and 2000-2001. This compares with a 74% increase in per case cost for another smoking related cancer (mouth and oropharyngeal cancer).<sup>12</sup>

### Indirect costs

Estimations of direct health expenditure do not represent the total economic impact of a disease. Substantial indirect costs can include those related to absenteeism, lost productivity or early loss from the workforce; out of pocket expenses in accessing health services; and the economic and emotional burden of premature mortality and reduced quality of life on family and carers. These costs are difficult to quantify but should not be forgotten when we consider the impact of lung cancer in Australia.

**Lung cancer is almost entirely preventable.**

### Lung cancer in the context of tobacco-related diseases

Tobacco smoking is responsible for the vast majority of lung cancers. Smoking costs the community about \$15.5 billion each year in health care and other related costs (representing \$21 billion in direct and indirect costs less the \$5.5 billion in revenue from excise and tobacco related taxes).<sup>13</sup> It is the risk factor associated with the greatest burden of disease in Australia, responsible for an estimated 10% of total disease burden, 12% in males and 7% in females.<sup>14</sup> About one-third of the 21,000 deaths estimated to be caused by smoking in Australia each year are from lung cancer.

### Impact on the individual

Lung cancer is so common that almost everyone knows someone who has suffered with the disease and probably died. Therefore, the prospect or reality of a diagnosis of lung cancer can be a very distressing experience for both the individual and their family. Because quitting smoking reduces the lung cancer risk substantially, but not entirely, development of lung cancer is particularly cruel for the many former smokers who have responded to public health messages and managed to quit.

People will react differently to their diagnosis. Some may find it difficult to cope and become anxious, depressed or angry. The reality of advanced disease at the time of diagnosis and rapid progression in all too many cases is a huge psychological challenge to those affected. Emotional support, as well as being informed about the disease, its treatment, and the necessity or otherwise of hospitalisation, can be very helpful in assisting patients and their families to come to terms with the diagnosis.

## WHAT ISSUES DOES THE LUNG HEALTH COMMUNITY BELIEVE TO BE IMPORTANT?

Delays in diagnosis and treatment, limited treatment options and inadequate investment into lung cancer research have contributed to the poor outcomes experienced by most lung cancer patients. The Australian Lung Foundation has consulted medical and allied health professionals with a special interest in lung cancer on the issues that need to be pursued more vigorously in a national effort to improve lung cancer management.

Prevention is paramount but cannot be the only approach taken. To improve lung cancer outcomes we also have to focus on improving both survival and quality of life.

Where there is effective lung cancer treatment the attitude to treatment of lung cancer patients must be positive. There must be:

- elimination of inappropriately negative attitudes about the value of treating lung cancer patients in general
- appropriate early referral to accessible high quality treatment
- multidisciplinary collaboration in the consideration of treatment options
- safe delivery of effective care
- adequate psychosocial support (for further information see NH&MRC *Clinical Practice Guidelines for Psychosocial Care for Adults with Cancer* <http://www.nhmrc.gov.au/publications/synopses/cp90syn.htm>)
- readily available relevant diagnostic tests and treatment.

The fundamental need of post-operative patients with high risk of relapse, and the many people who present with advanced disease, is for more effective treatments both to modify the course of the disease and to improve symptom control.

### Prevention

#### Smoking

Smoking cessation reduces the risk of lung cancer and is beneficial in every individual of any age. Patients who have already developed lung cancer also benefit. Effective tobacco control and smoking prevention strategies are required to reduce lung cancer prevalence and deaths in the short and long term.

Fewer than 5% of doctors smoke. The Australian Lung Foundation believes that we should be able to achieve smoking rates of 10% or less with appropriate efforts. Well-funded comprehensive tobacco control programs in California and Massachusetts have seen tobacco consumption fall at twice the rate elsewhere in the US.

Strategies such as reducing the affordability and availability of tobacco products, restrictions on tobacco advertising and promotion, and regulation to reduce exposure to environmental tobacco smoke should continue and are largely supported by the community. These strategies can be effective without stigmatising smokers. Well funded, planned and carefully analysed public media campaigns are essential, as is the availability of affordable access to nicotine replacement therapies and other pharmaceutical support for smoking cessation. New approaches are clearly needed where smoking prevalence is extremely high such as in Aboriginal and Torres Strait Islanders, young people, those from culturally and linguistically diverse backgrounds and low-income earners.

