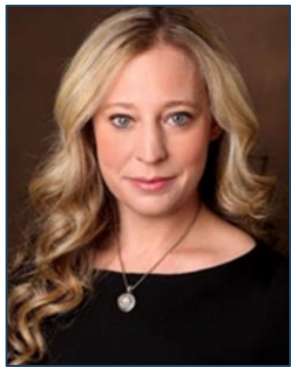
Lung Cancer in Women Task Group

Leah Backhus, MD, MPH



Kim Sandler, MD

M. Patricia Rivera, MD

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LUNG CANCER IN WOMEN TASK GROUP

Leah Backhus, MD, MPH

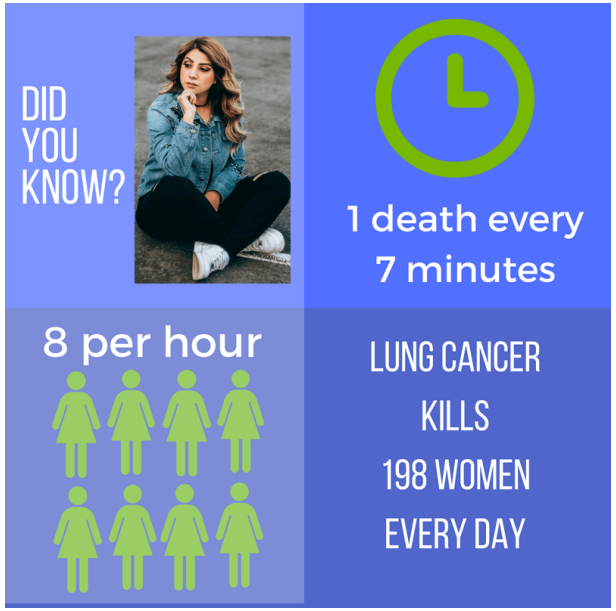
Associate Professor, Cardiothoracic Surgery

Co-Director, Thoracic Surgery Health Services Research

Stanford University

Lung Cancer in Women Task Group Charge

To promote awareness of lung cancer as a women's health imperative towards increasing prevention, early detection, and utilization of evidence-based initiatives in this unique population



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Lung Cancer in Women Task Group: Leadership and Members

Leah Backhus, MD, MPH, FACS
Task Group Chair
Associate Professor, Cardiothoracic Surgery
Co-Director, Thoracic Surgery Health Services Research
Stanford University

M. Patricia Rivera, MD, ATSF, FCCP
Task Group Vice Chair
Professor of Medicine
Pulmonary and Critical Care Medicine
University of North Carolina at Chapel Hill

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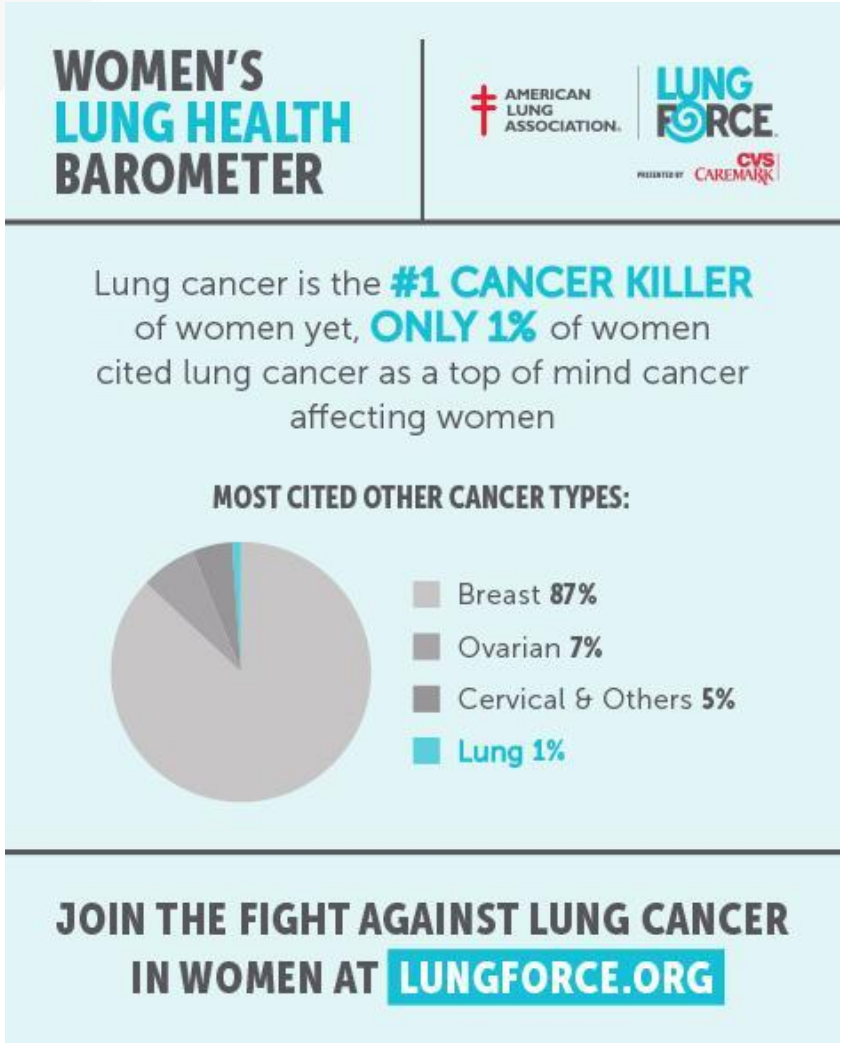
Lung Cancer in Women Task Group Leadership and Members

