

Health Professional Care Plan Information

Treatment of Non-Small Cell Lung Cancer at The Christie

Stereotactic Ablative Body Radiotherapy (SABR)

Introduction

This information is for health care professionals involved in the care of patients receiving at The Christie NHS Foundation Trust under the care of the Lung Cancer Disease Group, for non-small cell lung cancer.

Brief description of the treatment

Stereotactic ablative body radiotherapy (SABR) is a radical treatment for early stage (<5cm, peripheral, node negative tumours) NSCLC. SABR for NSCLC consists of 2 phases; treatment planning and treatment delivery. Treatment planning involves a 4DCT radiotherapy planning scan, where 3 permanent ink marks (the size of a small freckle) applied to the thorax. Treatment delivery takes place on alternate weekdays, over one (3 sessions, or fractions), two (5 fractions) or three (8 fractions) weeks.

Mechanism of action

Radiotherapy leads to ionisation reactions in tissue. This results in a series of reactions which results in DNA damage to both tumour and normal tissue. Irreparable damage leads to cell death, resulting in regression of the tumour, but also side effects from treatment.

Anticipated benefits

This is a radical treatment given with curative intent. However, patients are informed that unfortunately lung cancers will sometimes recur after radiotherapy. In these patients, treatment will control symptoms and delay disease progression.

Success rate

Retrospective data demonstrates local control rates of 80-95% at 3 years which is superior to standard conformal external beam radical radiotherapy, and comparable local control to surgery. 2 year overall survival ranges from 65% to 90%, again superior to the predicted 45% 2 year overall survival from radical external beam radiotherapy. SABR has not been compared to surgery in a randomised controlled trial.

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Risks and side effects

Side effects from radiotherapy are considered acute (occurring during radiotherapy and for up to 3 months after, and are usually reversible) and late effects (long term, irreversible damage from radiotherapy). The main acute side-effects for this treatment are: skin reaction, radiation oesophagitis, radiation pneumonitis, and lethargy. Late effects are rare (<5%) and include: radiation pulmonary fibrosis, oesophageal strictures, musculoskeletal damage (e.g. rib fractures), and chronic chest pain.

Because of the rare but potentially life-threatening risk of radiation pneumonitis, patients are counselled about the need to be vigilant in reporting worsening respiratory symptoms, particularly breathlessness on minimal exertion to the radiotherapy team whilst attending for daily treatment, and their lung cancer clinical nurse specialist thereafter.

24 hour medical helpline: The Christie Hotline 0161 446 3658

Detailed description of care plan

Initial investigations

Staging CT scan (thorax and abdomen +/- brain), EBUS/mediastinoscopy as appropriate, full lung function tests are desirable. The patient will have a radiotherapy planning 4DCT scan before starting treatment with SABR (when 3 permanent ink marks will be applied to the chest wall – one over sternum, one in each axilla).

Description of treatment

Treatment delivery then takes place on alternate weekdays, over one (3 sessions, or fractions), two (5 fractions) or three (8 fractions) weeks. Each fraction requires patient to lie supine, usually with arms supported above their head for 30-60 minutes.

Supportive medications (administered as required)

Radiation oesophagitis: sucralfate suspension, paracetamol mucilage, codeine phosphate liquid, oromorph, fentanyl patch. Soft diet/oral dietary supplements if required.

Radiation pneumonitis: oral steroids/antibiotics/antifungals

Radiation dermatitis: E45 cream/1% hydrocortisone cream

Planned investigations

Subsequent follow-up CT scans are planned 3, 6 and 12 months post-treatment. Patients will be followed-up 3 monthly for the first 2 years, usually by their oncologist.

Alternative treatments

Other treatment options include surgical resection, conventional external-beam radiotherapy, or active surveillance.

Responsibilities – who does what

The hospital team

The Consultant team at The Christie will be responsible for supervising the oncologic care of the patient. This will include planning, approving and prescribing the radiotherapy, prescribing supportive care medication, and arranging tests and scans as required. The treatment radiographers and medical physicists will be responsible for planning and delivering the radiotherapy treatment

GP and Community palliative care support

Management of the community aspects of care remain the responsibility of the GP. Lung cancer patients are likely to have poor performance status, troublesome symptoms, and emotional needs; this is in addition to any co-morbidities that exist prior to a cancer diagnosis. Patients with advanced disease may have a life expectancy is less than 12 months therefore it is appropriate to add your patient to the GP practice Gold Standards Framework End of Life/Palliative Care Register. We encourage patients with advanced disease to accept referral to district and Macmillan nurse services early in their disease journey so they are known to palliative care services as and when their needs increase.

You will receive regular letters of update regarding your patient's progress.

Other specialist teams

If your patient is also under the care of other hospital teams they should continue to attend their appointments unless otherwise advised