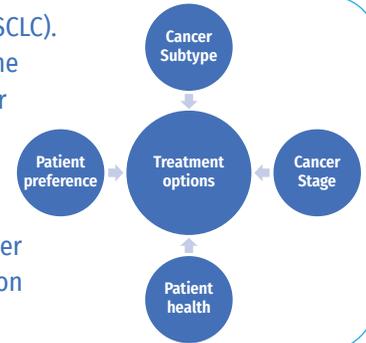


Treatment of Early-Stage Non-Small Cell Lung Cancer

There are several types of treatment for early-stage non-small cell lung cancer (NSCLC). You and your healthcare team will discuss which choice is best for you based on the type and stage of lung cancer you have, symptoms, your preferences and any other health problems you may have. Lung cancer treatments continue to improve as new discoveries are being made so it is important to discuss all your possible options with your healthcare team. This fact sheet focuses on the treatment of early-stage non-small cell lung cancer. For additional information about lung cancer including treatment of advanced-stage NSCLC, see our other ATS Patient Information Series fact sheets in the 'For More Information' section at the end of this leaflet.



There are two main types of lung cancer: Non-Small Cell Lung Cancer (NSCLC) and Small Cell Lung Cancer (SCLC) (see ATS Patient Information Series Fact Sheet Lung Cancer at www.thoracic.org/patients). NSCLC is the most common and the main sub-types of NSCLC are adenocarcinoma, squamous cell, and large cell lung cancer. Treatment is different depending on the type or sub-type of lung cancer you have.

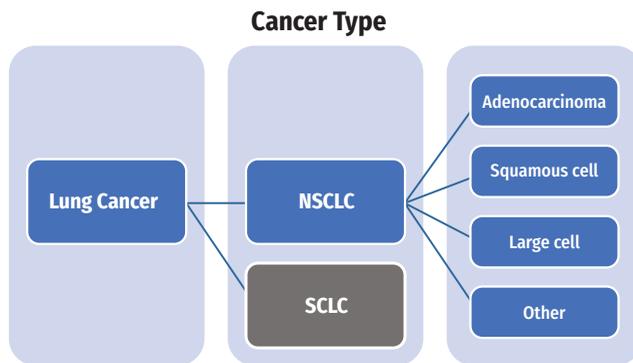
body radiation therapy (SBRT) also known as stereotactic ablative radiotherapy (SABR) are forms of local treatment. Surgery is generally more effective than SBRT in removing all the cancer, but as discussed below, not everyone can safely tolerate surgery, or some individuals may opt for a non-surgical approach.

Other options include chemotherapy (drugs that kill fast growing cells including the cancer cells), radiation therapy (high energy x-rays), immunotherapy (drugs that use your own immune system to kill the cancer) and targeted therapies (drugs that kill the cancer cells at the DNA level). These treatments, also known as systemic therapies, can be used to reduce the chance of the cancer returning after surgery (known as adjuvant therapies) or as the main treatment in patients who don't have surgery. If systemic therapies are given before surgery this is known as "neo-adjuvant".

Which treatments are used for early-stage NSCLC?

The following table lists the range of possible treatment options for the early-stages of NSCLC. Each person with lung cancer has different factors that need to be considered for a treatment plan, so what may be the best for one person may not be best for you.

NSCLC Early-Stage	Treatment
IA1,IA2,IA3	Surgery SBRT (if a person doesn't have surgery)
IB	Surgery SBRT (if a person doesn't have surgery)
IIA or IIB	Surgery SBRT (if a person doesn't have surgery) Chemotherapy Radiation Targeted therapy
IIIA	Surgery when possible Chemotherapy Radiation Immunotherapy Targeted therapy



The treatment approach for SCLC is different and is not included here. See ATS Patient Information Series fact sheet "Treatment of Small Cell Lung Cancer" for more information on this topic.



How does the stage of my cancer determine the treatment I receive?

