

A BREATH *of* HOPE
L U N G F O U N D A T I O N

Early Detection is Key

Collaborating for better results

Nancy Torrison

Breast Cancer

- **Five year survival rate: 90%**
- Stage 1 diagnosis: When breast cancer is detected early, and is in the localized stage, the 5-year relative survival rate is 99-100%.

Lung Cancer

- **Five year survival rate: <18%**
- Stage 1A diagnosis for non-small cell lung cancer: 49% (Source: VeryWellHealth.com)

Colon Cancer:

- **Five year survival rate: 64%**
- Stage 1 diagnosis: 90% (Source: ACS)

Lung
cancer
facts:



- Second most common cancer in men and women
- Leading cause of cancer death in world and U.S.
- **70% of lung cancers are diagnosed in stages 3 or 4**
- Approximately 160,000 Americans (2500 Minnesotans) die of lung cancer each year
- Nearly twice as many women die of lung cancer as breast cancer

Estimated deaths four major cancers, different age groups

	All ages	Younger than 45	45 and Older	Younger than 65	65 and Older
All sites					
Male	323,630	8,680	314,950	99,120	224,510
Female	286,010	9,790	276,220	86,030	199,980
Colon & rectum					
Male	27,390	970	26,420	9,610	17,780
Female	23,240	720	22,520	6,370	16,870
Lung & bronchus					
Male	83,550	650	82,900	23,960	59,590
Female	70,500	640	69,860	18,600	51,900
Breast (female)	40,920	2,300	38,620	16,750	24,170
Prostate	29,430	<50	<50	3,200	26,230

Projected deaths are based on US mortality data from 2001 to 2015 as reported by the National Center for Health Statistics, Centers for Disease Control and Prevention.

Note: Estimates should not be compared with those from previous years.

American Cancer Society, Surveillance Research, 2018

SCREENING TRIAL

NLST Study: A clinical trial that showed a reduced lung cancer mortality among individuals at higher risk of lung cancer using low dose CT screening (vs. chest x-rays).

Population: 53,464 people, 33 centers in US

- Ages 55-74 years
- Current smokers or former smokers who quit within past 15 years
- > 30 pack-year of smoking history
- Randomized into one of 2 groups: Chest X-ray and Low-Dose CT Screen
- Three annual screens



NLST Screening Trial

Landmark **National Lung Screening Trial Results 2011**

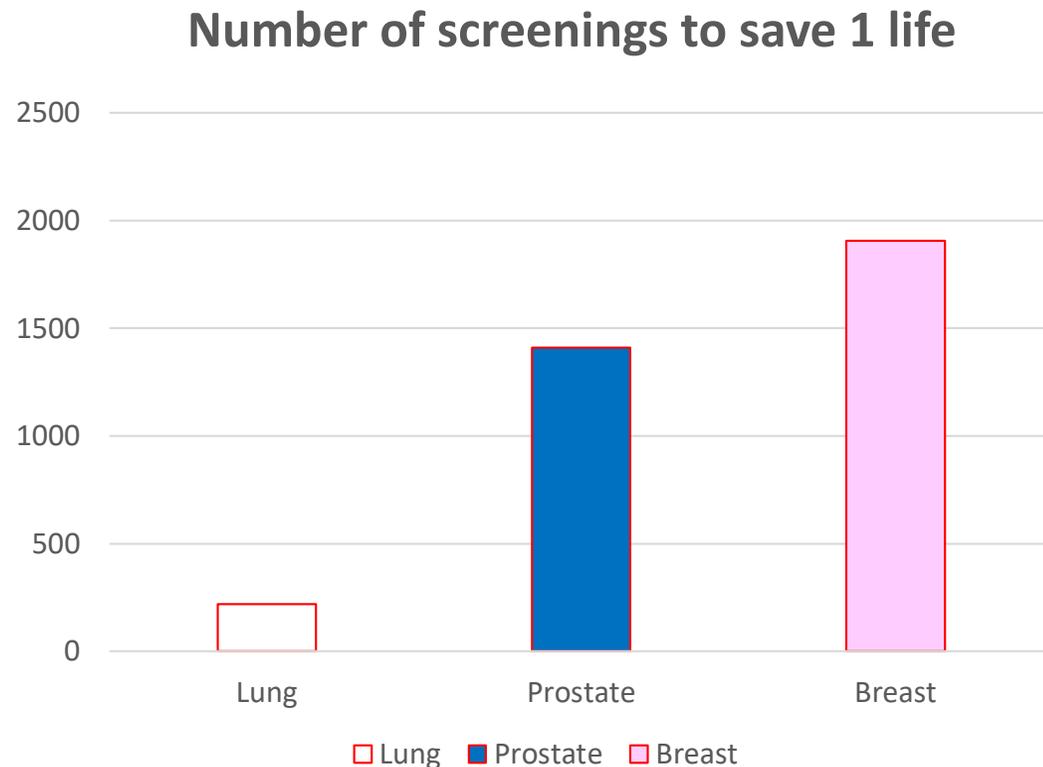
- Showed Lung Cancer Mortality Benefit!
 - 20 % decrease in lung cancer deaths in those who received Low-Dose CT vs. chest x-ray
 - 6.7% decrease in all-cause mortality (deaths due to any factor, including lung cancer)
 - 1.1% lung cancer detection rate
 - *False positives 24% “false-positive” rate (nodules > 4mm) • 96% are non-cancerous • 4% Cancers (N=649)*





