July 2020

Lung cancer in Queensland

A companion report to The Queensland Lung Cancer Quality Index: Indicators of safe, quality cancer care, Lung cancer care in public and private hospitals, 2011-2016

cancer alliance queensland

Queensland Government

Message from the Chair

Lung cancer is the leading cause of cancer death in both Queensland men and women and the 6th highest incident cancer. The management of patients with lung cancer is complex, requiring multidisciplinary care to ensure that patients receive treatment that will lead to the best outcomes. Importantly, this is the first time that statewide information on lung cancer diagnosis, staging, multi-modal treatment, and survival have been reported for all Queenslanders.

Read this impact report to learn more about lung cancer control in Queensland by looking at a wide range of system performance measures focused on lung cancer care. This report identifies areas in which interventions could be targeted to improve the cancer journey, experience, and outcomes for lung cancer patients. The *Queensland Lung Cancer Quality Index: Indicators of safe, quality cancer care, Lung cancer care in public and private hospitals, 2011-2016*, provides a detailed technical analysis of lung cancer treatments in Queensland.

Dr. Morgan Windsor
Chair Lung Cancer Subcommittee

Anyone can get lung cancer.

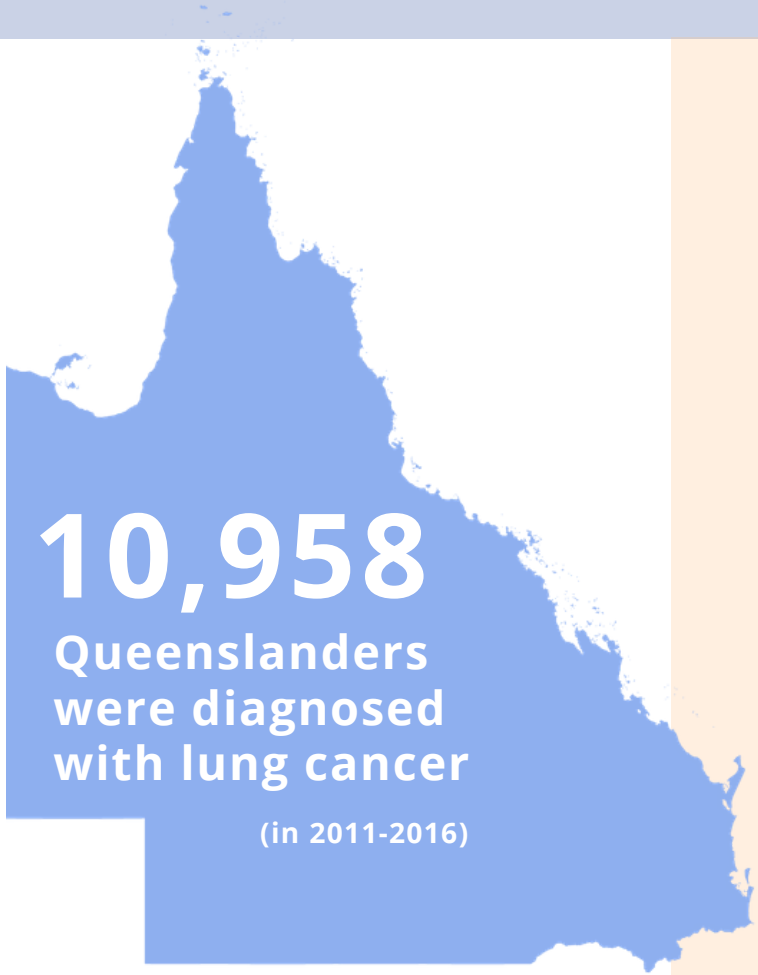
1 in 20 Queenslanders will be diagnosed with lung cancer in their lifetime.

Diagnosis

Each year, just under two out of every three lung cancer diagnoses are in men (62%). The age-standardised rate of new cancer cases in 2016 was 45 per 100,000 men and 31 per 100,000 women.

Since the late 1980s, rates of new cases and deaths from lung cancer have been going down in men while the rate of increase has been slowing in women. Changes to smoking behaviour have influenced these trends.