#### 2006 Update:

Due to tobacco control efforts, the prevalence of smoking is declining generally in Australia. However, there appear to be groups with persistently high smoking habits that require more intensive prevention and cessation efforts to further reduce the burden from smoking. New approaches are clearly needed in groups where smoking prevalence remains extremely high. These include Aboriginal and Torres Strait Islanders, some groups of recent migrants and the economically disadvantaged.

**Prevention includes both effective smoking cessation measures and preventing young people from commencing smoking.**



**Early detection should improve survival. Screening for lung cancer needs urgent evaluation and would complement tobacco control efforts.**

### Other risk factors

Effective ongoing minimisation of exposure to other known risk factors, such as asbestos exposure, is essential.

### Early detection

Given the often devastating consequences of late diagnoses of lung cancer, we need to increase our efforts towards early detection. However mass screening by chest x-ray has failed to show a conclusive benefit. More recent studies using computerised tomography (CT) scans to screen for lung cancer have been more promising. CT scans can detect early lung cancers in both current and former smokers and these are generally operable. However the effectiveness of CT can be diminished in populations where there are many benign nodules.

It is premature to advocate mass screening for lung cancer by CT scan in Australia. However the absence of effective treatment for advanced lung cancer increases the moral imperative for the earliest possible evaluation of lung cancer screening in high-risk populations in Australia. It is critical that we begin to evaluate screening in Australia, initially to determine whether or not benign nodules compromise the efficiency of such screening.

Meanwhile, there is no data that supports a role for commercial chest CT scans on the basis that early cancer will be detected. Ad hoc screening contributes nothing to our understanding of effective early detection and in the absence of effective algorithms for management may be hazardous.

An issue related to early detection is the need for research that might identify smokers, past or present, at particularly high risk of subsequent lung cancer. By narrowing down the search, other means of early detection will become feasible, more effective and safer.

### 2006 Update:

A large randomised control trial of low dose CT screening is underway in USA. To our knowledge, there are no current trials of screening in the Australian population.

### Management

There have been improvements in the management of lung cancer over the last decade and these are driving the change from a largely nihilistic approach to more active, positive and holistic management of the disease. Yet doctors who face patients with lung cancer are still frustrated that they cannot offer curative treatment to more people. Symptom control and quality of life are important considerations for patients with incurable disease but even these modest goals are not achieved in a significant proportion of patients.

### Recent advances

- Overseas evidence suggests access to multidisciplinary management of lung cancer can improve survival. Multidisciplinary care includes physical and psychological treatments, palliative care and other supportive therapy.
- Positron emission tomography (PET) scanning is much more effective than CT or bone scans in identifying cancer that has spread beyond the lungs. Research at the Peter McCallum Cancer Centre in Melbourne has found that up to 30% of lung cancer patients thought to have local disease before assessment with PET, actually had metastases in the bone or other organs.<sup>15</sup> PET scanning allows more accurate staging of disease ensuring that patients are offered the most appropriate choice of treatment.
- Different regimens of chemotherapy and radiotherapy (e.g. dose, duration of treatment, time between treatments) and combinations of surgery, chemotherapy and radiotherapy are producing better chances of cure. Doctors and nurses are more skilled in administering these treatments so that side effects are minimised.

**Treatment advances are happening but access and resource issues will also influence health outcomes.**

- A number of new and targeted biological agents that interfere with tumour cell growth are in clinical trials. Their specific mode of action should help improve treatment outcomes with less toxicity than traditional therapies.
- Minor surgical techniques such as laser therapy and the use of stents are now available to unblock or maintain airways. These treatments can alleviate distressing symptoms and extend life.
- The development of Australia's *Clinical Practice Guidelines for the Prevention, Diagnosis and Management of Lung Cancer* provides a useful resource for health practitioners and helps ensure all patients receive optimal treatment. ([www.nhmrc.gov.au/publications/synopsis/cp97syn.htm](http://www.nhmrc.gov.au/publications/synopsis/cp97syn.htm))

