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[www.uptodate.com](http://www.uptodate.com) ©2013 UpToDate®**Patient information: Non-small cell lung cancer (The Basics)**Written by the doctors and editors at UpToDate

**What is non-small cell lung cancer?** — Non-small cell lung cancer is 1 type of lung cancer. Lung cancer happens when normal lung cells change into abnormal cells and grow out of control ([figure 1](#)). There are different types of lung cancer. Some types grow faster than others.

Non-small cell lung cancer is the most common type of lung cancer. It does not usually grow as fast as another type of lung cancer called small cell lung cancer.

**What is lung cancer staging?** — Cancer staging is a way in which doctors find out how far in your body a cancer has spread. To describe how far a person's non-small cell lung cancer has spread, doctors call it stage 1 (I), 2 (II), 3 (III), or 4 (IV).

Sometimes, staging can be tricky. For example, your doctor might think that you have stage 1 or stage 2 cancer. But after you have surgery, your doctor might check the tissues you had removed and discover that you really have stage 3 cancer.

Some of the main differences between the stages include the following:

- In stage 1, the lung cancer is in either the left or right lung. It has not spread outside the lung or to any lymph nodes. (Lymph nodes are bean-shaped organs that are part of the body's infection-fighting system.) Stage 1 cancers are usually small.
- In stage 2, the cancer has spread to other parts of the lung, such as lymph nodes in the lung or the lining around the lung. Stage 2 cancers can be different sizes.
- In stage 3, the cancer might be large. Or it might have spread to lymph nodes in the middle of the chest, between the left and right lungs.
- In stage 4, the cancer has spread to the other lung or to other parts of the body, such as the brain or bones. Also, lung cancer is described as stage 4 if it causes fluid to collect around the outside of the lungs.

Your treatment will depend a lot on the stage of your lung cancer.

**How are stage 1 and stage 2 non-small cell lung cancers treated?** — People with stage 1 or stage 2 non-small cell lung cancer are usually first treated with surgery to remove the cancer. To remove the cancer, a doctor might remove part of a lung. Or he or she might need to remove the whole lung. (People who have 1 lung removed can use their other lung to breathe.)

People with stage 1 lung cancer might not need any other treatment after surgery. But people with stage 2 lung cancer usually need more treatment after surgery. This can include:

- Radiation therapy – Radiation kills cancer cells. Some people who do not want surgery or who cannot have surgery have radiation therapy instead.
- Chemotherapy – Chemotherapy is the term doctors use to describe a group of medicines that kill cancer

cells.

Sometimes people with stage 1 or stage 2 are treated with radiation therapy rather than surgery, if they have other problems that prevent them from having surgery.

**How is stage 3 non-small cell lung cancer treated?** — Doctors can treat stage 3 non-small cell lung cancer in different ways. Treatment depends on where the cancer is, how big it is, and which treatments a person has already had.

People with stage 3 lung cancer usually have 1 or more of the following treatments:

- Chemotherapy
- Radiation
- Surgery

Doctors also treat another type of lung cancer, called a “Pancoast tumor,” in these ways. A Pancoast tumor is a lung cancer that grows in the top part of the lung.

**How is stage 4 non-small cell lung cancer treated?** — There is no treatment that will cure stage 4 non-small cell lung cancer. But different treatments can reduce symptoms and help people live longer. People with stage 4 lung cancer can have 1 or more of the following treatments:

- Chemotherapy
- Targeted therapy – These are medicines that work only for cancers with certain characteristics. Your doctor might test your tumor to see if you have a kind of lung cancer that would respond to these medicines.
- Surgery to remove a cancer growth that is outside of the lungs
- Treatment for symptoms caused by the cancer – For example, if you have trouble breathing because fluid has collected around your lungs, your doctor can drain the fluid to help you breathe more easily.
- Radiation therapy

**What happens after treatment?** — After treatment, your doctor will check every so often to see if your lung cancer has come back. Follow-up tests usually include exams and imaging tests such as chest X-rays or CT scans. Imaging tests can create pictures of the inside of the body.

**What happens if the lung cancer comes back?** — If the lung cancer comes back, you might have chemotherapy, targeted therapy, radiation, or surgery.

**What if I smoke?** — If you smoke, you should try to quit. People who survive lung cancer have a greater chance of getting lung cancer again if they smoke.

**What else should I do?** — It is important to follow all your doctor’s instructions about visits and tests. It’s also important to talk to your doctor about any side effects or problems you have during treatment.

Getting treated for lung cancer involves making many choices, such as what treatment to have and when.

Always let your doctors and nurses know how you feel about a treatment. Anytime you are offered a treatment, ask:

- What are the benefits of this treatment? Is it likely to help me live longer? Will it reduce or prevent symptoms?
- What are the downsides to this treatment?

- Are there other options besides this treatment?
- What happens if I do not have this treatment?

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