

In sights

A PUBLICATION
OF THE
NORTHEAST
REGIONAL
CANCER INSTITUTE

SPECIAL EDITION - LUNG CANCER

.....
*this
special
issue...*

Lung Cancer: The Number One Cancer Killer in the U.S.

Lung cancer is the number one cause of death from cancer in the United States. Between 1991-2000, more than 1.5 million Americans died from the disease, according to a 2003 report from the American Cancer Society.

It's no wonder, then, that so many people are turning their attention to understanding lung cancer - its causes, diagnosis and treatment.

Lung cancer is caused by the uncontrolled growth of abnormal cells in one of or both lungs. This uncontrolled growth forms tumors that prevent the lungs from functioning properly.

Types of Lung Cancer

There are two main types of lung cancer: nonsmall cell lung cancer and small cell lung cancer. The cells for each type of lung cancer look differently when viewed under a microscope. In addition, each type of lung cancer grows and spreads in different ways and is treated differently.

Nonsmall cell lung cancer is the more common of the two lung cancers. It typically grows and spreads more slowly.



There are three main types of nonsmall cell lung cancer: squamous cell carcinoma (also known as epidermoid carcinoma), adenocarcinoma and large cell carcinoma.

Small cell cancer, sometimes referred to as oat cell cancer, is the less common form of cancer. However, this type of cancer grows more quickly and is more likely to spread to other body organs.

Community Education & Outreach

Common lung cancer causes...

pg. 2

Guide to symptoms, diagnosis and treatment...

pg. 3

Education and support resources...

pgs. 4-6

Epidemiology Research

Study shows smoking rates in NEPA higher than state and US averages...

pg. 7

QUICK FACT

Smoking Shortens Lifespan

On average, men who smoke cut their lives short by 13.2 years. Women lose 14.5 years.

Source: Surgeon General's Report, May 2004



The Most Common Causes of Lung Cancer

Tobacco products are the leading cause of lung cancer. Cigarette smoking is responsible for most lung cancer cases and deaths. A model developed by the Pennsylvania Cancer Control Consortium (PAC3), shows that cancer cases throughout Pennsylvania in 1998 could have been reduced by 17% if smoking had ceased.



Tobacco products are the leading cause of lung cancer cases and deaths.

The likelihood of a cigarette smoker developing lung cancer is influenced by the age at which the person began smoking, how long the person has smoked, the amount smoked and how deeply the smoker inhales. Smokers can greatly reduce their risk for developing lung cancer by stopping smoking at any time.

The influencing factors of developing lung cancer, as outlined above, also hold true for those who smoke cigars and pipes. Additionally, these types of tobacco products present an increased risk for developing mouth and other types of cancer.

Tobacco Smoke Pollution, also causes lung cancer. Persons who are exposed to smoke in the air caused by someone else who smokes are at risk of developing the disease.

Radon can cause damage to the lungs that may lead to lung cancer. Radon is an odorless, tasteless and invisible radioactive gas that occurs naturally in soil and rocks. Homeowners can test the radon level of their home through a radon test performed by a do-it-yourself inspection kit or by a certified inspection company.

Asbestos can lead to the development of lung cancer. Asbestos is the name of a group of minerals that occur naturally as fibers. These fibers have a tendency to break into small particles that float in the air. When inhaled, they can lodge in the lungs and damage cells.

Asbestos was used in several industries, such as mining and manufacturing, insulation, brake repairs and shipbuilding. Workers who have been exposed to large amounts of asbestos are three to four times more likely to develop lung cancer than workers who have not been exposed to asbestos.

Pollution is also thought to have a link to lung cancer, although the precise nature of this connection is still being researched.

Some types of **lung diseases**, such as tuberculosis, increase a person's chance of developing lung cancer.

Personal history also plays a part. A person who has had lung cancer once is more likely to develop lung cancer a second time.

Radon: The Silent Killer

Radon is an odorless, tasteless and invisible radioactive gas that occurs naturally in soil and rocks. While low levels of radon are present almost everywhere, prolonged exposure to elevated levels of radon within a home can cause cancer.

The Pennsylvania Department of Environmental Protection (DEP) estimates that between 860 - 3,800 lung cancer deaths each year are attributable to radon. DEP estimates that 40% of Pennsylvania homes have radon levels greater than the EPA guideline of 4pCi/L. Yet it is estimated that only about 10% of homes in Pennsylvania have been tested for radon.

