



# Understanding Cancer

## What We Know About Lung Cancer

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### Did you know?

Lung cancer is the third most commonly diagnosed cancer and the leading cause of cancer death among both men and women in the United States. One in thirteen (1/13) men and one in sixteen women (1/16) will be diagnosed with lung cancer during their lifetime.<sup>1</sup> The risk of dying from lung cancer is 23 times higher among male smokers, and 13 times higher among female smokers, compared to non-smokers.

The costs in morbidity, mortality, and personal and collective healthcare costs are significant.<sup>2</sup> The good news is that lung cancer incidence and mortality rates have been falling over the last two decades as smoking has declined.<sup>3</sup> Smoking is by far the greatest contributor to lung cancer, attributable for 90% of lung cancer cases.<sup>4</sup>

Other risk factors include exposure to radon, and environmental and work related carcinogens. Change in policies and lifestyle behaviors to avoid these cancer producing agents will go a long way to eliminating this disease.

### Lung Cancer Statistics:<sup>5,6</sup>

Number of new cases every year:

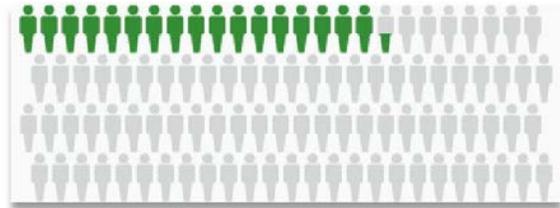
- US : 221,200 (2015)
- VA: 5,580 (2014)

Number of people who die every year:

- US death rate: 158,040 (2015)
- VA death rate: 4,110 (2014)

### 5-year Survival Rate:<sup>5</sup>

Only 17.4% of people with lung cancer will survive 5 years after diagnosis.



Survival rate increases to 54% if lung cancer is found at an early (local) stage.

### Types of Lung Cancer:

There are 3 major types of lung cancer. Each grows and spreads in different ways and is treated differently.

- Non-Small Cell Lung Cancer: 85% of lung cancers.
- Small-Cell lung cancer: 10-15% of lung cancers
- Lung Carcinoid Tumor: 5% of lung cancers, grow slowly and rarely spread

### Symptoms:<sup>7</sup>

Worsening cough	Chronic cough
Coughing up blood	Frequent lung infection
Shortness of breath	Hoarse voice
Wheezing	Pain on swallowing
Constant chest pain	High pitch sound talking

## Early Detection & Screening:

*U.S Preventive Services Task Force screening guidelines*

Annual Low dose computed tomography scan for:

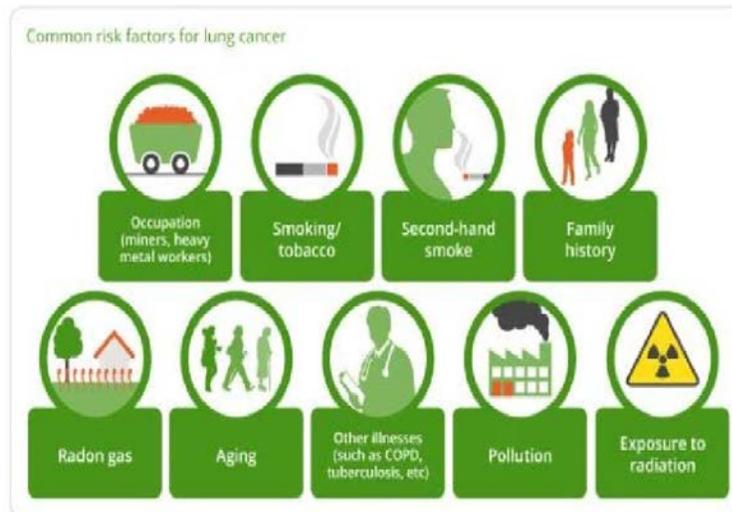
- Adults 55 to 80 years with 30 pack-year smoking history  
&
- A current smoker or have quit within the past 15 years

Patients should consult with their physician about screening eligibility.<sup>8</sup>  
Medicare is covering the cost of screening for high risk patients.<sup>9</sup>

## Treatment:

Treatment is specific to the type and stage of lung cancer. Treatments may include surgery, chemotherapy, radiation therapy, targeted therapy (new drugs that directly address the mutations causing the cancer cells to grow uncontrollably) and palliative care.<sup>6</sup>

## Risk Factors:<sup>1</sup>



Source: [www.lung.org](http://www.lung.org)

- Smoking is the most significant and preventable contributor to lung cancer
- Exposure to second-hand smoke
- Exposure to certain toxic substances, such as arsenic, radon or asbestos
- Exposure to indoor and outdoor air pollution
- Radiation exposure
- Personal or family histories of lung cancer
- Illnesses like COPD or tuberculosis



## High Risk Population:

- Age > 55 years
- Males, especially African American men
- Smoking History: 30 packs/ year or more:  
1 pack / day for 30 years or 2 pack per day for 15 years (Pack: 20 cigarettes)
- Exposure to second hand smoke
- Exposure to other cancer-causing agents: asbestos, radon, arsenic

## Prevention:

### ✓ *Don't smoke:*

If you've never smoked, don't start.

