



Issue Brief

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Lung Cancer is a Women's Health Issue

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Lung cancer is the #1 cause of cancer death among women in the United States. Lung cancer used to be thought of as a man's disease, but women now account for almost half (46%) of the more than 172,000 people who will be newly diagnosed with lung cancer this year, and for 45% of the more than 163,000 lung cancer deaths this year.

Of all the types of lung cancer, women are more likely to develop small-cell lung cancer, which is more aggressive and harder to treat than other types.

Risk Factors

Everyone knows that smoking is the leading cause of lung cancer, but 30% of women with lung cancer never smoked. That is about twice as high as the percentage of men's lung cancers

that are not attributed to smoking. In addition, exposures to radon, arsenic, asbestos, radiation, air pollution, some organic chemicals such as benzene, tuberculosis, and second-hand smoke also increase the risk of developing lung cancer.

Beginning in the 1950's, smoking became more acceptable for American women. As more women smoked, the number of women dying from lung cancer increased very dramatically -- by more than 600% between 1950 and 1997. When a woman stops smoking, her risk decreases, but not as much as many women think. Twenty years after stopping, the increased risk from smoking drops only by half. And, of course, exposure to second hand smoke at home, at work, or in other environments - including childhood exposures - can cause lung cancer in women who have not smoked themselves.

Symptoms of Lung Cancer

The most commonly recognized symptoms of lung cancer include:

- persistent cough, coughing that wakes you in the night, and/or coughing up blood
- wheezing and/or shortness of breath
- chest pain
- hoarseness
- swelling in the face and neck
- loss of appetite and/or unexplained weight loss
- unusual tiredness
- recurring pneumonia or bronchitis

Lung Cancer Detection and Treatment

While much progress has been made to improve the survival rates for most cancers over the last 30 years, little progress has been made in the survival rate for lung cancer. For example, between 1974 and 1976, the five-year survival rate for breast cancer was 75%, and this increased to 88% during 1995-2000. Similarly, the survival rate for prostate cancer increased from 67% to 99% in those years. In contrast, the five-year survival rate for lung cancer increased from 13% during 1974-76 to 15% from 1995-2000.

What would be needed in order for progress in lung cancer to parallel that in breast or cervical cancer? Unfortunately, by the time most women are diagnosed with lung cancer, it has already spread to other organs, making a cure extremely unlikely.

In contrast, mammograms and colonoscopies make it possible to diagnose breast cancer and colon cancer at an earlier stage, when surgery, radiation, or chemotherapy have a better chance of eliminating the disease. Earlier diagnosis and more effective treatments, therefore, will be key to advances in lung cancer treatment. However, finding effective methods for lung cancer screening for people who don't have symptoms is complicated. Since lung biopsy is risky, any screening method that produces a high percentage of false positive test results isn't useful for the general population. On the other

hand, people who are at higher risk have more reason to insist that their healthcare providers monitor their lung health aggressively. These include current or past smokers, people exposed to lung cancer-promoting chemicals, and those who have close relatives who have had lung cancer. This might result in earlier detection and treatment of lung cancer.

Unfortunately, it is not clear that earlier detection of lung cancer - through screening with chest x-ray, low dose computerized tomography (LDCT), or any other currently available method or combination of methods - truly lengthens survival time or saves lives. However, as newer and better screening methods and lung cancer treatments are developed, these statistics might improve. In the meantime, women and men who are at high risk for lung cancer need to decide whether they are willing to pay for screening tests themselves, since insurance often will not reimburse the costs.

In addition, treatments for lung cancer are not as effective as treatments for other cancers. For example, one of the new lung cancer drugs, erlotinib (trade name Tarceva), was found to extend survival by an average of only two months in a clinical trial. It is only indicated for locally advanced or metastatic small cell lung cancer that is not responsive to other forms of chemotherapy. Moreover, Tarceva costs more than \$3,000 per month. Insurance cover depends on the individual's health plan type and location.

Funding for Lung Cancer Research

The National Cancer Institute is the major source of cancer research funding in the United States. Some comparisons for 2005 NCI funding for various types of cancer are shown in the table below.

	Total NCI Funding (in millions)	New Cases Diagnosed (male & female)	Funding per New Case	Overall Deaths	Funding per Patient Death
Lung Cancer	\$266.1	172,570	\$1,542	163,510	\$ 1,627
Breast Cancer	\$560.1	212,930	\$2,630	40,870	\$13,704
Colon Cancer	\$253.1	104,950	\$2,412	56,290	\$ 4,496
Prostate Cancer	\$309	232,090	\$1,331	30,350	\$10,181

Far too many women and men are dying of lung cancer every year. Could increased research funding result in better screening, earlier diagnosis, more effective treatment, longer survival and lower mortality for patients diagnosed with lung cancer? We believe the answer is yes.