Investing just $40 million new dollars in lung cancer research related to women has dramatic impact on US economy

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Doubling the funding for research focused on women and lung cancer will have enormous economic impacts for families and the nation, according to a new report released today by Women's Health Access Matters (WHAM), which commissioned The RAND Corporation to create this study on lung cancer in women. According to rigorous modeling based on a number of conservative estimates, even health improvements of 0.1 percent in mortality and quality of life will yield a return on investment of $1,200 for every additional dollar spent. Today's findings mirror three previous studies from WHAM, which were executed by The RAND Corporation and show similar findings with respect to the power of investment for women's health research associated with Alzheimer's disease, heart disease and rheumatoid arthritis.

For lung cancer, this is particularly critical because in the U.S., lung cancer is the number one cause of cancer death in women. More women die of lung cancer (estimated approximately 61,000 in 2022, according to CA: A Cancer Journal for Clinicians) than of breast, ovarian and cervical cancers combined. And non-smoking women are more than two times as likely to get lung cancer as their male counterparts, yet the sex disparities of the disease have yet to be thoroughly examined, and only 15 percent of lung cancer research is focused on women.

Lung cancer research receives the least amount of funding of the major cancers affecting women. The new report is a first-of-its-kind microsimulation model that examines socioeconomic impacts of investments in women's health research in the U.S.—revealing critical gaps in the nation's current research portfolio and the potential gain to the economy through greater funding.

The new research examines the return on investment if the research funding for women and lung cancer were doubled. Assuming that the additional research generates health improvements of only 0.1 percent or less in terms of age incidence, mortality and quality of life, the nation can reliably anticipate the following payoff:

- For the U.S. population aged 25 and older, more than 22,700 years can be saved across 30 years of extended life, with substantial gains in health-related quality of life.
- Approximately 2,500 more labor years (valued at $45 million in labor productivity) result from increased work time and longer life.
Overall, doubling the investment would have an expected ROI of more than 1,200 percent.

"These findings are stunning," said WHAM Founder and CEO Carolee Lee. "Women are sick and dying from a disease that disproportionately affects them, yet research doesn't acknowledge this fact. And the pain of disease is not just a medical problem by any means. This new data could not be more clear about the economic pain we all pay when women leave the workforce early to manage their own health or serve as caregivers for their loved ones. Women's health is an economic issue that impacts everyone, and we can't afford to ignore it."

"This research shows that very small investments in women's health can generate outsized returns, in part because women's health research is still very much under-funded," said Lori Frank, senior author of the study. "Our modeling suggests that even small investments in women's lung cancer research could result in significant gains in health outcomes, health-related quality of life and workforce productivity. But it also points to the importance of addressing diseases that hit women harder; equity in medical research leads to meaningful benefits."

"This report brings important new data to the case that we have been making for years: that lung cancer impacts women differently—both physically and societally—and these disparities must be addressed," said Laurie Fenton Ambrose, President and CEO of GO2 for Lung Cancer and supporter of the report. "The WHAM findings not only underscore the need for legislation that expands resources to better understand the science of lung cancer in women, but also show how investing in research could result in economic benefits for women living with the disease."

The WHAM Report can be a tool to help decisionmakers plan for future research strategies, help funders decide how to allocate their portfolios, and address the business case for payers and business leaders to invest in women's health.

The report authors recommend expanding the research agenda to address multiple aspects of sex and gender in lung cancer using the limited evidence base, including:

- The unknown interactions of sex and gender with lung cancer etiology, risk factors and disease progression to inform treatment and prevention research.
- Understudied interactions of gender and race with lung cancer risk, health care and disease progression; in particular, examining obstacles to access to and use of diagnostic technology, including for personalized medicine.
- Differences by sex and gender in lifestyle impacts on disease.
- Differences in disease course and outcomes by sex and gender, based on different patterns of the use of formal and informal caregiving.

"Women are more than half of the population and workforce, control 60 percent of personal wealth, and are responsible for 85 percent of consumer spending and 80 percent of healthcare decisions," said Lee. "Yet even while diseases impact them disproportionately and differently, pulling many from the workforce too soon, investment in women's health research lags. This is such an easy win for our country."


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