LUNG CANCER AND SMOKING



• Lung cancer is the leading cause of cancer death in the United States.1

Lung Cancer Incidence

- It is estimated that 222,520 new cases of lung cancer will occur in 2010 (116,750 in men and 105,770 in women). This will account for 15% of diagnoses.
- From 2003-2007, the median age at diagnosis for lung and bronchus cancer was 71 years of age.¹
- Other than active smoking, risk factors for lung cancer include exposure to radon, asbestos, cooking fumes, heavy metals and secondhand smoke as well as human papillomavirus infection and inherited genetic susceptibility.²

Deaths from Lung Cancer

- Lung cancer accounts for 28% of all cancer deaths in the United States.³
- In 2007, 158,760 Americans died from lung, trachea, and bronchus cancer (88,372 men and 70,388 women).³
- It is estimated that 157,300 Americans will die of lung and bronchus cancers in 2010 (86,220 men and 71,080 women).1
- The five-year survival rate for lung and bronchus cancer is 16% (14% among men and 19% among women). Put another way, 84 percent of lung cancer patients die within five years of diagnosis.¹
- Over half of lung cancer cases are diagnosed in the latest stage -- when the cancer has spread from the original site to other areas of the body. The five-year survival rate for these patients is 3.5%.¹
- Lung cancer death rates are highest among African Americans followed by Whites and American Indians and Alaska Natives.¹
- In November 2010, initial results from a National Cancer Institute trial found 20% fewer lung cancer deaths among current and former heavy smokers if they had a computed tomography (CT) scan rather than a chest X-ray.⁴

Smoking and Lung Cancer

- Active cigarette smoking causes approximately 75% of lung cancer deaths in women and nearly 90% of lung cancer deaths in men.⁵
- Nearly 80% of Americans living with lung cancer are former smokers and never smokers (61.2% of former smokers and 17.9% of never smokers).
- Compared to lifelong nonsmokers, the risk of developing lung cancer is 23 times higher for male smokers and 13 times higher for female smokers.⁷ The longer a person smokes and the more cigarettes smoked each day, the more this risk goes up.⁸
- Despite smoking at the same rates, African American men develop lung cancer at rates 23% higher and die at rates 28% higher than White men.^{1, 9}
- Among former smokers, the risk of developing lung cancer decreases with increasing duration of abstinence. Ten to twenty years after quitting smoking, a former smoker's risk of ever dying from lung cancer is 30 to 50 percent that of a smoker's. 10,11
- Even after many years of not smoking, the risk of lung cancer is higher among former smokers compared to lifelong nonsmokers.^{6,10}
- The 2004 Surgeon General's Report, The Health Consequences of Smoking found that although characteristics of cigarettes have changed during the last 50 years and yields of tar and nicotine have declined substantially, the risk of lung cancer in smokers has not declined.
- Cigar smoking causes lung cancer. The more deeply cigar smokers inhale and the more cigars they smoke per day the more likely they are to die from lung cancer.¹²

Financial Impact

- The National Cancer Institute estimates that \$10.3 billion were spent on lung cancer care in the United States in 2006.¹³
- In 2010, \$203 million will be spent on lung cancer research through the National Institutes of Health. It is estimated that \$214 billion were spent in 2009 and \$188 million will be spent in 2011.¹⁴

Women and Lung Cancer

- Since 1950, lung cancer mortality rates for U.S. women have increased an estimated 600%. In 1950, lung cancer accounted for only 3% of all cancer deaths among women; however, by 2000, it accounted for an estimated 25% of cancer deaths.¹⁵
- In 1987, lung cancer surpassed breast cancer to become the leading cause of cancer death among U.S. women. ¹⁴ In 2010, about 31,000 more women will die from lung cancer than they will from breast cancer. ¹
- Research suggests that women have increased susceptibility to tobacco carcinogens but have a lower rate of death from lung cancer compared with men.¹⁶