#### **2006 Update:**

- Modern technology in the form of newer bronchoscopic techniques including fluorescent bronchoscopy and endobronchial ultrasound may make the diagnosis and staging of lung cancers more effective.
- There is increasing evidence supporting the role for multimodality therapy in improving outcomes, including concurrent chemoradiation for locally advanced disease, and adjuvant chemotherapy following surgery in some early stage disease.
- There is emerging evidence for the role of targeted therapies and some have now reached the clinical arena. Much research is now focused on learning how to harness the advantages of the new therapies in conjunction with or to complement effective conventional therapies. Some cancers may respond better than others to certain biologically based targeted therapies.
- The ALF has successfully assisted in the creation of a national lung cancer clinical trials group, aimed at performing high quality scientific trials in lung cancer to address questions which will impact on the Australian population.
- The development of the role of the specialist lung cancer nurse coordinator appears to lead to improved psychosocial support and streamlining of care.

#### **Issues to be resolved**

- The Australian health care system with its emphasis on fee-for-service does not have an easy means of funding multidisciplinary care. There is limited funding for important allied health services.
- Although it has been shown to be a cost-effective management strategy in lung cancer staging, PET is not easily available due to the high cost and limitations to access.
- There is an undersupply of radiotherapy services which delays treatment for many cancer patients including those with lung cancer. It has been calculated that the optimal rate of radiotherapy use in lung cancer is 76%, but actual rates are below 60%.<sup>16</sup>
- Combination therapy can improve patient outcomes in lung cancer, and the challenge is how to resource and deliver the additional treatments in the context of our health care system and budget constraints.
- New biological agents to treat lung cancer are expensive. The challenge for the community will be to ensure equity of access to effective new treatments.
- It is likely there will be continuing advances in health technology including imaging, diagnosis and therapies. These advances may dramatically change lung cancer care and bring large gains, but at potential high costs. It will be essential to learn how to ensure that new effective and cost effective technologies for improving lung cancer outcomes benefit the Australian community in a timely manner.
- Access to specialist treatment services is a generic problem for people from regional and rural Australia.
- Infrastructure to support a specific clinical trials group for lung cancer would facilitate the design and conduct of research necessary to extend the clinical evidence base.

**There are specific issues in Australia that need to be addressed to ensure optimal and cost-effective treatments for people with lung cancer.**

### Closing the funding gap

At present, lung cancer does not generate health costs nor attract research funding commensurate with its importance as the leading cause of cancer deaths. There is a funding gap that needs to be bridged via the prompt availability of new cancer treatment agents and increased funding for lung cancer research.

## WHAT IS BEING DONE ABOUT LUNG CANCER?

### Global response

Lung cancer is the leading cause of cancer deaths worldwide yet there is no political environment in which it is accorded an appropriate level of priority. One exception is The World Health Organisation which has promoted the Framework Convention for Tobacco Control (<http://www.who.int/tobacco/framework/en/>) to assist all countries with guidance as to a minimum effective strategy for reducing the future lung cancer burden.

In order to address this problem, the Global Lung Cancer Coalition (GLCC) was established in September 2001. The GLCC and its member organisations such as The Australian Lung Foundation have recognised the burden of this disease and are committed to increasing awareness about this important public health problem.

The GLCC has set specific objectives that include:

- placing lung cancer squarely on the global health agenda
- reducing the stigma of lung cancer
- empowering lung cancer patients to take a more active role in their care
- effecting change in legislative and regulatory policies to optimise treatment and care of lung cancer patients.

The World Health Organisation has promoted the Framework Convention for Tobacco Control to assist all countries with guidance as to a minimum effective strategy for reducing the future lung cancer burden.

### Local response

Cancer councils around the nation have for many years provided important information about lung cancer and treatment options as well as support groups for patients and their carers. We are all aware of the important role that survivors of breast cancer play in effective lobbying for improved services for breast cancer patients. Frailty, progressive illness and early mortality mean that it is not easy to assemble a similar group for lung cancer and these issues have denied interested organisations and the community, the compelling advocacy that survivors of other common cancers have been able to provide.