Staging is a process for defining how much cancer is within your body (see ATS Patient Information Series fact sheet "What is Lung Cancer Staging?" at www.thoracic.org/patients). Usually, cancers that are limited to a small area of the chest are best treated with a local treatment to remove or kill the entire tumor. Surgery and stereotactic

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How will my healthcare team decide if I should have surgery for early-stage NSCLC?

The stage and location of your cancer helps determine if surgery may be useful. Next, your healthcare team will help you decide if you are “fit” enough for surgery. Surgery is stressful on the body and can be risky for some people, such as those who have poor nutrition, or other lung and/or heart diseases. This might make lung cancer surgery impossible to perform safely for you. You and your healthcare team will need to discuss the risks and the benefits of having surgery.

For those being considered for surgery, other tests may be needed to check your lungs and heart to find out if you can safely tolerate the surgery. These tests often include breathing and/or exercise tests, a study looking at blood flow to the lungs known as a ventilation-perfusion scan (V/Q scan), and a stress test of the heart and/or an ultrasound of your heart (echocardiogram).

Are there side effects of lung cancer treatments, how can I manage them?

Your healthcare team will discuss the specific side effects of each therapy you receive. In general, the complications of surgery include infections, damage to areas near the surgical site, bleeding, and shortness of breath. Other risks include heart attack, stroke or a blood clot to the lungs.

Many of the side effects of systemic therapies depend on the individual patient and the doses used. Be sure to talk to your healthcare providers about what to expect and medications that can help to alleviate your symptoms.

Palliative care is an important approach for patients with lung cancer. The goal of palliative care is to improve your quality of life and help you and your family deal with the challenges of a serious illness. Palliative care attempts to minimize side effects and any related psychological, social, and spiritual problems you may be experiencing.

For more detailed information on these topics please see helpful links in our ‘For More Information’ section.

What about research centers or clinical trials?

Many of the treatments available for lung cancer patients today are the direct result of studies in which other people with cancer volunteered to take part in clinical trials. These research studies assess new treatments or new ways to deliver treatments. They allow healthcare providers to learn the very best treatment options for people and at times can benefit the people taking part in the studies. Often, many of the newest treatment options are available only by taking part in a clinical trial. Speak with your healthcare team about what research is being done to treat your type of cancer and whether you would be a good candidate to enroll in a clinical trial. The National Cancer Institute also allows you to search for clinical trials in your area through its website (<http://www.cancer.gov/clinicaltrials>).

How does stopping smoking improve lung cancer outcomes?

Stopping smoking can improve cancer outcomes at any stage of disease. Stopping smoking may help you heal better if you need surgery, cut down on side effects from systemic

therapies like chemotherapy and radiation, and allow these treatments to work better. Smoking cessation may also help you live longer, improve your quality of life, and lower the risk of cancer coming back or you getting a new cancer.

Speak to your healthcare provider about taking over the counter and/or prescription medications to help you stop smoking.

Helpful links to stop smoking:

<https://www.cancer.org/healthy/stay-away-from-tobacco/guide-quitting-smoking/nicotine-replacement-therapy.html>

<https://quitnow.net/mve/quitnow>

OR call 1-800-QUITNOW (1-800-784-8669)

Healthcare Provider’s Contact Number:

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Reviewers: Hasmeena Kathuria MD, Marianna Sockrider MD, DrPH

Resources:

American Thoracic Society

- www.thoracic.org/patients
 - Lung Cancer
 - Treatment of Advanced-Stage Non-Small Cell Lung Cancer
 - Smoking Cessation and Cancer 2021
 - Palliative Care for People with Respiratory Disease or Critical Illness

American College of Surgeons

- <https://www.sts.org/sites/default/files/lungbooklet.pdf>

American Society of Clinical Oncology

- https://www.cancer.net/sites/cancer.net/files/asco_answers_guide_nsclc.pdf

American Society for Radiation Oncology

- <https://www.rtanswers.org/Cancer-Types/Lung-Cancer/Treatment-Types>

Go2 Foundation

- <https://go2foundation.org/treatments-and-side-effects/side-effect-management/>

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