### ✓ *Stop smoking:*

The risk of dying from lung cancer for someone who has quit smoking is half that of a person who is still smoking.<sup>10</sup> There are many resources that can help you to quit smoking.

### ✓ *Avoid second hand smoke:*

If you live or work with a smoker, urge them to quit or to smoke outside. Avoid areas where people smoke.

### ✓ *Test your home for radon:*

Have the radon levels in your home checked, especially if you live in an area where radon is known to be a problem. The Environmental Protection Agency (EPA) has more information about residential radon exposure.<sup>11</sup>

### ✓ *Avoid carcinogens at work:*

Take precautions to protect yourself from exposure to toxic chemicals at work (face masks, gloves, etc.).

### ✓ *Eat a diet full of fruits and vegetables:*

Choose a healthy diet and consume 5 servings of a variety of fruits and vegetables daily. Get vitamins and nutrients from food rather than supplements. Avoid large dose vitamins in pill form, as they may increase lung cancer risk.<sup>12</sup>

### ✓ *Be physically active:*

Regular physical activity may reduce lung cancer risk. The Center for Disease Control and Prevention (CDC) recommends 2 hours and 30 minutes (150 minutes) of moderate-intensity aerobic activity weekly for adults. Examples for aerobic activity include walking, running, and swimming, and bicycling.<sup>13</sup>

Smoking is the greatest risk factor for lung cancer. The longer a person uses tobacco and the more they use, the greater the risk for developing lung cancer. Stopping before middle age avoids more than 90% of the risk attributable to tobacco. Quitting smoking before the age of 40 reduces the risk of dying from smoking-related disease by about 90%.<sup>14</sup>

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- <sup>2</sup> Agency for Healthcare Research and Quality, Healthcare Cost and Utilization Project, Statistical Brief #63 2006, Hospital Stays for Lung Cancer: retrieved from: <http://www.hcupus.ahrq.gov/reports/statbriefs/sb63.pdf>
- <sup>3</sup> National Cancer Institute, helping drive decrease in overall cancer death rates; 2013, Annual Report to the Nation includes special feature highlighting the contribution of other diseases on survival of patients, retrieved from: <http://www.cancer.gov/news-events/press-releases/2013/ReportNationDec2013Release>
- <sup>4</sup> American Lung Association, Lung Cancer Fact Sheet, 2015, retrieved from: <http://www.lung.org/lung-disease/lung-cancer/resources/facts-figures/lung-cancer-fact-sheet.html>
- <sup>5</sup> Surveillance, Epidemiology and End Result Program, Tuning Cancer Data into Discovery, 2015, retrieved from: <http://seer.cancer.gov/>
- <sup>6</sup> American Cancer Society, Cancer Facts & Figures 2014, retrieved from: <http://www.cancer.org>
- <sup>7</sup> NCCN Guidelines for Patients®, Lung Cancer Screening, Version 1.2015. Retrieved from: [http://www.nccn.org/patients/guidelines/lung\\_screening/index.html#3/z](http://www.nccn.org/patients/guidelines/lung_screening/index.html#3/z)
- <sup>8</sup> Final Recommendation Statement, Lung Cancer: Screening, December 2013, <http://www.uspreventiveservicestaskforce.org/Page/Document/RecommendationStatementFinal/lung-cancer-screening>
- <sup>9</sup> Decision Memo for Screening for Lung Cancer with Low Dose Computed Tomography (LDCT) (CAG-00439N), Retrieved from: <https://www.cms.gov/medicare-coverage-database/details/nca-decision-memo.aspx?NCAId=274>
- <sup>10</sup> American Cancer Society, Can quitting really help a lifelong smoker? 2015, retrieved from: <http://www.cancer.org/cancer/cancercauses/tobaccocancer/questionsaboutsmokingtobaccoandhealth/questions-about-smoking-tobacco-and-health-quit-benefits>
- <sup>11</sup> United States Environmental Protection Agency (EPA), Indoor Air quality (IAQ), 2013, Consumer's Guide to Radon Reduction How to fix your home: <http://www2.epa.gov/sites/production/files/2015-05/documents/consguid.pdf>
- <sup>12</sup> Fruits and vegetables and lung cancer: Findings from the European Prospective Investigation into Cancer and Nutrition, Miller AB, Altenburg HP, Bueno-de-Mesquita B, Boshuizen HC, International Journal Of Cancer, 2004.
- <sup>13</sup> Center for Disease Control and Prevention (CDC), 2015, how much physical activity do adults need? Retrieved from: <http://www.cdc.gov/physicalactivity/basics/adults/>
- <sup>14</sup> National Cancer Institute, helping drive decrease in overall cancer death rates; 2013, Annual Report to the Nation includes special feature highlighting the contribution of other diseases on survival of patients, retrieved from: <http://www.cancer.gov/news-events/press-releases/2013/ReportNationDec2013Release>