The need to improve access to effective clinical practice management strategies for early and established disease is pressing. National clinical practice guidelines for the management of lung cancer, produced by a multidisciplinary working party of the Australian Cancer Network are now available ([www.nhmrc.gov.au/publications/synopses/cp97syn.htm](http://www.nhmrc.gov.au/publications/synopses/cp97syn.htm)). These clinical practice guidelines cover topics such as prevention and screening, initial assessment, treatments for non-small cell lung cancer and small cell lung cancer of all stages, alternative and complementary therapies, supportive care and palliative care. Uniform implementation of these guidelines should improve the decisions of healthcare professionals, empower consumers and provide direction for further research and funding.

A two page summary of the NH&MRC lung cancer guidelines is also available for GPs and other health workers and is available on The Australian Lung Foundation website ([www.lungnet.com.au](http://www.lungnet.com.au)).



### What is the Government's current view of lung cancer?

Cancer control is a National Health Priority Area and lung cancer is one of eight cancers that have been targeted for action. However while lung cancer is potentially one of the most preventable cancers, expenditure on the tobacco control strategies that could help achieve that goal is disproportionately low.

The federal budget commitments to major public health programs (average annual commitments for 1994-95 to 2002-03), compared with deaths from associated causes, 1998, were:<sup>17</sup>

- \$264,706 per death from AIDS on AIDS control
- \$20,172 per death from breast cancer on breast cancer-related programs
- \$4,525 per death from asthma on asthma management
- \$1,438 per death from falls on falls prevention
- \$337 per death from tobacco-related disease on tobacco control.

In 1999-2002 the budget commitment to tobacco control decreased further to \$112 per death. Despite the recent deaths from lung cancer of some high profile public figures, there has been no funding stimulus. The governmental response has been one of relative inaction.

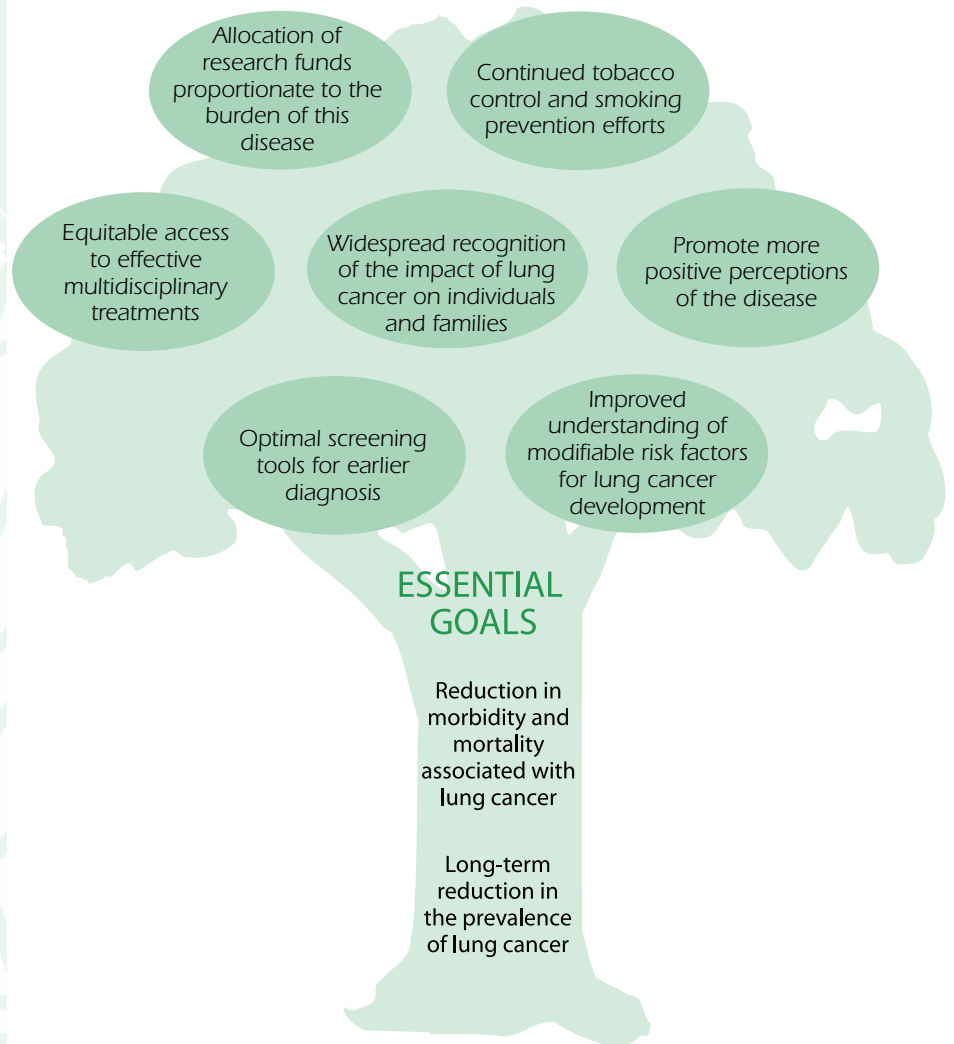
## ACTION BY THE AUSTRALIAN LUNG FOUNDATION

