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Commentary

Driving Change in Lung Cancer: Cancer Centers Must Ensure That Lung Screening Reaches Those Who Can Benefit Most

By Candace S. Johnson, PhD



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Commentary Overview

- Nationally, only about 14 percent of lung cancer patients will be diagnosed at early stages of lung cancer progression, when the disease is most treatable.
- While the estimated average costs of lung cancer treatments in Medicaid-eligible patients in the region around Roswell Park range from \$20,112 per case for surgery to \$176,000 per case for immunotherapy, the cost of low-dose CT screening over 10 years is just \$724.14 per case.
- Through a partnership with New York State, Roswell Park will launch a mobile lung screening program bringing cancer screening into communities most at risk for poor outcomes from lung cancer.

A Message From Roswell Park Comprehensive Cancer Center

As we finalized this piece for publication in the AACI Commentary, Roswell Park's home community in Buffalo was reeling from the deadly assault by a heavily armed teenager who drove 200-plus miles with the specific intention of killing Black people. The attack at a grocery store in a historically Black residential neighborhood on a sunny Saturday afternoon took place just over a mile away from Roswell Park's campus.

Please join us in celebrating the lives of the 13 innocent people executed or wounded in this racist and extremist attack, and in recognizing this tragedy as just the latest example in a history of inequity and injustice that must be acknowledged and overcome in order for our work to address health disparities to have lasting effect.

As a nation, we have not done enough to prevent deaths from lung cancer. Reasonable,

actionable solutions are within reach, and America's cancer centers are primed to lead the way in mobilizing these resources—literally—in communities of all sizes.

For decades, lung cancer has been the biggest cancer killer in the United States, leading to the deaths of more Americans every year than the next three most common cancers combined. The outsized impact of this most-deadly cancer has persisted stubbornly, despite the incredible progress we are making in smoking cessation, breakthrough targeted and immune-based treatments, and earlier detection.

We are making progress and blunting lung cancer's edge, to be sure, as the American Cancer Society's [Cancer Facts & Figures](#) reports have documented so well over the last three years. But the benefits of what we know today about lung cancer are not reaching every community.

Only A Fraction of Eligible Adults Are Getting Screened

Early detection of lung cancer through a low-dose CT scan can make the difference between a treatable, survivable lung cancer and one that will be deadly. But between 2010 and 2015, a fraction of eligible people—6 percent—underwent this simple procedure. Factoring in the cancer screening delays that COVID-19 has driven, with nearly 10 million cancer screenings missed in the U.S. in the first year of the pandemic, that percentage is likely even lower today.

Nationally, only about 14 percent of lung cancer patients will be diagnosed at early stages of lung cancer progression, when the disease is most treatable.

We have the data and tools to do *much* better. We know which groups of people are most at risk for this disease—particularly Black Americans, who are 18 percent less likely to be diagnosed early, 23 percent less likely to receive surgical treatment, 9 percent more likely to not receive any treatment, and 21 percent less likely to survive five years compared to white Americans, as [reported by the American Lung Association](#)—and we have a noninvasive, potentially life-saving imaging test available.

We've seen welcome policy changes, too, that have expanded the possibilities of what can be achieved through early detection. Based on extensive evidence of the benefits of lung cancer screening, the U.S. Preventive Services Task Force last year [expanded the eligibility for early detection through annual low-dose CT scan](#) to all adults age 50-80 who smoked at least one pack of cigarettes a day for the past 20 years, and who either currently smoke or quit within the past 15 years — nearly doubling the number of people who qualify for this potentially life-saving intervention, with insurance coverage.

The Costs of Diagnosing Lung Cancer at Late Stages

Stage 4 lung cancer is not only one of the most deadly cancers, it's one of the most expensive to treat. My Roswell Park colleague **Mary Reid, PhD**, our chief of cancer screening, survivorship and mentorship, shared with me data she compiled from three recent analyses of the comparative costs of lung cancer interventions (Zeng X, et al. *BMJ Open* 2019; Sheehan D, et al. *Can Med* 2019; Ganti, A, et al. *JAMA Oncol* 2021).

These data put a fine point on the opportunity to save both lives and financial resources through lung cancer early detection. While the estimated average costs of lung cancer treatments in Medicaid-eligible patients in the region around our center range from \$20,112 per case for surgery to \$176,000 per case for immunotherapy, the cost of low-dose CT screening over 10 years pales in comparison, at just \$724.14 per case. We focused on seven underserved counties in Western and Central New York State for our analysis, but the relative intervals between these costs are similar nationwide.

Partnership With State Enables Mobile Outreach Program

Our team members at Roswell Park have been longtime ambassadors for early detection of lung cancer, operating one of the oldest lung cancer screening programs in the nation. Thanks to a close collaboration with New York State leaders, we will very soon be taking our lung cancer screening and outreach services right into the neighborhoods where they can have the most impact — through the first mobile lung screening program in New York State, and one of the first in the nation.

Through an initiative championed by New York Governor Kathy Hochul, New York State Senator

Tim Kennedy, and New York State Assembly Majority Leader Crystal Peoples-Stokes, Roswell Park has been granted state funding to launch a mobile lung screening program bringing cancer screening into the communities most at risk for poor outcomes from lung cancer — and, at the same time, least likely to have good access to early detection.

Currently, 1 in 15 New Yorkers can expect to be diagnosed with lung cancer at some point. Once our mobile outreach effort gets underway later this year, we expect the impact from this evidence-driven initiative to be significant in terms of both dollars and lives saved.

Other states—Massachusetts and Kentucky, notably—have made significant, laudable inroads in getting eligible people screened for lung cancer. But even the screening rates for these national leaders—at 18 percent and 14 percent, respectively—punctuate the momentous task that remains to deliver early detection services to the tens of thousands of eligible but unscreened Americans who are at high risk for developing lung cancer.

We hope that New York, too, will soon join the list of states that are successfully turning the tide against lung cancer, which has already taken so much, and so many loved ones, from us.

I encourage my colleagues in leadership roles at our nation's cancer centers to look closely at the opportunity to save lives by expanding and enhancing lung cancer early detection initiatives. Look for creative solutions that will help you get over remaining barriers that make it hard to get people screened — or to get the screening to the people.

Our Mission

The Association of American Cancer Institutes (AACI) represents 104 premier academic and freestanding cancer centers in the United States and Canada. AACI is accelerating progress against cancer by empowering North America's leading cancer centers in their shared mission to alleviate suffering.

About AACI Commentary

To promote the work of its members, AACI publishes *Commentary*, a monthly editorial series focusing on major issues of common interest to North American cancer centers, authored by cancer center leaders and subject matter experts.

