LUNG CANCER ALLIANCE

AMERICAN COLLEGE OF CHEST PHYSICIANS

LUNG CANCER

Understanding the Diagnosis

*Lung Cancer Alliance

LUNG LOVE **LEARN**

THE LUNG LOVE PROJECT℠

Receiving a diagnosis of lung cancer can be overwhelming. This brochure will provide you with basic information to help you understand your diagnosis and talk with your doctor about your treatment options.

The content of this publication is for informational purposes only and is not intended to be a substitute for professional medical advice, diagnosis, or treatment. Only your doctor can provide you with advice on what is safe and effective for you.

Models used in this brochure are for illustrative purposes only.

What is lung cancer?

Cancer is a group of diseases in which cells grow out of control. In lung cancer, these uncontrolled cells form a mass or masses (also called tumors) in the lungs, the sponge-like organs located in the chest that are part of the respiratory system.

As in other cancers, lung cancer cells can leave the primary tumor site (where the tumor started to form) and spread to neighboring tissues or other parts of the body. When cancer spreads, it is called metastasis. Other cancers (such as colon, breast, or kidney cancer) may spread to the lungs but would not be considered a primary lung cancer and may be treated very differently.

Lung cancer is separated into categories based on the type of cell that makes up the cancer. The majority of lung cancer cases fall into one of the following two categories:

- **NON-SMALL CELL LUNG CANCER (NSCLC)** is the most common type of lung cancer (nearly 85% of all cases). There are three main kinds of NSCLC:
  - – Adenocarcinoma
  - – Squamous cell carcinoma
  - – Large cell carcinoma

  NSCLC is categorized into four stages (I, II, III, and IV) based on the size of the primary tumor and if and where the cancer has spread.
- **SMALL CELL LUNG CANCER (SCLC)** cells are smaller in size and tend to spread quickly to other parts of the body. SCLC is staged as either limited or extensive depending on if and where the cancer has spread.

How did I get lung cancer?

Although the exact cause of lung cancer remains unclear, many factors increase the risk of developing it. A history of smoking is the main risk factor for developing lung cancer. Cigarette smoke contains many proven carcinogens (substances that cause cancer). Other risk factors may include:

- Exposure to secondhand smoke (or passive smoking)
- Exposure to radon (an invisible, odorless, tasteless radioactive gas that occurs naturally in soil and rocks)
- A family history of lung cancer
- Radiation therapy to the chest area
- Other lung illnesses (such as emphysema, chronic obstructive pulmonary disease [COPD], or tuberculosis)
- Exposure to industrial chemicals including arsenic, asbestos, beryllium, and uranium

How is the diagnosis of lung cancer made?

Lung cancer often does not cause symptoms until the disease has spread. Even when there are symptoms, they can be similar to those of other common illnesses.

You may have already gone through all of the tests that are used to diagnose lung cancer, or you may be at the beginning of the process. Your doctor may order one or more of the following diagnostic tests:

These are the symptoms most commonly associated with lung cancer:

- Frequent coughing*
- Shortness of breath (dyspnea)
- Tiredness (fatigue)
- Wheezing
- Pain in the chest, shoulder, upper back, or arm
- Coughing up blood (hemoptysis)
- Repeated pneumonia or bronchitis
- Loss of appetite (anorexia) and weight loss
- General pain
- Hoarseness
- Swelling of face or neck

*Most common.

- **IMAGING TESTS**
  X-rays, CT (computed tomography, also called CAT) scans, MRI (magnetic resonance imaging) scans, and PET (positron emission tomography) scans are used to find out more about the cancer. These tests can indicate where the cancer is, the size of the tumor(s), and if and where the cancer has spread.

- **BIOPSIES**
  Biopsies confirm the presence of cancer. Small pieces of the suspicious tissue are removed from the body and examined under a microscope to determine the type of cancer.

- **LABORATORY TESTS**
  Many laboratory tests (for example, blood and urine) can indicate how other organs, such as the liver, are functioning. These results may provide valuable information regarding overall health, as well as the potential spread of the cancer.

Your Treatment Team May Include:

- **MEDICAL ONCOLOGIST**
  A doctor who specializes in diagnosing and treating cancer.
- **THORACIC SURGEON**
  A doctor who performs surgeries in the chest region. Some thoracic surgeons specialize in lung cancer.
- **PATHOLOGIST**
  A doctor who specializes in diagnosing and classifying cancer by studying tissue, fluid, or blood samples.
- **RADIATION ONCOLOGIST**
  A doctor who specializes in treating cancer using various forms of radiation by focusing it on the tumor site in the body.
- **PULMONOLOGIST**
  A doctor who specializes in treating diseases and conditions involving the lungs.
- **PULMONARY REHABILITATION SPECIALIST**
  A specialist who works to reduce symptoms and side effects from diseases of the lung—including lung cancer—and their treatments.
- **ONCOLOGY NURSE**
  A nurse who specializes in helping people with cancer and who may further specialize in the surgical or medical management of a patient's care.
- **ONCOLOGY SOCIAL WORKER OR COUNSELOR**
  A social worker or counselor who specializes in helping patients and loved ones cope with the emotional impact of cancer and who may help identify other needed resources.
- **PATIENT NAVIGATOR**
  A nurse, social worker, or trained lay person who assists patients and loved ones on their journey through the healthcare system.

What treatment options are available for patients with lung cancer?