Homeowners can test the radon level of their home through a radon test performed by a do-it-yourself inspection kit, or by a certified inspection company. For additional information about radon and radon testing, contact the Pennsylvania Department of Environmental Protection at 1-800-23RADON.



A Guide to Symptoms, Diagnosis and Treatment

Lung cancer does not often present **symptoms** in its early stages. Sometimes, it is discovered when a person has a chest x-ray for another medical reason.

Lung cancer is typically found after a growing tumor causes symptoms to appear. These symptoms include:

- ♦ A persistent cough (the most common symptom)
- ♦ Constant chest pain
- ♦ Shortness of breath, wheezing or hoarseness
- ♦ Coughing up blood
- ♦ Swelling of the neck and face

There might also be other symptoms that do not appear to be related to the lungs. These include:

- ♦ Fatigue
 - ♦ Loss of appetite
 - ♦ Loss of weight
 - ♦ Headache, pain or bone fractures (in cases where the lung cancer has spread to other parts of the body).
- None of the above symptoms are definite signs of lung cancer. Only a physician can make a complete diagnosis.

Diagnosis begins with an evaluation of a patient's medical history and, often, a chest x-ray. If lung cancer is suspected, the next step might be a simple test that involves the microscopic examination of cells obtained from a deep-cough sample of mucous in the lungs.

The only way to confirm the presence of lung cancer is to examine lung tissue under a microscope. This tissue is obtained via a biopsy; several procedures can be used:

- ♦ **Bronchoscopy:** A bronchoscope (thin, lighted tube) is placed into the mouth or nose and down through the windpipe to examine breathing passages. Through this tube, the doctor can collect cells or small tissue samples.
- ♦ **Needle Aspiration:** A needle is inserted through the chest into the tumor to remove a tissue sample
- ♦ **Thoracentesis:** A needle is used to remove a sample of the fluid that surround the lungs; this fluid is examined for cancer cells
- ♦ **Thoracotomy:** Sometimes surgery is needed to open the chest in order to diagnose lung cancer. This is a major operation performed in a hospital.

If cancer is detected, the next step is to learn the **stage of the disease** to see if the cancer has spread and, if so, where. For example, lung cancer often spreads to the brain or bone. Understanding the stage of the disease helps health care professionals to develop a treatment plan. Several tests are used to determine where the cancer may have spread:

- ♦ Bone scan, to see if the cancer has spread to the bone
- ♦ MRI, which uses a powerful magnet linked to a computer to make detailed pictures of areas inside the body
- ♦ CAT Scan, which uses a computer linked to x-rays to create detailed pictures of areas inside the body
- ♦ Mediastinoscopy/Mediastinotomy, used to show whether the cancer has spread to the lymph nodes in the chest.

The most common forms of **treatment** for lung cancer are surgery, radiation and chemotherapy. Sometimes, the treatment involves some combination of the above three treatments.

Surgery is performed when it is likely that all of the tumor can be removed. Three main types of surgery are used, depending on the size and location of the tumor and the extent of the cancer, among other things.

- ♦ A wedge resection removes only a small part of the lung
- ♦ A lobectomy removes an entire lobe of the lung
- ♦ A pneumonectomy removes an entire lung.

Non-small Cell Lung Cancer Treatment

Surgery is typically used for patients with this form of cancer who have cancer in only one lung, or in one lung and nearby lymph nodes. Patients with large tumors or who cannot have surgery due to other medical conditions are often treated with radiation.

Radiation therapy is also used for patients whose cancer has spread to distant lymph nodes or other tissues. Some patients are treated with both surgery and radiation therapy, and some also receive chemotherapy.

Small Cell Lung Cancer Treatment

Because this form of cancer spreads quickly, cancer cells have generally spread to other parts of the body by the time cancer is diagnosed. Accordingly, health care professionals generally treat this form of cancer with chemotherapy to be sure that treatment affects all cancer cells.

Often, treatment for this type of cancer also includes radiation therapy to shrink or destroy the primary tumor in the lung or tumors in other parts of the body. Because small cell lung cancer has a tendency to spread to the brain, some patients have radiation therapy to the brain, even if no cancer is detected there. This treatment, called prophylactic cranial irradiation (PCI), is given to prevent tumors from forming in the brain.