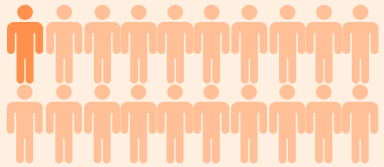
The information in this report focuses on non-small cell lung cancer and excludes in situ tumours.



What is the chance of developing or dying from lung cancer?

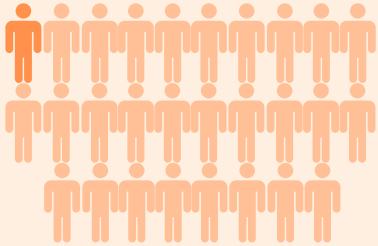
1 in 20

Queenslanders will be diagnosed with lung cancer in their lifetime



1 in 28

Will die from the disease



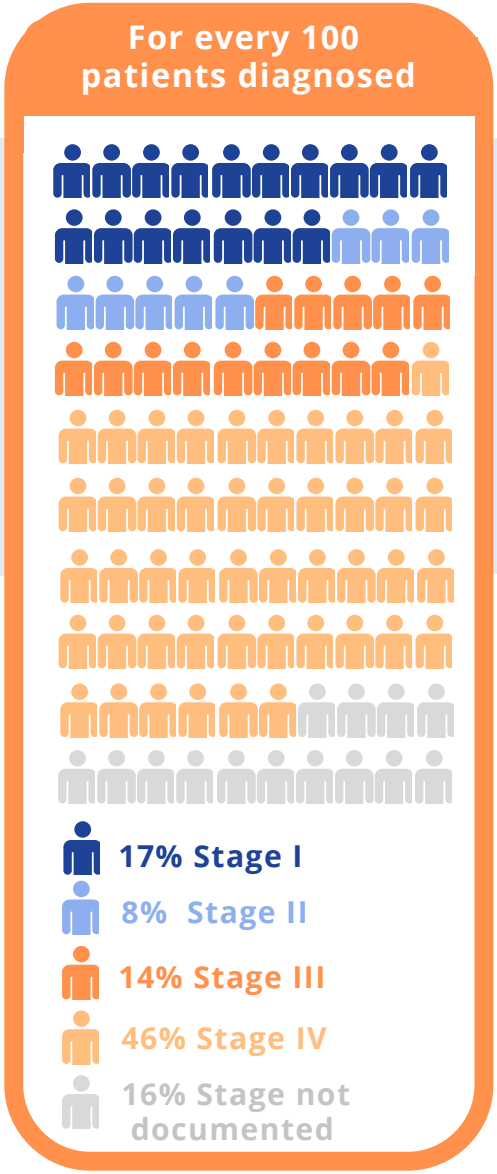
For further information, refer to The Queensland Lung Cancer Quality Index page 15

Where lung cancer is detected early, 82% of people are alive after two years.

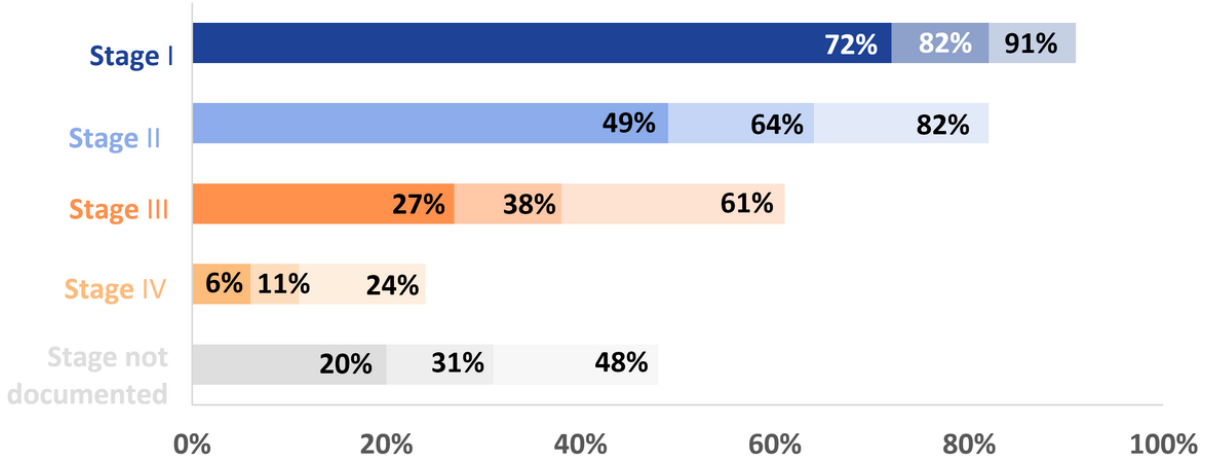
What is cancer stage?

