

Treating cancer with radiation

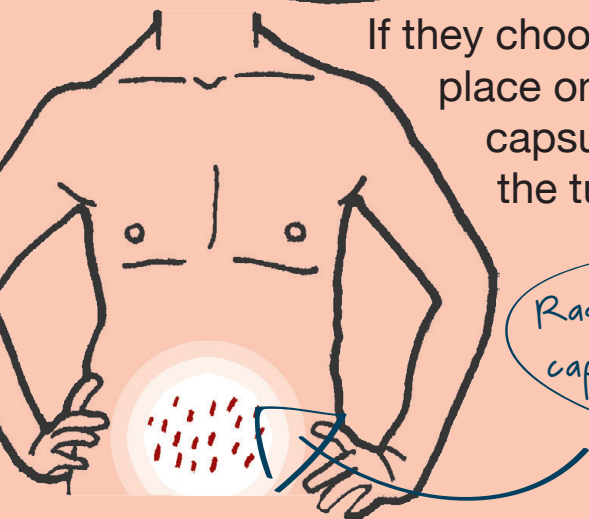
One of the best ways to treat cancer is to expose it to high-energy radiation (radiotherapy). This damages the cancer cells and stops the cancer growing. Radiotherapy can cure cancer or reduce the patient's symptoms.

Medical physicists, doctors, radiographers, and technologists work on the radiotherapy treatment together. They must decide on the best treatment method, and the distribution and dose of radiation needed.

They use medical scans to look inside the body and locate the tumour



If they choose brachytherapy, they will place one or more radioactive capsule on or in the body, near the tumour or inside it.



Radiation emitted from the capsule treats the cancer.

When radiation hits the cancer, it damages the DNA of the cancer cells, which stops them from replicating. Radiation can damage healthy cells too. Radiotherapy treatments are carefully planned to minimise damage to tissues around the tumour.

If they choose to use external beam radiotherapy, they will apply beams of high-energy radiation to the patient, usually in the form of X-rays. A linear accelerator (linac) makes the X-rays.

Some machines can change the beam's shape and dose rate as they rotate around the patient.

Lead shutters shape the radiotherapy beam to match the shape of the tumour.

