FOCUS ON: LUNG CANCER

OVERVIEW

Lung cancer is the second most common cancer in both men and women and is the leading cause of cancer deaths in the United States. According to the American Cancer Society, there are nearly 225,000 new cases of lung cancer diagnosed each year in the United States.

SYMPTOMS AND WARNING SIGNS

Typically, lung cancer does not exhibit any signs and symptoms in its earliest stages. Most often they occur when the disease is already in an advanced stage. Signs and symptoms include:

- A COUGH THAT DOES NOT GO AWAY
- FEELING FATIGUED
- SHORTNESS OF BREATH
- COUGHING UP BLOOD
- HOARSENESS
- CONTINUAL WHEEZING
- LOSS OF APPETITE
- UNEXPLAINED WEIGHT LOSS
- CHEST PAIN

LUNG CANCER BY THE NUMBERS

Based on the most recent data available from the New York State Cancer Registry, 14,364 people in the state were diagnosed with lung cancer in 2017 – 6,972 men and 7,333 women. Westchester County accounted for 598 cases, with 280 men and 318 women afflicted. White Plains Hospital treated 179 lung cancer patients over that period – 76 men and 103 women.

White Plains Hospital treats 30% of Westchester County residents diagnosed with lung cancer. Many patients choose the Hospital because of its high quality of care and follow-up that patients receive both in and out of the Hospital.
DEFINITIONS

**Non-Small Cell Cancer:** Non-small cell lung cancer is a disease in which malignant cancer cells form in the tissues of the lung. It is the most common kind of lung cancer, accounting for approximately 85% of all lung cancers.

**Small Cell Cancer:** Small cell lung cancer accounts for approximately 10% to 15% of all lung cancers and is sometimes called oat cell cancer. Small cell cancer grows quickly but tends to respond well to chemotherapy and radiation therapy.

<table>
<thead>
<tr>
<th></th>
<th>New York State</th>
<th>Westchester County</th>
<th>White Plains Hospital</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Small Cell Cancer</td>
<td>12,853</td>
<td>543</td>
<td>169</td>
</tr>
<tr>
<td>Small Cell Cancer</td>
<td>1,551</td>
<td>55</td>
<td>10</td>
</tr>
</tbody>
</table>

LUNG CANCER SCREENING

**Screening is the standard of care used to detect lung cancer in its early stages** when it is still likely to be curable. Research by the American Lung Cancer Society asserts that if lung cancer is caught before it spreads, the likelihood of surviving five years or more improves to nearly 60%.

Patients with a history of smoking should be honest with their primary care physician or pulmonologist and be encourage to get a screening. The only recommended screening test for lung cancer is a low-dose CT scan, or low-dose computed tomography. A patient's physician can order the screening CT scan. White Plains Hospital offers low dose CT scans at its offices in White Plains, New Rochelle, Armonk and Rye Brook.

SMOKING RISK CALCULATOR

The U.S. Preventive Services Task Force (USPSTF) recommends screening for asymptomatic adults between 50 to 80 years of age who have a 20 pack-year history (smoking one pack of cigarettes per day for 20 years) and currently smoke or have quit smoking within the past 15 years. A Smoking Risk Calculator can gauge the effect smoking has on a person's life.

To see your risk, please click on the link: [SHOULDSCREEN.COM/ENGLISH/PACK-YEAR-CALCULATOR](https://shouldscreen.com/english/pack-year-calculator)

If you find that your risk is elevated, please contact your primary care provider or pulmonologist to discuss if a screening CT scan is right for you.

SMOKING CESSATION

For individuals committed to quitting smoking, White Plains Hospital offers a free smoking cessation course. The program is a one-time, three-hour course led by a Certified Smoking Cessation Counselor. Participants benefit from:

- **Applying Effective Techniques from Trained Professionals to Kick the Tobacco Habit for Good**
- **Nicotine Replacement Therapy**
- **Information on Nutritional Counseling to Prevent or Limit Weight Gain**
- **Being Part of a Unique Research Study Using Aromatherapy to Help Reduce Nicotine Cravings**
**CLINICAL TRIALS**

The White Plains Hospital Center for Cancer Care offers patients a variety of clinical trials with promising new therapies for cancer treatment using the latest in diagnostic approaches, cutting-edge technology, and novel drugs. For more information on how to participate in our clinical trials program, please contact the Center at: 914-849-7582

The Hospital currently offers five clinical trials for the treatment of lung cancer:

**NON-SMALL CELL LUNG CANCER**

- **MERCK 671 (NEO ADJ):** A Phase III, Randomized, Double-blind Trial of Platinum Doublet Chemotherapy +/- Pembrolizumab (MK-3475) as Neoadjuvant/Adjuvant Therapy for Participants with Resectable Stage II, IIIA, and Resectable IIIB (T3-4N2) Non-small Cell Lung Cancer (NSCLC) (KEYNOTE-671)

  The purpose of the study is to evaluate the safety and effectiveness of an experimental drug called pembrolizumab (MK-3475) as a possible treatment for non-small cell lung cancer when combined with standard chemotherapy and surgery. The research team is studying if pembrolizumab, given with standard chemotherapy, makes cancer cells shrink or grow more slowly than if the subject received chemotherapy alone. After surgery, the combination regimen may decrease the chances of cancer coming back, but this is not known. The study will also look at how the body reacts to pembrolizumab.

- **MERCK 867:** A Phase 3, Randomized, Placebo-Controlled Clinical Study to evaluate the Safety and efficacy of Stereotactic Body Radiotherapy (SBRT) with or without Pembrolizumab (MK3475) in Participants with Medically Inoperable Stages I or IIA Non-Small Cell Lung Cancer (KEYNOTE-867).