Cancer is broadly categorised into four stages of increasing severity, with stage I being localised disease and stage IV being metastatic or more widely spread disease. Staging is determined by having scans and other tests. Knowing the cancer stage is essential as it helps doctors work out the best treatment options.

Overall survival rates are presented below. At one year following diagnosis, 91% of stage I patients were alive, with this rate falling to 82% at two years. Queensland overall survival compares favourably to other Australian states and internationally.



Three, two, and one-year lung cancer survival by stage at diagnosis



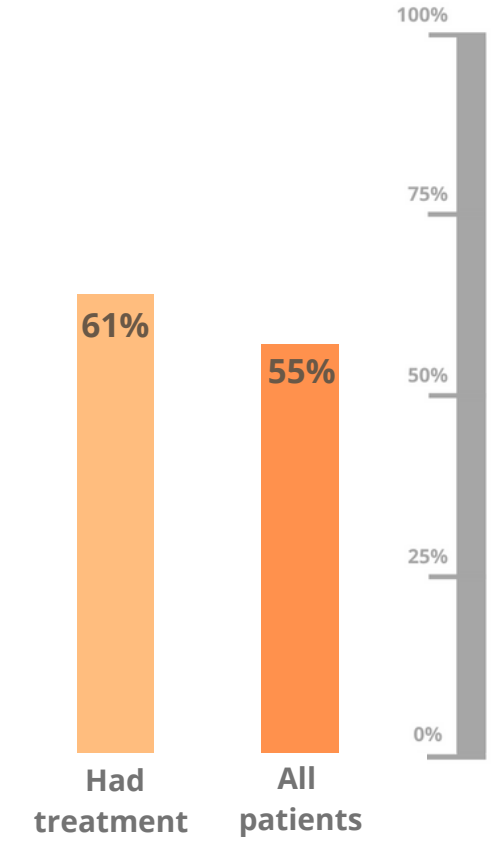
For further information, refer to The Queensland Lung Cancer Quality Index pages 22 and 91

Multidisciplinary team discussions improve outcomes.

A multidisciplinary team review (MDT) ensures a patient is discussed with doctors from different disciplines including surgeons, medical oncologists, and radiation oncologists, to determine a patient's diagnosis, cancer staging, and subsequent treatment plan.

MDTs provide a gold standard of care. This is particularly important for patients receiving multi-modality treatments. This analyses only includes the 8 MDTs that provide data to Cancer Alliance Queensland, meaning that the data here are likely an underestimate of the true rate of patients reviewed by MDT.

Proportion of lung cancer patients reviewed at MDT who provide data to Cancer Alliance Queensland

