

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.

Radiation treatment is given daily or on alternate working days, for just a few minutes. The duration of treatment will be determined by the oncologist.

Treatment is available at specialist treatment centres in Auckland, Hamilton, Tauranga, Palmerston North, Wellington, Christchurch, and Dunedin.

Transport and accommodation can be an issue for some patients. A National Travel Assistance Programme is available.