Some were/are still
skeptical based on
numbers ...

Number Needed To Screen Lower Than Other Commonly Accepted Cancer Screening Tests



Cost Effectiveness of Lung Cancer Screening - QALY

- QALY: Quality adjusted life year
- Actuarial simulation models predict over the next fifteen years 985,284 quality adjusted life years could be saved
- With the addition of smoking cessation to that screening process, the cost utility ratio of quality adjusted life years could be reduced from \$28,240 to \$16,198 per life year gained.
- Annual lung cancer screenings in a high risk cohort of adults aged 50–64 is highly cost-effective at \$28,240 per QALY gained compared to both the currently accepted cost-effectiveness threshold of \$109,000 per QALY gained, and the more conservative threshold of \$50,000 per QALY gained.
- *Source: Mary Pasquinelli, UIC*

From IASLC (*International Association for the Study of Lung Cancer*) 2018

Based on results from the **Nelson Study**: CT screening reduced the risk of death from lung cancer by 9% to 41% in men over the course of the study, with an overall reduction of 26% at 10 years, and in a smaller subset of women, the rate-ratio of dying from lung cancer varied from 39 to 61% at different years of follow-up, he said, noting that this suggests a “significant and even larger reduction” in women.

From ACR (American College of Radiology) 2018

The Nelson Study, presented at the IASLC World Conference on Lung Cancer, showed that annual lung cancer screening with low-dose computed tomography in high-risk patients reduced lung cancer deaths by 26 percent in men and up to 61 percent in women (up to a 44 percent reduction overall if male and female cohorts were evenly split). Given that the American Cancer Society predicts 160,000 lung cancer deaths in the US in 2018, widespread screening could save up to 65,000 American lives each year.

The Nelson study reinforces three important points about lung cancer screening policy:

- Screening older current and former smokers each year **should be done far more widely**
- **Medical providers must become familiar with lung cancer screening guidelines** and prescribe these exams for appropriate high-risk patients
- **Drastically low Medicare reimbursement must be increased** to support widespread screening

From ACR (continued...)

Physicians Not Adhering to Guidelines

Unlike breast and colon cancer screening, a patient's primary care physician must approve the patient for a lung cancer screening exam during a shared-decision making visit. Many of these providers are unaware of the exams – or not informed on the benefits of these scans.

Tests are Under-Covered by Medicare

Shortly after covering these exams, the Centers for Medicare & Medicaid Services slashed Medicare reimbursement to as little as \$60 per exam in the hospital outpatient setting – less than half the Medicare provider reimbursement for a mammogram. This has restricted the number of facilities able to provide these lifesaving scans to large teaching hospitals. Funding for lung cancer screening needs to be greatly increased.

False Positives Overstated

Updates to Lung-RADS™ - a quality assurance tool to standardize lung cancer screening CT reporting and management recommendations – has reduced false positive rates by 75 percent compared to previous studies. This process will improve, but only with an adequate number of patients to screen and review. Previous psychological studies show that patient concern over cancer screening false positives is short-term with no lasting effects.

“The massive lifesaving benefit of these exams, and the threat to older current and former smokers from this disease, outweighs any potential harms to the defined screening population. By reimbursing at a realistic rate, Medicare has a real opportunity to help save lives now,” said Kazerooni.