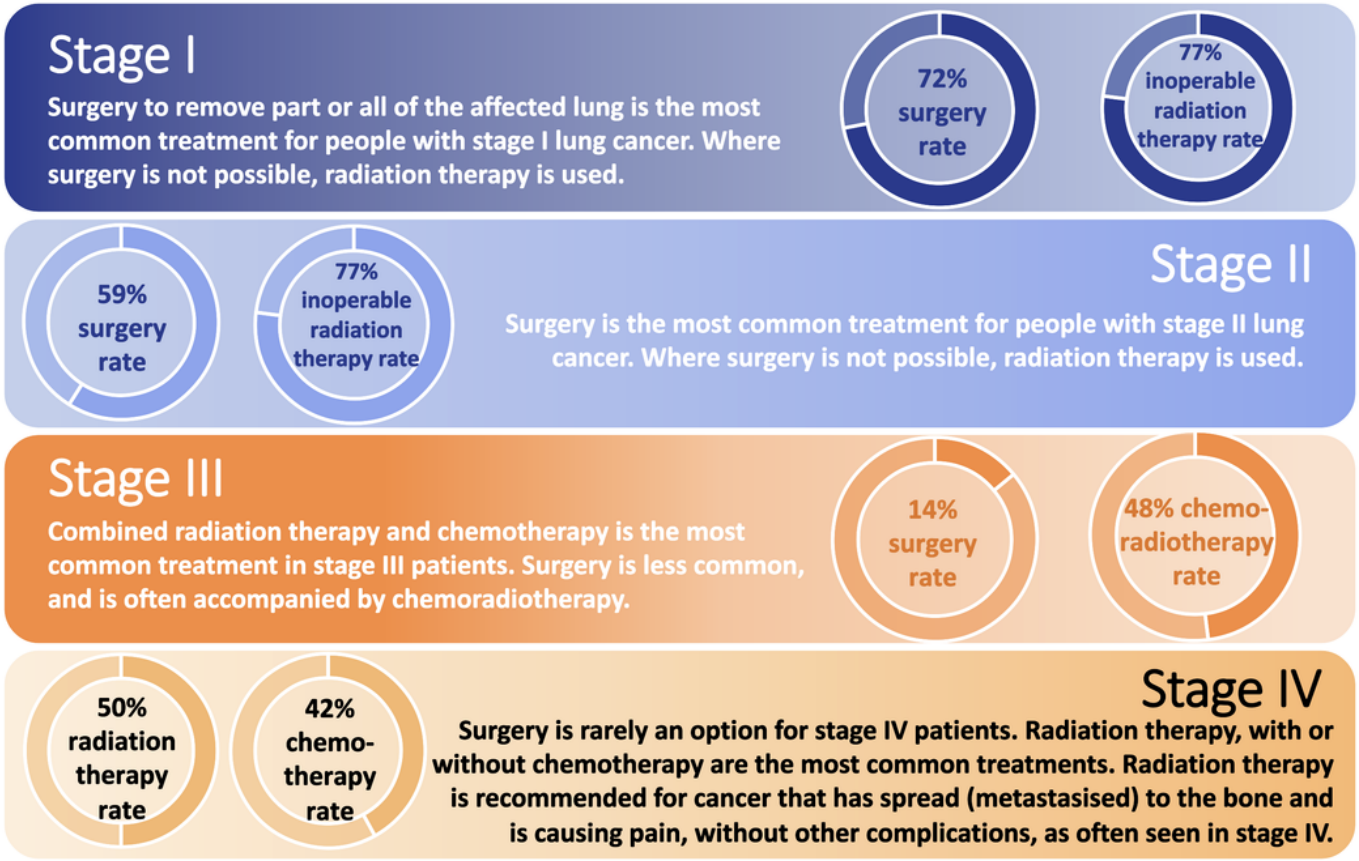


For further information, refer to The Queensland Lung Cancer Quality Index page 19

Treatment

Treatment for lung cancer is complex and depends on many factors including the stage of disease at diagnosis, the pathology of the tumour, and any co-existing conditions the patient may have.

Chemotherapy alone does not have a role in curative therapy for lung cancer, and is a more common treatment in patients with stage III and IV disease.



