

Fewer Sessions, Fewer Side Effects: The Role of Stereotactic Body Radiation Therapy in Non-Small Cell Lung Cancer

What is stereotactic body radiation therapy?

Stereotactic body radiation therapy (SBRT) is a special type of cancer treatment that uses many small beams of high-dose radiation. The beams enter the tumor at different angles and overlap to deliver a high dose of precise radiation. SBRT is also sometimes called stereotactic ablative body radiotherapy (SABR).

How is SBRT different from traditional radiation?

Traditional radiation therapy exposes a slightly broader area of healthy tissue around the tumor to radiation as compared to SBRT. It's often delivered in small daily doses, over several weeks, allowing healthy tissue near the tumor to recover between treatments.

SBRT can be completed in a shorter time period than traditional radiation therapy. Because it delivers a higher dose of radiation that is precisely aimed at the tumor, nearby healthy tissue is less affected, resulting in fewer side effects.

Both traditional and SBRT radiation therapy may be used in non-small cell lung cancer (NSCLC).

Traditional radiation therapy	SBRT
20 to 35 treatments over the course of 4 to 7 weeks	1 to 5 treatments over the course of 1 to 2 weeks,
Lower dose of daily radiation	Higher doses of precisely aimed radiation
Less effective in early-stage NSCLC	Very effective in early-stage NSCLC
More radiation exposure to nearby healthy tissue	Less radiation exposure to nearby healthy tissue
Used more often in later stages of NSCLC	Used less often in later stages of NSCLC

When is SBRT used and why?

SBRT is a commonly used lung cancer treatment for both early and late-stage NSCLC.

In early-stage NSCLC, SBRT may be used along with surgery, or it may be used alone in cases where surgery is not recommended due to other medical conditions or risk factors.

In later stages of NSCLC, SBRT may be used along with other treatment types to treat a small number of metastases (cancer that has spread from the lung to other parts of the body) or to treat a tumor that has come back after prior treatment.

What are the possible side effects of SBRT?

SBRT is generally well tolerated, and most people receiving SBRT do not experience severe side effects. However, like all cancer treatments, SBRT can cause some side effects to be , depending on the size and location of the tumor, as well as your overall health.

Possible short-term side effects (during treatment or within the first few weeks after) include:

- Skin changes, such as dry skin or reddening
- Fatigue
- Mild cough or shortness of breath
- Mild chest discomfort
- Nausea

Possible long-term side effects (months to years after treatment) include:

- Radiation pneumonitis (Inflammation of the lung tissue near the treated site)
- Lung fibrosis (scarring) of the treated area
- Chest wall pain

Most short- and long-term side effects resolve on their own without specific treatment, while others may be managed with support from your healthcare team.

Ask your healthcare team how to prevent or manage these effects and when to seek emergency care.

Questions about SBRT for your healthcare team

- Is SBRT the best option for my specific diagnosis?
- How many treatment sessions will I need?
- Are there activities I should avoid during or after treatment?
- What side effects should I be aware of, and how should I manage them?
- Will I need other treatments, such as surgery or chemotherapy?
- How often will I need follow-up scans after treatment?

If you want to learn more about SBRT or have questions about lung cancer, please contact our free [HelpLine](https://www.go2.org/help) at 1-800-298-2436 or email support@go2.org