# Radiotherapy treatment intent

Radiation can be used in the management of almost all cancers as a curative treatment, to palliate symptoms or as a prophylactic treatment.

## Curative intent

Radiotherapy as a curative treatment can be delivered in a variety of settings, either alone or in conjunction with other treatment modalities.

### Definitive

Radiotherapy is used as the sole or primary treatment modality.

Chemotherapy or targeted therapies may be given concurrently in this setting to increase the sensitivity of the cancer cells to the damage caused by radiation.

Cancer types that may be treated definitely with radiation include:

- prostate
- cervical
- head and neck
- lung
- anal
- colorectal
- oesophageal
- bladder
- skin

### Neoadjuvant

Radiotherapy is delivered before surgery with the aim of improving surgical outcomes e.g. shrinking the tumour to improve operability.

Cancer types that may be treated with neoadjuvant radiation include:

- oesophageal
- rectal
- sarcoma
- lung (Pancoast)

### Adjuvant

Radiotherapy is delivered after primary treatments, such as surgery, to reduce the risk of the cancer returning locoregionally and/or improving survival.

Cancer types treated with adjuvant radiation include:

- breast
- colorectal
- cervical
- endometrial
- oesophageal
- head and neck
- melanoma
- lung
- skin

### Salvage

Radiotherapy is delivered to eradicate residual disease, after primary treatments have failed.

Examples of cancer types treated with salvage radiation include:

- prostate bed (following removal of the prostate)

## Prophylactic intent

Radiotherapy can be used prophylactically to eradicate subclinical disease in order to prevent or delay the clinical spread of disease.

Prophylactic irradiation may provide benefit in those cancers where the pattern of disease failure is well recognised. For example, in the management of small cell lung cancer, which commonly metastasises to the brain, prophylactic cranial irradiation may be prescribed following a complete or partial response to primary therapy to prevent or delay cranial relapse.

## Palliative intent

Radiotherapy is delivered with the aim of controlling symptoms and improving quality of life by shrinking the cancer and slowing growth.

Examples of indications for palliative radiotherapy include:

- painful bone metastases
- presence of brain metastases
- skin lesion which is eroding the skin
- oesophageal tumour causing dysphagia
- shortness of breath from lung cancer
- pain, abdominal distension from liver metastases
- haematuria from bladder cancer

## Emergency

Radiotherapy in the emergency setting is used to shrink the tumour with the aim of:

- reducing pain
- reducing bleeding
- alleviating obstruction
- reducing compression

Examples of indication for emergency radiation include:

- spinal cord compression
- superior vena cava obstruction