Northeast Regional Cancer Institute Offers Prevention, Education and Support Programs

The Northeast Regional Cancer Institute offers programs that educate the general community and healthcare professionals about the prevention, early detection and treatment of cancer. The Cancer Institute also serves as an information and referral source to enlighten cancer survivors on local, regional, and national support groups/services available to serve specific cancer needs of area residents. The Cancer Institute partners with many organizations to provide current, clinically-sound information to the residents of Northeast Pennsylvania.

For more information about these programs listed or any programs offered at the Cancer Institute, please contact us at (570) 941-7984 in Lackawanna County and (570) 970-6543 in Luzerne County.

Cancer In My Family: Understanding the Risk

Cancer in My Family: Understanding the Risk is offered through the Cancer Institute's Cancer Risk Program to individuals who have questions or concerns about their risk or a family member's risk for cancer due to a personal or family history of the disease. This program is also a must for anyone with questions about cancer genetic testing.

Healthy Choices: Tips for Reducing Cancer Risk

Healthy Choices: Tips for Reducing Cancer Risk helps individuals identify and understand the risk factors that can lead to the development of cancer. Strategies to lower cancer risk are offered including proper nutrition, exercise and lifestyles choices.

Cancer Clinical Trials Awareness

Most of the best cancer treatments we have today are based on what we learned from clinical trials. This program provides basic information on the importance of clinical trials, how participant safety is protected and types of trials and how they work. Resource information is also available for program participants interested in finding out more about clinical trial availability in their community.

Cancer Screening Protocols: What You Should Know

This program provides information about the rationale for cancer screening and reviews screening recommendations for the most common occurring cancers. Risk, benefits and limitations of screenings are also addressed. Resources for specific types of screening are provided to interested participants.

Cancer Basics

Cancer Basics provides easy-to-understand information about cancer development, staging, treatment, coping skills and community resources for newly diagnosed cancer patients and their families in a convenient 1-hour session.

Cancer Survival Toolbox

The Cancer Survival Toolbox provides practical tools to individuals and families dealing with a cancer diagnosis. Topics addressed include: communication, finding information, making decisions, solving problems, finding ways to pay for care, and caring for the caregiver. Participants receive a free set of Toolbox audiotapes as well as other helpful resource information.

Coping With Fear of Recurrence

Fear of recurrence is a phenomenon experienced by many cancer survivors and concerned family members. This program provides information about the impact of recurrence concerns on cancer survivors and family members as well as tips for coping with recurrence concerns. Additional coping resources are also provided to participants.



Candy's Place: A Cancer Resource Center in Northeastern Pennsylvania

Many of the resources dedicated to cancer patients deal with medical aspects of the disease. In recent years, however, there has been growing attention to the need to provide services that address quality of life issues before, during and after cancer treatment.

Northeastern Pennsylvania is fortunate to have a place where patients, their families and caregivers can receive emotional, social and physical support, and therapeutic services. **Candy's Place - a Rainbow of Hope**, was founded in 1998 in memory of Candice Vincent-Mamary. Candy, who died of cancer, bravely envisioned a way to help cancer patients seek "a different kind of support."

Located in the Kirby Health Center, Wilkes-Barre, Pa., Candy's Place is a non-profit organization funded through grants, donations and fundraising events.

Candy's Place is unique in its many specialized programs and services provided by certified professionals. Yoga classes, Cancer Well



Candy's Place - a Rainbow of Hope was founded in 1998 in memory of Candice Vincent-Mamary, shown here, fourth from the left, in a family photo.

Fit exercise programs, massage therapy, Reiki health touch, spa treatments, educational workshops, art therapy and social/emotional consultations are a few of the many services provided.

Candy's Place designed the first specialized exercise program for cancer patients in Northeastern Pennsylvania in 1999. Research indicates that patients who participate in regular exercise can improve their health outcomes over those who

undergo only traditional cancer treatments. For example, exercise can help decrease side effects such as, fatigue, nausea, pain and depression, can help to prevent osteopenia and lymphedema resulting from cancer drugs or surgery, and can increase or sustain endurance and restore self-esteem.

All services and programs offered by Candy's Place are free of charge. For additional information, call (570) 208-HOPE (4673).

Lung Cancer Screening Update

Currently, evidence is insufficient to recommend for or against screening people "without any symptoms" for lung cancer with either low dose CT Scan, chest x-ray, sputum cytology or a combination of these tests. Based on fair evidence, screening does not reduce mortality from lung cancer. Also, based on existing evidence, lung cancer screening would lead to false-positive tests and unnecessary invasive procedures and treatment.