In making the comparisons in this document, there is no intent to understate the importance of other diseases. However, The Australian Lung Foundation has a longstanding interest in lung cancer and is committed to furthering the collaborative effort necessary to reduce the impact of this disease.

Initiatives include:

- LungNet** (established 1997) – an information service and network of lung support groups (currently over 100 nationwide). Services include a toll free 1800 number for information and referrals to support groups and pulmonary rehabilitation programs, assistance with establishment of support groups, state-based education seminars and a self-help newsletter for patients and carers.
- Lung Cancer Consultative Group** (established 2001) - a multidisciplinary group assisting the ALF with the development of lung cancer-related projects. It has a broader based Lung Cancer Advisory Group to ensure that all views are represented.
- Australasian Lung cancer Trials Group (ALTG)** (established 2004) - a broad based inclusive multidisciplinary group of clinicians, scientists and those interested in lung cancer clinical trials collaborating to undertake the highest quality scientific trials in Australia and New Zealand.
- National Lung Cancer Patient Support Network** (established 2004) the ALF in conjunction with other stakeholders including cancer councils and other consumer organisations are establishing a national collaboration to develop initiatives aimed to improve the support and help available to people with lung cancer and their carers and families.

# LUNG CANCER - WHERE DO WE WANT TO GO?



**ESSENTIAL GOALS**

Reduction in morbidity and mortality associated with lung cancer

Long-term reduction in the prevalence of lung cancer.

**ESSENTIAL GOALS**

Reduction in morbidity and mortality associated with lung cancer

Long-term reduction in the prevalence of lung cancer

**To become involved please contact:**

Mr William Darbishire  
 Chief Executive Officer  
 The Australian Lung Foundation  
 Level 1, 473 Lutwyche Road  
 (PO Box 847)  
 Lutwyche Queensland 4030

Freephone 1800 654 301  
 Phone 07 3357 6388  
 Fax 07 3357 6988

Email: [enquiries@lungnet.com.au](mailto:enquiries@lungnet.com.au)  
 Website: [www.lungnet.com.au](http://www.lungnet.com.au)