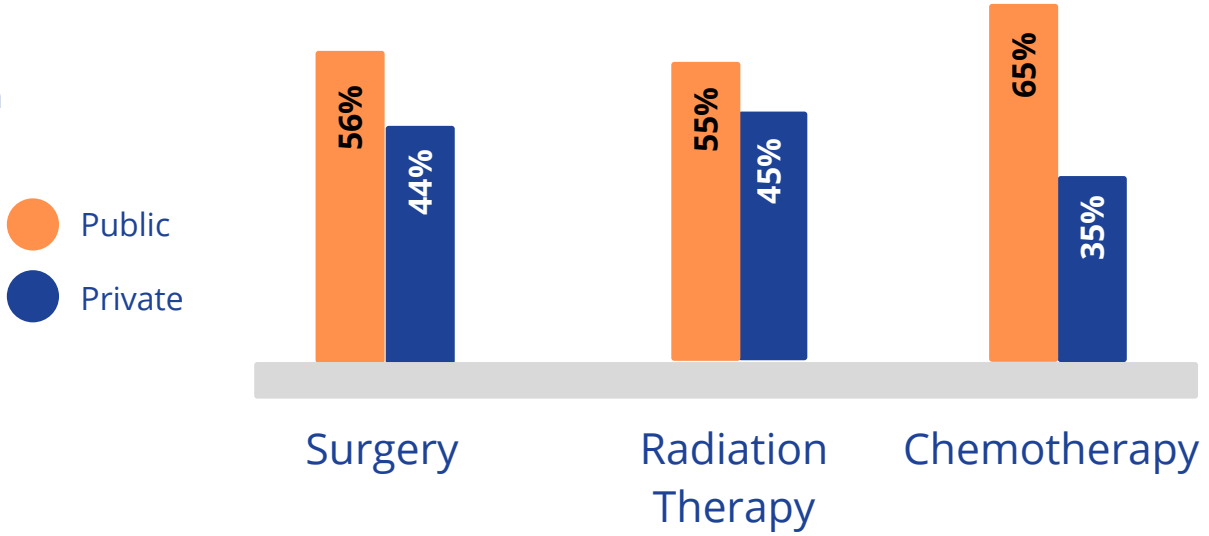
The most significant burden of illness for lung cancer patients, their families, and the healthcare system occurs during the treatment phase.

For further information, refer to The Queensland Lung Cancer Quality Index pages 8 and 22

Treatment for lung cancer is delivered in public and private facilities.

During the period 2011 to 2016, the proportion of treatment delivered in public facilities was:

- 56% of surgery
- 55% of radiation therapy
- 65% of chemotherapy.



For further information, refer to The Queensland Lung Cancer Quality Index page 32

Safety

Mortality is an important measure of safe surgery. Queensland mortality rates after lung cancer surgery are among the lowest in the world.

In hospital post-operative mortality for 2011-2016 was less than 1%.

Ninety-day mortality was low, at less than 2%.

Risk of 90-day mortality was highest for patients with late stage disease, for males, and for older patients.

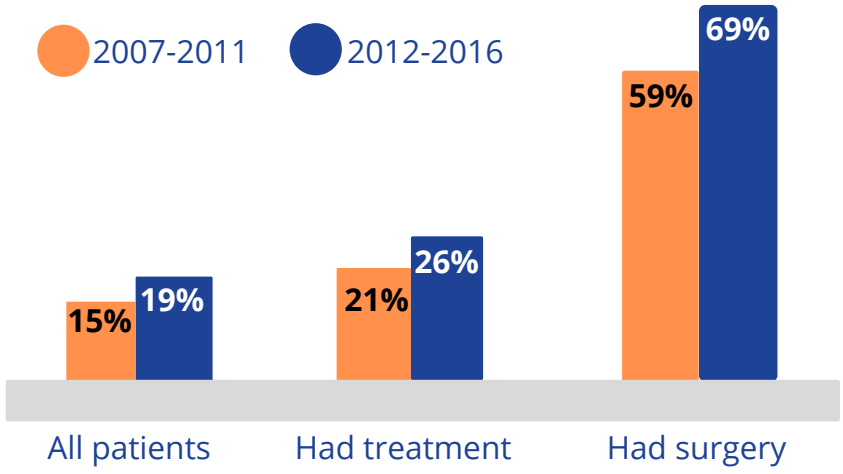
Lung cancer treatment for Queenslanders is among the safest in the world.

