Facing Surgery for Lung Cancer?

Learn about minimally invasive *da Vinci*® Surgery

The Condition:

Lung Cancer

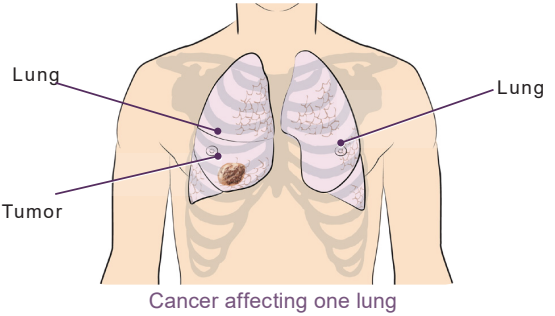
Your lungs are spongy, air-filled organs that move oxygen through your body. You have two lungs - one on each side of your heart.

Lung cancer is a disease that attacks the lung tissue. It usually develops in adults older than age 65It is the most common cancer worldwide, with 1.2 million new cases every year.

Tobacco smoke is the leading cause of lung cancer. Smoking cigarettes, pipes, cigars or being exposed to secondhand smoke can increase your risk for this disease.

Of the two main types of lung cancer, non-small cell is the most common. Fortunately, it is also the slower growing of the cancers.

In the early stages, lung cancer may not cause any symptoms but may be found during a routine X-ray. If symptoms are present, they may include a chronic cough, trouble breathing, chest pain and unexplained weight loss.



Cancer affecting one lung

Treatments & Surgical Options:

After your doctor makes a diagnosis and determines the stage (extent) of the cancer, he/she will suggest a treatment plan. Treatment and surgical options for the most common lung cancer, non-small cell lung cancer, can vary. Patients may have surgery, chemotherapy, radiation therapy or a combination of treatments.

Radiation uses high-energy X-rays to kill cancer cells. External radiation is the most common type of radiation for lung cancer. Side effects depend on the dose and type of radiation. While it is non-invasive, this treatment may harm your esophagus and ability to swallow.

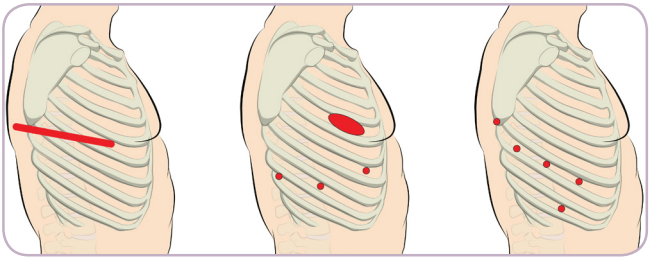
Chemotherapy uses anti-cancer drugs to kill cancer cells. These drugs can be given through a vein or taken by mouth. Your doctor will discuss the side effects of chemotherapy with you, as well as the pros and cons of all treatments and surgical options.

During lung cancer surgery, your surgeon will remove: a small section of your lung with the tumor and a margin of healthy tissue (wedge resection); a larger portion of the lung, but not an entire lobe (segmental resection); an entire lobe of one lung (lobectomy); or an entire lung (pneumonectomy). The amount of tissue/lung removed will depend on the stage of the cancer.

Lung cancer surgery is often performed using open surgery through a long chest incision. Your surgeon may also need to spread your ribs to access your lung. Open surgery allows doctors to see and touch your organs while operating.

An alternative to open surgery is thoracoscopy (also called video-assisted thoracic surgery or VATS). Doctors insert a tiny camera (thorascope) and surgical instruments into your chest through small incisions. The camera takes images inside your body and sends them to a video monitor in the operating room to guide doctors as they operate.

A mininmally invasive option for lung cancer patients facing lobectomy isda Vinci Surgery.



Open Surgery Incision | VATS Incisions | *da Vinci* Surgery Incisions

da Vinci Surgery :

A Minimally Invasive Surgical Option

Using the *da Vinci* System, surgeons make a few small incisions - similar to thoracoscopy procedures. The *da Vinci* System features a magnified 3D high-definition vision system and tiny wristed instruments that bend and rotate far greater than the human wrist. These unique features enable surgeons to operate with enhanced vision, precision, dexterity and control.

As a result of *da Vinci* technology, *da Vinci* Lobectomy offers precise removal of cancerous tissue, as well as the following potential benefits compared to open surgery:

- Lower rate of complications
- Less blood loss
- Shorter hospital stay
- Less pain
- Fewer days with chest tube (used to drain excess lung fluid)
- Improved mental quality of life soon after surgery
- Small incisions for minimal scarring

Risks & Considerations Related to Lobectomy & *da Vinci* Surgery:

Potential risks of any lobectomy procedure, including *da Vinci* Lobectomy, include:

- Abnormal heartbeat following surgery
- Bronchopleural fistula (abnormal passageway develops between lung airways and the membranes that line the lungs)
- Blood loss requiring transfusion