After your diagnosis, your doctor may recommend one or more treatment options. The choice of treatment is based on the type of lung cancer, where it is located, if it has spread, and other factors including your age, general health, and medical history. Research is currently ongoing to determine if certain biomarkers, including genetic mutations, may help to select the right treatment for the right patient as well as predict response to treatment. Learning about the potential treatment options may help you to have an informed discussion with your doctor:

- **Surgery** is an operation to remove the tumor. The type of surgery depends on the tumor's location, its size, the type of tumor, and the stage of the lung cancer. Types of lung cancer surgery include:
  - **WEDGE RESECTION**
    The removal of the tumor as well as a small amount of normal lung tissue (the margin).
  - **LOBECTOMY**
    The surgical removal of an entire lobe of the lung. The right lung is divided into three lobes; the left lung has two lobes.
  - **BILOBECTOMY**
    The surgical removal of two lobes of the right lung.
  - **PNEUMONECTOMY**
    The surgical removal of an entire lung.

If you smoke, **quitting** is one of the single most important lifestyle changes you can make to improve your health. Even if you have lung cancer, quitting may help improve how you respond to treatment. If you want to quit, help is available. Ask your doctor or other healthcare provider for information.

There are two surgical procedures that are used to remove lung tumors and associated diseased tissue.

– **THORACOTOMY**
The traditional open surgery in which a large incision is made in the chest to remove lung tissue.

– **VATS (VIDEO-ASSISTED THORACIC SURGERY)**
A newer surgical procedure that requires two to four small incisions through which a video camera and smaller instruments are inserted to remove tissue.

In addition to surgery, your doctor may prescribe chemotherapy and/or radiation to be given either before surgery, after surgery, or both.

If surgery is not an option, your doctor may recommend one or more of the following options:

- **CHEMOTHERAPY** is a treatment with chemicals that kills rapidly dividing cells or cells that grow quickly, which include cancer cells. Initial chemotherapy for lung cancer often includes a combination of two or more chemicals (cisplatin or carboplatin along with another drug, such as paclitaxel, docetaxel, etoposide, gemcitabine, or pemetrexed).
- **RADIATION THERAPY** is used to kill or shrink cancer cells at the site of the tumor; for palliative care (pain management); or to prevent cancer from spreading to the brain, as in the case of prophylactic cranial irradiation (PCI) after treatment for small cell lung cancer.
- **TARGETED THERAPIES** are designed to target cancer cells based on the unique ways in which they grow and divide. Current targeted therapies available in the United States for use in NSCLC include erlotinib and bevacizumab. Newer targeted therapies are in development and are currently being studied in clinical trials.
- **CLINICAL TRIALS** are research studies that allow patients to try new treatments such as cancer drugs, new approaches to surgery or radiation therapy, combinations of treatments, or new methods of treatment (such as cancer vaccines).

Depending on the treatment(s) you receive, you may experience side effects. Not everyone experiences the same side effects, and they may vary in severity. It is important to know that in most cases, side effects can be managed. You and your doctor should discuss any potential side effects you may experience or are currently experiencing.

Here are some common side effects, which may depend on what type of treatment(s) you receive:

- Loss of appetite (anorexia)
- Nausea and vomiting
- Constipation
- Shortness of breath (dyspnea)
- Tiredness (fatigue)
- Numbness or tingling in the hands and/or feet (neuropathy)
- Rash
- Low red/white blood cell count

What additional questions should I ask about my lung cancer?

To learn more about your diagnosis, treatment options, and support that may be available to you, here is a list of useful questions to ask your treatment team:

ABOUT DIAGNOSIS

- What type of lung cancer do I have?
- What stage is my lung cancer?
- Has the cancer spread to other parts of my body?
- What types of physical symptoms will I experience now?
- Do I need more tests?

ABOUT TREATMENTS

- What are my treatment options?
- What type of treatment(s) do you recommend for me? Why?
- What are the potential side effects associated with these treatments?
- When do I start treatment? How long will it last? How often will I get it?
- Do I qualify for any clinical trials? If so, how do I find more information about clinical trials?
- Which treatments are covered by my insurance?

ABOUT SUPPORT SERVICES

- Are there any support groups available for me and/or my family and friends?
- Where can I get more information about lung cancer?
- Where can I get financial assistance?
- Where can I get treatment-related assistance, such as transportation to appointments?
- Is there someone I can talk to who can help me find resources?

About Lung Cancer Alliance

Lung Cancer Alliance (LCA) is the only national nonprofit organization dedicated solely to providing support and advocacy for people living with or at risk for the disease, and their loved ones. LCA offers unique education and support programs focused on helping people directly affected by lung cancer. Our mission is clear: leading the movement to reverse decades of stigma and neglect by empowering patients, elevating awareness, and changing health policy.

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About the American College of Chest Physicians

The American College of Chest Physicians (ACCP) is an international medical society and the leading resource for improvement in pulmonary, critical care, and sleep medicine worldwide. The ACCP promotes the prevention and treatment of chest diseases through leadership, education, research, and communication. Its philanthropic arm, The CHEST Foundation, helps patients live and breathe easier through work in four key areas: tobacco prevention, humanitarian service, clinical research, and critical care/end-of-life care. By giving life to projects in local communities and across the world, The CHEST Foundation enables the ACCP to realize its vision of being the "leading resource for the improvement in cardiopulmonary health and critical care worldwide."

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Where can I go for additional information?

For more information about lung cancer and current treatments, to discuss support options, or for referral to other resources, such as financial and legal assistance, please contact Lung Cancer Alliance at our toll-free information line or visit our Web site.

- **INFORMATION LINE**
  1-800-298-2436
- **WEB SITE**
  www.lungcanceralliance.org
- **E-MAIL**
  info@lungcanceralliance.org
- **LUNG CANCER ALLIANCE**
  888 16th Street, NW
  Suite 150
  Washington, DC 20006

Lung Cancer Alliance's (LCA's) services are made possible by generous support from people like you. Please consider giving back so that others may continue to receive these free services. LCA is a 501(c)(3) nonprofit organization. All donations are tax-deductible to the full extent permitted by law.

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