Shonta Chambers, MSW	Executive Vice President of Health Equity Initiatives and Programs, Patient Advocate Foundation
Ching-Fei Chang, MD	Assistant Professor, University of Southern California (Pulmonary Medicine)
Narjust Duma, MD	Assistant Professor, University of Wisconsin Carbone Cancer Center (Medical Oncology)
Louise Henderson, PhD, MSPH	Professor, Department of Radiology, University of North Carolina at Chapel Hill (Epidemiology)
Claudia Henschke, PhD, MD	Clinical Professor, Icahn School of Medicine at Mount Sinai (Radiology)
Gina Hollenbeck, RN, BSN	Survivor Advocate; President, ALK Positive
Francine Jacobson, MD, MPH	Assistant Professor, Harvard Medical School, Brigham and Women's Hospital (Radiology)
Ahmedin Jemal, DVM, PhD	Scientific VP, Surveillance & Health Services Research, American Cancer Society (Epidemiology)
Karen Kelly, MD	Professor, Associate Director for Clinical Research, UC Davis Cancer Center (Medical Oncology)
Linda Martin, MD, MPH	Associate Professor, University of Virginia (Thoracic Surgery)
Elridge Proctor, MPH	Senior Director, Government Affairs & Public Policy, GO2 Foundation for Lung Cancer (Policy)
Lori Sakoda, PhD, MPH	Research Scientist, Division of Research, Kaiser Permanente (Epidemiology)
Kim Sandler, MD	Assistant Professor, Department of Radiology and Radiological Sciences, Vanderbilt University
Joan Schiller, MD	Chair Scientific Steering Committee, Lung Cancer Research Foundation (Medical Oncology)
Jill Siegfried, PhD	Professor and Chair of Pharmacology, University of Minnesota (Pharmacology)
Patty Watkins	Survivor Advocate; Chris Draft Family Foundation
Juan Wisnivesky, MD, DrPH, MPH	Professor, General Internal Medicine, Icahn School of Medicine Mount Sinai (Pulmonary Medicine)
Andrea Wolf, MD, MPH	Assistant Professor, Icahn School of Medicine at Mount Sinai (Thoracic Surgery)

Opportunities for Intervention/Influence



- Promote knowledge that lung cancer is a **women's health imperative**
- Promote knowledge that there is a **disparate impact of lung cancer on women** and in particular, on women who have never smoked
- Explore **strategies to mitigate factors contributing to disparities** across the continuum of prevention
- Collaborate with NLCRT members to promote research and design that results in **increased federal funding to support additional research strategies**
- Identify **opportunities for policy interventions** addressing issues related to lung cancer in women

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Lung Cancer in Women Summit

- ***Establishing a Research Agenda for Improving Knowledge Gaps in Etiology, Biology, Policy, and Outcomes* – 2019 (American Cancer Society Global Headquarters)**
  - **Specific Aims:**
    - To summarize existing evidence and identify knowledge gaps about the epidemiology, risk factors, biologic differences, and outcomes of lung cancer in women
    - To develop and prioritize research topics and questions that can be used to address the knowledge and research gaps in lung cancer in women
    - To propose strategies and methods for future research
  - Invited lectures from clinical and research experts in the field on topics of epidemiology, social determinants, risk factors, physiology, and disparities in treatment and mortality between men and women.
- Completed manuscript to be submitted to the journal *Cancer*

