



# Radiation Treatment

## Key points



- There are different types of radiation for lung cancer. All types kill cancer cells or stop them from growing.

- Sometimes radiation is used to relieve lung cancer symptoms.

Lung cancer radiation treatment uses powerful, high-energy X-rays to kill cancer cells or keep them from growing. Radiation may come from outside the body (external) or from radioactive materials put inside the lung cancer tumour (internal/implant). In lung cancer, external radiation is used. The radiation is aimed at the lung cancer tumour and kills the cancer cells only in that area of the lungs.

Radiation can be used before lung cancer surgery to shrink the tumour or after surgery to kill any cancer cells left in the lungs. Sometimes external radiation is used as the main type of lung cancer treatment. People who are not well enough to have surgery or whose cancer has spread too far to have surgery may have radiation treatment. Radiation treatment can also be used to relieve symptoms caused by the cancer, such as pain, bleeding or blockage of airways by the tumour when cure may not be possible.

In some lung cancer care plans both radiation and chemotherapy treatment is given at the same time.

Doctors use several different radiation techniques to treat people.

## Radiation techniques for lung cancer



- External beam radiation (external beam)

*External beam radiation uses a machine that directs high-energy radiation from outside the body into the tumour, often with beams coming in from different directions but giving an even dose over the cancer target volume. Treatment is given usually on weekdays for several weeks.*

- Intensity Modulated Radiation Therapy (IMRT)

*Radiation beams are shaped to match the tumour. The intensity of the treatment can be changed throughout the session.*

- Stereotactic Radiosurgery (SRS or STRS).

*Uses a very high dose of radiation delivered very precisely to tumours in the body in a one-day session or over time (fractionated). It is often used as an alternative to therapy for patients who cannot tolerate more invasive procedures.*

## Possible side effects of radiation



- Mild skin reactions
- Nausea (feeling sick)
- Tiredness
- Mouth sores
- Sore throat
- Pain
- Cough.

Discuss concerns, possible side effects and any effects that you experience with your doctor.

## Related content

[American Lung Association \(2016\) "What Are The Symptoms of Lung Cancer?"](#)

[European Lung Foundation \(2016\) "Lung Cancer"](#)

[Lung Foundation Australia \(2012\) "Better Living with Lung Cancer: A Patient Guide"](#)



## About Lung Foundation New Zealand

Lung Foundation New Zealand is a non-government organisation dedicated to promoting healthy lungs and early detection of lung disease (including lung cancer, New Zealand's biggest cancer killer). The Lung Foundation is devoted to supporting people affected by lung disease and provides a voice for patients and their families.

Lung Foundation New Zealand advocates on a range of issues, including access to more effective funded treatments, an increase in research funding and a commitment to making Aotearoa a smoke free nation by 2025.

## Support us

Lung Foundation New Zealand is an independent organisation and is reliant on support from fundraising events, donations and bequests. This resource has been produced as the result of generous support provided by members of the public.

If you or a member of your family would like to support our work we would love to hear from you. Together we can save lives by increasing awareness about lung health and early detection of lung disease. Please visit our website [www.lungfoundation.org.nz](http://www.lungfoundation.org.nz) or contact Philip Hope, CEO on (+64) 021 959 450 or [philip.hope@lungfoundation.org.nz](mailto:philip.hope@lungfoundation.org.nz)

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**Expert Review Policy:** Our information was checked for accuracy and clarity by cancer specialists. This resource has been approved by Medical Director & Associate Professor of Oncology, Chris Atkinson of Christchurch; assisted by Dr Greg Frazer, Respiratory Physician, Christchurch Hospital; Catherine Smith, Clinical Nurse Specialist - Lung Cancer, Christchurch Hospital; and Anne Fraser, Oncology Nurse Practitioner, Auckland City Hospital. Lung Foundation New Zealand writes in plain English. We review our information every two years so it is kept up to date.

Thanks to the American Lung Association and the European Lung Foundation for allowing us to adapt their resources for our New Zealand readers.

*This information sheet is one in a series produced by Lung Foundation New Zealand on lung disease, its treatment and related issues and is correct at time of print. It is designed to be used as a guide only; it is not intended or implied to be a substitute for professional medical treatment. Please consult your family doctor or specialist if you have further questions relating to this information.*