Each year
600 cases of lung cancer are detected and 480 deaths result from lung cancer, making lung cancer the 2nd leading cause of death in Northeastern Pennsylvania.



Cessation Programs and Resources Can Help You Quit

he best way to prevent lung cancer is to quit, or never start, smoking.

There are many benefits to quitting smoking. Did you know that your body begins to heal within 20 minutes of your last cigarette? Your body will start to repair itself within three days as the nicotine leaves your system. It is never too late to quit smoking; quitting will lower your chance of death from lung cancer.

When you quit smoking, you will be able to breathe easier, and your sense of taste and smell will improve. If you are pregnant, quitting smoking will improve your chances of having a healthy baby.

Smoking Cessation Programs

There are many cessation programs offered right here in Northeastern Pennsylvania. Local programs are offered at:

- ♦ Marian Community Hospital
- ♦ Community Medical Center
- ♦ Mercy Hospital, Scranton

For other local resources contact:

- ♦ Carbon/Monroe/Pike Drug and Alcohol Commission (570) 421-3669
- ♦ Lackawanna County Commission on Drug and Alcohol (570) 963-6820
- ♦ Wayne County Drug and Alcohol (570) 253-6022
- ♦ Susquehanna County Drug and Alcohol Commission (570) 278-1000
- ♦ Luzerne-Wyoming Counties Drug and Alcohol Program (570) 826-8790

Pennsylvania's Free Quitline

In addition to the local programs, the Pennsylvania Department of Health and the American Cancer Society have partnered to offer Pennsylvania's Free Quitline, 1-877-724-1090.

Through this toll-free number, available 24 hours a day, seven days a week, clinically-trained counselors provide advanced counseling and assistance for Pennsylvania residents who are committed to quitting smoking. Those wanting to help someone quit are also encouraged to call.

www.smokefree.gov

Another resource is the Web site www.smokefree.gov, created by the Tobacco Control Research Branch of the National Cancer Institute, with important contributions from other nationally recognized agencies and organizations such as the Centers for Disease Control and Prevention and the American Cancer Society.

Smokefree.gov is intended to help you or someone you care about quit smoking. The Web site offers the following resources:

- ♦ An online step-by-step cessation guide
- ♦ Local and state telephone quitlines
- ♦ NCI's national telephone quitline
- ♦ NCI's instant messaging service
- ♦ Publications, which may be downloaded, printed, or ordered.

Lung Cancer Resources

ALCASE, the Alliance for Lung Cancer Advocacy, Support and Education, is a national not-for-profit organization dedicated solely to helping people with lung cancer, and those who are at risk for the disease, improve the quality of their lives through advocacy, support and education.

The ALCASE website, www.alcase.org, provides a wealth of information and support resources for lung cancer patients and their families. The Web site includes news stories, information about clinical trials specific to lung cancer, stories of hope and tributes. There is also a link to a Phone Buddy Program.

Additional information about ALCASE may also be obtained by calling toll-free (800) 298-2436.



(570) 941-7984
or (570) 970-6543
www.cancernepa.org



Alliance for
LUNG CANCER
Advocacy, Support,
and Education

(800) 298-2436
www.alcase.org



**AMERICAN
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(570) 346-1784
www.lungusa.org



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1-800-ACS-2345
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Sandy's Place

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www.sandysplace.org

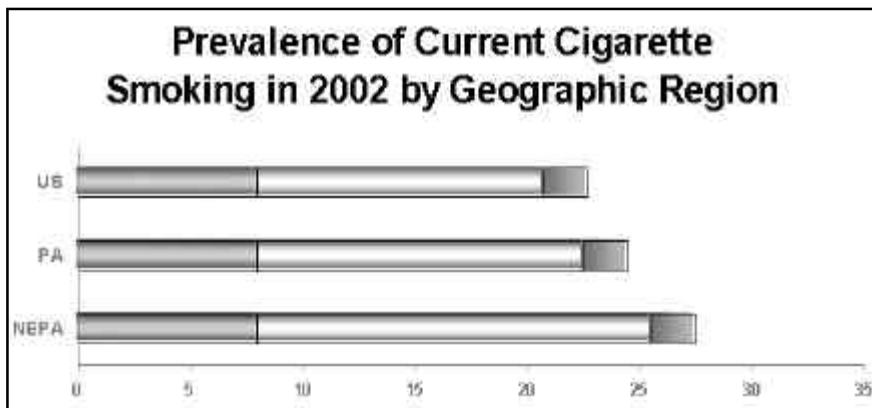


Study: Tobacco Usage in Region Exceeds State, National Averages

Adults in northeast Pennsylvania use tobacco products at rates significantly higher than the averages in Pennsylvania and the U.S., according to the results of a research project conducted by the Northeast Regional Cancer Institute.