  The purpose of the study is to evaluate the safety and tolerability SBRT with an experimental drug called pembrolizumab (MK-3475) as a possible treatment for non-small cell lung cancer. The research team is studying if pembrolizumab, given with SBRT, makes cancer cells shrink or grow more slowly than if the subject received SBRT alone.

- **ALK E4512 (ADJ – ALK MUTATION):** A Randomized Phase III Trial for Surgically Resected Early Stage Non-Small Cell Lung Cancer: Crizotinib versus Observation for Patients with Tumors Harboring the Anaplastic Lymphoma Kinase (ALK) Fusion Protein

  The purpose of this research study is to compare the effects of using the study drug, crizotinib (also known as XALKORI®), after surgery and, in some cases, after chemotherapy and/or radiation therapy for ALK-positive non-small cell lung cancer. The addition of crizotinib may help prevent cancer from returning, but it could also cause side effects. This research study will determine whether this unique approach is better, the same, or worse than the usual approach. If the response is positive, the study drug should increase how long your patients live by 2 years and 9 months (33 months total) or more compared to the usual approach. Crizotinib is already FDA-approved for use in ALK-positive locally advanced or metastatic (spread to other areas of the body) non-small cell lung cancer. The use of crizotinib in this study is investigational (not approved by the FDA) because crizotinib will be prescribed for earlier stage disease after the cancer has been surgically removed.

- **MATCH: Molecular Analysis for Therapy Choice:** There are two parts to this study: screening study and a sub-study. Participants in the screening study are required to have had a sample of their tumor tested by a MATCH-designated laboratory. If the tumor has a genetic change or mutation that is targeted by one or more of the drugs used in this study, subjects will be asked to participate in that sub-study. The sub-study information will be provided in a separate consent form. Anyone who participates in one of the sub-studies will take the study drug that is being evaluated until their cancer worsens, or until they have side effects and can no longer tolerate the study drug.
CLINICAL TRIALS CONT.

SMALL CELL LUNG CANCER

MATCH: Molecular Analysis for Therapy Choice: There are two parts to this study: screening study and a sub-study. Participants in the screening study are required to have had a sample of their tumor tested by a MATCH-designated laboratory. If the tumor has a genetic change or mutation that is targeted by one or more of the drugs used in this study, subjects will be asked to participate in that sub-study. The sub-study information will be provided in a separate consent form. Anyone who participates in one of the sub-studies will take the study drug that is being evaluated until their cancer worsens, or until they have side effects and can no longer tolerate the study drug.

The Checkmate Study, a new clinical trial of experimental treatment for patients with advanced lung cancer, is also available.

TREATMENT

SURGICAL TREATMENT

By combining state-of-the-art surgical procedures and techniques, the thoracic and vascular surgical specialists can provide our patients the highest level of surgical care. WPH provides a multidisciplinary team, including surgeons, anesthesiologists, intensivists, pulmonologists, medical oncologists, and radiation oncologists.

White Plains Hospital offers a wide range of traditional surgical procedures for lung cancer, including:
- Segmentectomy
- Lobectomy
- Pneumonectomy
- Bronchoscopy

One of the effective tools used to treat lung cancer is a navigational bronchoscopy, which is used to examine and treat lesions in areas of the lungs that are inaccessible using a regular bronchoscope. The navigational bronchoscopy uses GPS technology to help identify masses. WPH can perform endobronchial ultrasounds (EBUS) to stage the patient. Staging is very important because it tells the medical team how to treat the disease.
MINIMALLY INVASIVE SURGICAL PROCEDURES

There have been significant advances in the surgical resection of lung cancer. Instead of performing surgery that always involved large incisions requiring a long recovery, surgeons now use robotics, with small incisions that decrease recovery time.

Below are the minimally invasive surgical procedures performed at White Plains Hospital:
- Video Assisted Thoracic Surgery (VATS)
- Thoracentesis
- Thoracostomy

OTHER TREATMENTS

Over the past decade there have been many advances in the medical management of lung cancer. Molecular testing that started in the early 2000s is now a fundamental tool to guide and individualize treatment selection for patients. The development of targeted therapies including immune checkpoint inhibitors, immunotherapy, as well as anti-angiogenic therapies, has also helped improve survival rates over the last 10 years.

Additionally, Radiation Therapy treatment has also improved greatly over the last 20 years through the use of 3D and/or Intensely Modulated Radiation Therapy (IMRT), which adjusts the radiation beam to the contours of a tumor, allowing for higher, more effective doses of radiation to be delivered while minimizing exposure to surrounding healthy tissue.

Finally, as an alternative to surgery, the Hospital's two new state-of-the-art linear accelerators, the Varian® EDGE™ and TrueBeam Linear Accelerators, treat tumors without having to surgically remove them. The EDGE and TrueBeam can be used to treat cancer in any area of the body where radiation therapy is indicated, including the brain, spine, pancreas, liver, and lungs.

LUNG NAVIGATION PROGRAM

The goal of the program is to coordinate and expedite care when a patient is diagnosed or suspected of having a new lung cancer. A Thoracic Physician Assistant helps to coordinate care between thoracic surgeons and the care team of primary care physicians, pulmonologists, gastroenterologists and medical/radiation oncologists.

THORACIC TUMOR BOARD CONFERENCES

Thoracic Tumor Board conferences are held bi-weekly. At these conferences, surgeons, medical and radiation oncologists as well as other clinical staff meet to discuss each individual case and come to a consensus on treatment options offered to the patient. A patient may be discussed more than once as doctors decide on the best treatment plan. The conference reviews over 100 thoracic cases each year.

FOR ADDITIONAL INFORMATION ABOUT OUR CANCER PROGRAMS, CONTACT THE WHITE PLAINS HOSPITAL CENTER FOR CANCER CARE AT 914-849-7500.