From ASCO (American Society of Clinical Oncology) 2018

- Most heavy smokers in the United States who are eligible for low-dose CT screening for lung cancer do not receive it, according to a cross-sectional study reported in a press briefing held before the annual meeting of the American Society of Clinical Oncology.
- Results of the National Lung Screening Trial reported in 2011 showed a 20% reduction in lung cancer mortality with targeted low-dose CT (LDCT) screening, noted lead study author Danh C. Pham, MD, of the James Graham Brown Cancer Center at the University of Louisville (Ky.).
- Since 2013, the U.S. Preventive Services Task Force has recommended this screening for people aged 55-80 years who are current or former heavy smokers, defined as having smoked at least 30 pack-years, he added. “More importantly, in 2015, the Centers for Medicare and Medicaid Services expanded Medicare coverage for LDCT for lung cancer screening,” he said.
- However, results of the new study showed that nationally, only 1.9% of more than 7.6 million eligible current and former smokers underwent LDCT screening in 2016.
- The findings are stark when juxtaposed with rates of screening for some other cancers, Dr. Pham maintained. For example, 65% of women aged 40 years or older underwent mammography for breast cancer screening in 2015.

REPORTING FROM ASCO 2018 on lung cancer screening, Dr. Dahn C. Pham

“This ultimately begs the question as to the root of the disparity,” he said. “Are physicians not referring enough? Or perhaps, are eligible patients not wanting screening, even if they know a test is available? Unfortunately, controversy still exists among providers about costs and benefits of screening, while patients at risk for lung cancer also perhaps lack adequate awareness of the benefits of screening.”

It is also possible that the stigma attached to smoking, a modifiable risk factor, and thus to lung cancer screening may be a deterrent, Dr. Pham speculated. Specifically, patients may perceive screening-detected lung cancer as confirmation of a poor lifestyle choice.

“Regardless of the reason, this ultimately is a call to action on everyone’s part to increase this much-needed screening, whether that’s through creating awareness or conducting additional research, to urgently increase screening for the No. 1 cancer killer in America, as it has been now documented that effective screening can prevent nearly 12,000 premature lung cancer deaths per year,” he concluded.

Cancer Plan MN 2025



Overarching Goals 1 and 2:

PREVENTION. Prevent cancer from occurring. Not every cancer can be prevented. Yet, almost two-thirds of cancers can be prevented if people would stop smoking cigarettes, get more exercise and eat healthier food. Achieving such lifestyle changes is not easy, however. Many Minnesotans live in neighborhoods and communities where they lack access to healthy food and places to be physically active. Some are exposed to environmental toxins like radon gas, which can cause cancer.

DETECTION. Detect cancer at its earliest stage. Many cancers can be effectively treated when detected early, and some cancers, such as cervical cancer and colorectal cancer, can be prevented through screening. Yet despite good evidence to support the use of screening, changes in guidelines, uncertainties about insurance coverage, the need to take time away from work and the cost of transportation to get to screening appointments create barriers for many people. People whose lives are complicated by poverty, job insecurity and language and cultural differences face even greater challenges.

Cancer Plan Objective 4:

Increase low-dose CT scan screening among persons at high risk for lung cancer

Strategies

- 4.1 Educate primary care providers about lung cancer screening guidelines based on age and smoking history
- 4.2 Add pack-years to smoking history captured in data systems to determine who is eligible for lung cancer screening
- 4.3 Expand public awareness of lung cancer screening guidelines
- 4.4 Conduct targeted outreach activities in populations with high rates of smoking and lung cancer
- 4.5 Provide eligible Quitline users with information about lung cancer screening programs

Collaborating for better results

Thought Leader meetings co-hosted by **ABOH**, **ACS** and **ALA** in April and September of 2018 drew leaders from eight of Minnesota's healthcare organizations to share, learn and plan for improving screening numbers in MN.

100% of attendees said they want the meetings to continue in 2019, and most felt this collaboration **will move the needle** on lung cancer screening.



Collaborating for better results

ABOH and MDH piloted a Radon Awareness and Mitigation program in 2018, along with radon partners who performed the mitigation services at reduced rates. Families with dangerous levels of radon and for whom mitigation costs were prohibitive, were offered mitigation at no cost.

ABOH and MDH are now seeking funding to scale up the project in MN.

Did you know?

Radon is considered the

#1 cause of lung cancer in non-smokers.

Test your home today!

A BREATH of HOPE
LUNG FOUNDATION



A BREATH *of* HOPE

L U N G F O U N D A T I O N

Thank you!