Secondhand Smoke and Lung Cancer

- Secondhand smoke causes lung cancer in non-smokers.¹⁷
- An estimated 3,400 people (2,131 men and 1,269 women) die each year of lung cancer due to secondhand smoke exposure.⁴

SOURCES

- ¹Altekruse SF, Kosary CL, Krapcho M eds, et al. SEER Cancer Statistics Review, 1975-2007. Bethesda, MD: National Cancer Institute; 2010. Available at http://seer.cancer.gov/csr/1975_2007/. Accessed on October 21, 2010.
- ² Subramanian J, Govindan R. Lung Cancer in Never Smokers: A Review. J Clin Oncol. 2007;25(5):561-570.
- ³ Xu JQ, Kochanek KD, Murphy SL, Tejada-Vera B. Deaths: Final data for 2007. National vital statistics report. 2010; 58(19). Hyattsville, MD: National Center for Health Statistics; 2010.
- ⁴ National Cancer Institute. National Lung Cancer Screening Trial: Questions and Answers. Available at: http://www.cancer.gov/newscenter/qa/2002/nlstqaQA. Accessed on November 8, 2010.
- ⁵ CDC. Cigarette Smoking-Attributable Mortality, Years of Potential Life Lost, and Productivity Losses —United States, 2000-2004. MMWR Morb Mortal Wkly Rep. 2008;57(35):1226-1228.
- ⁶ CDC. Cigarette Smoking Among Adults United States, 2006. MMWR Morb Mortal Wkly Rep. 2007; 56(44); 1157-1161.
- ⁷ U.S. Department of Health and Human Services. The Health Consequences of Smoking: A Report of the Surgeon General. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health; 2004.
- ⁸ Alberg AJ, Ford JG, Samet, JM. Epidemiology of Lung Cancer ACCP Evidence-Based Clinical Practice Guidelines. 2nd ed. Chest. 2007;132(suppl 3): 29S-55S.
- 9 CDC. Vital Signs: Current Cigarette Smoking Among Adults Aged
 ☐ 18 Years United States, 2009. MMWR Morb Mortal Wkly Rep. 2010;59:1135-1140.
- ¹⁰ U.S Department of Health and Human Services. The Health Benefits of Smoking Cessation: A Report of the Surgeon General. Atlanta: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Provention: 1990
- 11 Ebbert, JO, et al. Lung Cancer Risk Reduction After Smoking Cessation: Observations from a Prospective Cohort of Women. J Clin Oncol. 2003;21(5):921-926.
- ¹² National Cancer Institute. Disease consequences of cigar smoking. In: Health Effects and Trends. Smoking and Tobacco Control Monograph No. 9. Bethesda, MD: U.S. Department of Health and Human Services, National Institutes of Health, National Cancer Institute; 1998. NIH Pub. No. 105-160.
- ¹³ National Cancer Institute. Cancer Trends Progress Report 2009/2010 Update. Bethesda, MD: National Institutes of Health, Department of Health and Human Services; 2010. Available at: http://progressreport.cancer.gov. Accessed on October 21, 2010
- ¹⁴ National Institutes of Health. Estimates of Funding for Various Research, Condition and Disease Categories. Available at: http://report.nih.gov/rcdc/categories/. Accessed on October 21, 2010.
- ¹⁵ U.S. Department of Health and Human Services. Women and Smoking. A Report of the Surgeon General. Rockville, MD: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control, Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health; 2001.
- ¹⁶ International Early Lung Cancer Action Program Investigators; Henschke CI, Yip R, Miettinen OS. Women's susceptibility to tobacco carcinogens and survival after diagnosis of lung cancer. JAMA. 2006;296(2):180-4.
- ¹⁷ U.S. Department of Health and Human Services. The Health Consequences of Involuntary Exposure to Tobacco Smoke: A Report of the Surgeon General. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, Coordinating Center for Health Promotion, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health; 2006.