Under contract with the Lackawanna County Commission on Drug and Alcohol Abuse, the Luzerne-Wyoming Counties Drug and Alcohol Program, and the Susquehanna County Drug and Alcohol Commission the Northeast Regional Cancer Institute established a baseline on tobacco use in six counties in northeast Pennsylvania - Lackawanna, Luzerne, Pike, Susquehanna, Wayne and Wyoming in 2002. Data collected in subsequent years will be compared to this baseline to monitor changes in tobacco use in the region.

According to the results of the research study, 27.5 percent of all adults in northeastern Pennsylvania smoked cigarettes in 2002. By comparison, 24.5 percent of adults in



Pennsylvania smoke cigarettes, and an average of 22.7% adults in the U.S. smoke.

The proportion of women in northeastern Pennsylvania who smoked cigarettes - 26.1 percent - was also higher than state and national averages of 22.8 percent and 20.6 percent respectively.

Broken down by region, 31.4 percent of adults in Lackawanna County and 27.1 percent of adults in Luzerne County smoked cigarettes.

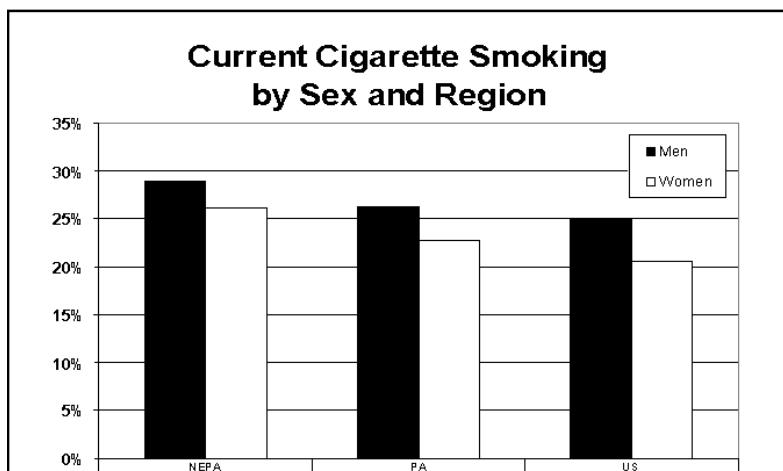
Overall, tobacco use in the region is highest among residents

under 45 years of age. Current smoking rates decreased with advancing age and education.

Data for the Cancer Institute research were obtained through random telephone interviews with adults 18 years of age and older. Participants were invited to respond to questions about a variety of health and lifestyle issues ranging from diet and exercise to health screening factors and, of course, tobacco use.

While the research provides interesting statistics, it also provides valuable information that supports efforts to control tobacco use and reduce the risk of cancer in the region.

“By having an in-depth understanding of how and why tobacco is used, we are in a better position to develop programs that help people stop smoking or, better yet, to never start,” said Gertrude Coleman, PhD, Epidemiologist, in the Cancer Institute’s Luzerne County Office who, with Samuel Lesko, MD, MPH, Director of Research and Medical Director, led the research project.



Northeast Regional Cancer Institute

.....
*Easing the burden
of cancer in
Northeastern
Pennsylvania*

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Financial support for
the Cancer Institute's
educational programs and
services is provided by the
**Harry and Jeanette
Weinberg Foundation**
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Department of Health.**

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*The Northeast Regional Cancer Institute is a non-profit
community-based agency working to ease the burden of cancer
in Northeastern Pennsylvania throughout Lackawanna,
Luzerne, Pike, Susquehanna, Wayne, and Wyoming Counties.
Focusing on research, education, and survivorship, the Cancer
Institute invests all of its resources in this region.*

*Partnering with the Cancer Institute to achieve its goals are
community leaders, volunteers, healthcare professionals, and a
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Northeastern Pennsylvania.*

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