For further information, refer to The Queensland Lung Cancer Quality Index pages 43-4 and 84

Relative survival for lung cancer is improving, but remains low.

Relative survival

Relative survival indicates the likelihood of people diagnosed with cancer surviving for a certain amount of time (e.g., five years) compared to similar people (i.e., people of the same sex and age) in the general population. A five-year relative survival of 100% means the cancer has no impact on the person's chance of still being alive five years after diagnosis, whereas a figure of 50% means that the cancer has halved that chance.



Five-year relative survival is improving but remains low for Queensland lung cancer patients. For 2012-2016, five-year relative survival was 19%, increasing from 15% for 2007-2011.

Understanding the numbers

These numbers don't take everything into account. Survival rates are grouped based on treatment. But other factors, such as the cancer subtype, stage at diagnosis, gene changes in the cancer cells, a patient's sex (women tend to have better survival than men), age (survival typically decreases with age), overall health, and how well the cancer responds to treatment, can also affect a patient's outlook.

People diagnosed with lung cancer today have a better outlook than these numbers show. Treatments have improved over time, and these numbers are based on people who were diagnosed and treated some time ago.

For further information, refer to The Queensland Lung Cancer Quality Index page 17

Palliative care is an essential component of lung cancer care.

The goal of palliative care is to improve the quality of life for patients by controlling and alleviating physical, emotional, and psychological concerns.

Palliative care treatment

The majority of lung cancer patients are diagnosed with stage IV disease. Stage IV lung cancer is hard to cure because the cancer has spread to other parts of the body. Palliative treatment to control the symptoms of the disease may be the best option. Surgery, chemotherapy, radiotherapy, and targeted treatments may relieve symptoms, slow the spread of the cancer, and help patients live longer.

The use of these palliative treatments has to be balanced against toxicity and the need to attend for treatment for a number of days to weeks.

Time spent receiving treatment needs to be weighed against time spent with friends and family.

Finding help and support for lung cancer

Cancer Australia's *Getting the best advice and care: A guide for those affected by lung cancer* highlights key principles that are important to ensure best practice care is provided to people with lung cancer. The guide explains what you can expect when care is delivered according to best practice and contains information on finding help and support.

About us

Cancer Alliance Queensland brings together The Queensland Cancer Control Safety and Quality Partnership (The Partnership), Queensland Cancer Control Analysis Team (QCCAT), and the Queensland Cancer Register.

Cancer Alliance Queensland supports a clinician-led, safety and quality program for cancer across Queensland. As a gazetted Quality Assurance Committee, a key role of The Partnership is to provide cancer clinicians, Hospital and Health Services, hospitals, and treatment facilities with cancer information and tools to deliver the best patient care. Since 2004, QCCAT have compiled and analysed a vast amount of information about cancer incidence, mortality, treatment, and survival. This matched and linked data is housed in the Queensland Oncology Repository, which contains approximately 50 million records from 1982-2020.

Note from the team

We hope this impact report gives you some insights into the innovation employed by Cancer Alliance Queensland. Our work spans the continuum of cancer control from diagnosis to multidisciplinary care through to cancer treatment, end of life, and survivorship and cuts across that continuum with initiatives to monitor and improve cancer system performance and mobilise evidence to drive service improvements.

For a more detailed version of the report, including definitions of terms and methodology descriptions, go to The Queensland Lung Cancer Quality Index 2011-2016.

We gratefully acknowledge past and present members of The Partnership and individual members of the Queensland Cancer Control Analysis Team who conceived many of the original ideas and made significant contributions to the Cancer Alliance Queensland program of work.

We thank members of the Lung Cancer Sub-committee for their valuable comments and leadership: Morgan Windsor (Chair), Margot Lehman, and Jasotha Sanmugarajah.

The Lung cancer in Queensland report has been developed under the auspices of The Partnership. The report was prepared by Theresa Negrello, Danica Cossio, Shoni Philpot, and the Queensland Cancer Control Analysis Team. We thank Professor David E Theile AO for his guidance throughout the production of this report.

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