## REFERENCES

1. Department of Human Services. Victorian Burden of Disease Study Melbourne: DHS 1999
2. Australian Institute of Health and Welfare Cancer incidence projections Australia 2002-2011
3. Supramaniam D et al. Survival from cancer in NSW in 1980 to 1995 Sydney: NSW Cancer Council 1999
4. AIHW. Cancer Survival in Australia, 2001 Part 2
5. Doll R, Peto R, Boreham J, Sutherland I. British Medical Journal. 2004 Jun 26;328(7455):1519. Mortality in relation to smoking: 50 years' observations on male British doctors
6. Australian Institute of Health and Welfare. Cancer in Australia 1997, Canberra
7. Australian Institute of Health and Welfare. Online cancer data
8. Morgan LC. Grayson D. Peters HE. Clarke CW. Peters MJ. Lung cancer in New South Wales: current trends and the influence of age and sex. Medical Journal of Australia. 172(12):578-82, 2000 Jun 19
9. Australian Institute of Health and Welfare
10. National Drug Strategy: Household Survey: Urban Aboriginal and Torres Strait Islander Peoples 1994. Sourced: Southern NSW Public Health Unit website
11. Australian Institute of Health and Welfare. Australia's Health 2000 Canberra
12. Australian Institute of Health and Welfare Health system expenditures on cancer and other neoplasms in Australia 2000-2001
13. Commonwealth Department of Human Services and Health. The social costs of drug abuse in Australia. Canberra 1996
14. Chapman, Simon. Tough on Drugs – Weak on Tobacco. Medical Journal of Australia 2000; 172: 612-614
15. Mac Manus MP, Hicks R, Ball DL, Kalff V, Matthews J, Salminen E, Khaw P, Wirth A, Rischin D, McKenzie A. F-18 fluorodeoxyglucose positron emission tomography staging in radical radiotherapy candidates with non-small cell lung carcinoma: powerful correlation with survival and high impact on treatment. Cancer 2001; 92: 886-895
16. Delaney et al, Lancet Oncology 2003; 4:120
17. Tobacco Control: A Blue Chip Investment in Public Health. VicHealth Centre for Tobacco Control. [www.vctc.org.au](http://www.vctc.org.au) (Accessed March 21st, 2003)



## ACKNOWLEDGEMENTS

This Lung Cancer Case Statement was collated and reviewed with the assistance of members of The Australian Lung Foundation's Lung Cancer Consultative Group:

Dr Kwun Fong (Chair)

Dr Fiona Abell

Associate Professor David Ball

Dr Michael Bolton

Dr Rayleen Bowman

Ms Linda Christenson

Mr Peter Cole

Associate Professor Lou Irving

Dr Craig Lewis

John Litt

Dr Jenny Ma Wyatt

Associate Professor Matthew Peters

Professor Bruce Robinson

Ms Janette Vincent

The ALF acknowledges the assistance of the following sponsors who support the activities of The Australian Lung Foundation's Lung Cancer Consultative Group:

## FOUNDING GOLD SPONSORS

AstraZeneca 

Bristol-Myers Squibb  
ONCOLOGY 

  
Answers That Matter.

  
sanofi aventis  
Because health matters.

## GOLD SPONSORS

  
Roche

 NOVARTIS  
ONCOLOGY

# THE AUSTRALIAN LUNG FOUNDATION AND LUNG CANCER

The Australian Lung Foundation's mission is to reduce the burden of chronic lung disease and promote lung health through research, education, advocacy and patient support.

The Australian Lung Foundation was established in 1990. Its national office is in Brisbane and it has a committee in every state. It is linked to The Thoracic Society of Australia and New Zealand, which is the peak professional body for medical and scientific knowledge on respiratory disease.

A multidisciplinary Lung Cancer Consultative Group was established in 2001 and assists The Australian Lung Foundation with the development of lung cancer-related projects.

## **How can The Australian Lung Foundation help people with lung cancer?**

By calling The Australian Lung Foundation's toll free number (1800 654 301), lung cancer patients and their carers will be offered:

### **1) Lung cancer information**

- LungNet News – a free magazine for patients and carers published quarterly
- To subscribe to LungNet News on line, email: [enquiries@lungnet.com.au](mailto:enquiries@lungnet.com.au)
- Educational leaflets on a range of issues related to lung health. Relevant titles include:
  - The Lungs (an overview of how they work)
  - Bronchoscopy
  - Asbestos Related Lung Diseases
  - Silica Related Lung Diseases

### **2) Support groups**

The Australian Lung Foundation co-ordinates LungNet, a national network of lung support groups. There are currently over 100 groups throughout metropolitan, regional and rural Australia supporting people with lung disease. To find out about a support group in your area, call 1 800 654 301.

Relevant titles include:

- Quality of Life Through Patient Support
- How to Start a LungNet Patient Support Group

**TOLL FREE 1800 654 301**  
**[www.lungnet.com.au](http://www.lungnet.com.au)**  
**[enquiries@lungnet.com.au](mailto:enquiries@lungnet.com.au)**