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Provider Bias Survey with AAFP

- **Chair: Joan Schiller**
- **Members:** Ching-Fei Chang, Narjust Duma, Elridge Proctor, Shonta Chambers, Gina Hollenbeck, Patty Watkins
- Survey of AAFP membership
- Working with Dr. Tom Houston and Dr. Jan Eberth (Provider Engagement and Outreach Task Group) and Dr. Robert Volk (Shared Decision-Making Task Group)
- Scope of work with AAFP/ACS/NLCRT being finalized

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Delays in Diagnosis and Cost Analyses

- **Chair: Leah Backhus**
- **Members:** M. Patricia Rivera, Kim Sandler, Juan Wisnivesky, Ahmedin Jemal, Andrea Wolf, Karen Kelly, Lori Sakoda, Narjust Duma
- Use of claims data to examine potential delays in diagnosis for women with lung cancer presenting with symptoms
- Out-of-pocket costs following lung and breast cancer screening
- Exploring data sources and designing analytic plan

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Lung Cancer Screening in Women versus Men: Results from the ACR LCSR

- **Chair: Louise Henderson**
- **Members**: M. Patricia Rivera, Lori Sakoda, Francine Jacobson, Leah Backhus, Claudia Henschke, Ahmedin Jemal, Stacey Fedewa, Robert Smith
- Utilize ACR Lung Cancer Screening Registry to compare predictors and outcomes of LCS in women vs men.
- Proposal submitted and approved in August. First meeting with ACR LCSR team held in November

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Missed Opportunities for Lung Cancer Screening among Women Presenting for Mammography

- **Chair: Kim Sandler**
- **Members:** Leah Backhus, Gina Hollenbeck, Claudia Henschke, Patty Watkins, Jill Siegfried, Linda Martin, Carey Thomson, Robert Smith
- Study proposal submitted to NLCRT leadership for external funding

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LUNG CANCER IN WOMEN TASK GROUP

M. Patricia Rivera, MD

Professor of Medicine

Director, Multidisciplinary Lung Cancer Screening Program

University of North Carolina at Chapel Hill

Secretary-Treasurer, American Thoracic Society

Lung Cancer Screening in Women versus Men

- **Chair: Louise Henderson**
- **Co-Chairs:** Lori Sakoda, M. Patricia Rivera
- **Members:** Francine Jacobson, Leah Backhus, Claudia Henschke, Ahmedin Jemal, Stacey Fedewa, Robert Smith
- **ACR Lung Cancer Screening Registry team members:** Tina Tailor, Linda Haramati
- Objective to utilize ACR Lung Cancer Screening Registry to:
  - Compare the characteristics of women versus men who undergo LCS
  - Evaluate if there are differences in rates of positive LCS exams by gender
  - Assess adherence to annual LCS by gender
  - Determine rates of appropriate work-up after a positive screening for women versus men
  - Compare types and stage of cancer detected for women versus men
  - **Proposal submitted in August 2020**

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Manuscript: Lung Cancer in Women

Overarching objective and strategic plan:

- Summarize existing evidence and identify key knowledge gaps surrounding the epidemiology, risk factors, biologic differences, and outcomes of lung cancer in women
- To develop and prioritize research topics that address research gaps and advance knowledge to improve quality of care of lung cancer in women
- To propose strategies and methods for future research

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Lung Cancer in Women

Areas of Research Focus:

Advancing Lung Cancer Screening Initiatives
Identify Factors Associated with Increased Risk of Lung Cancer
Address Delays in Lung Cancer Diagnosis
Opportunities to Increase Knowledge and Awareness About Lung Cancer Risk and Screening
Patient Education and Advocacy
Address Factors Contributing to Disparities Across the Continuum of Lung Cancer Care
Address Issues Related to Survivorship Care

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Lung Cancer in Women

Strategies to Improve Lung Cancer Outcomes in Women:

Develop educational materials for PCP/OB/GYN on the benefits of LCS in women.
Develop a systematic way to identify eligible women and offer them the opportunity of LCS, such as during encounters for mammography.
Use of claims data to examine potential delays in lung cancer diagnosis in women.
Partner with PCP to understand biases and gaps in knowledge about lung cancer and nuances surrounding risk in women that may affect delays in diagnosis
Increase smoking cessation efforts and awareness about lung cancer screening among women in the states included in the "Tobacco Nation."
Provide educational materials and community-based support services to honor cultural differences and overcome barriers across the continuum of lung cancer care with personal and community services.

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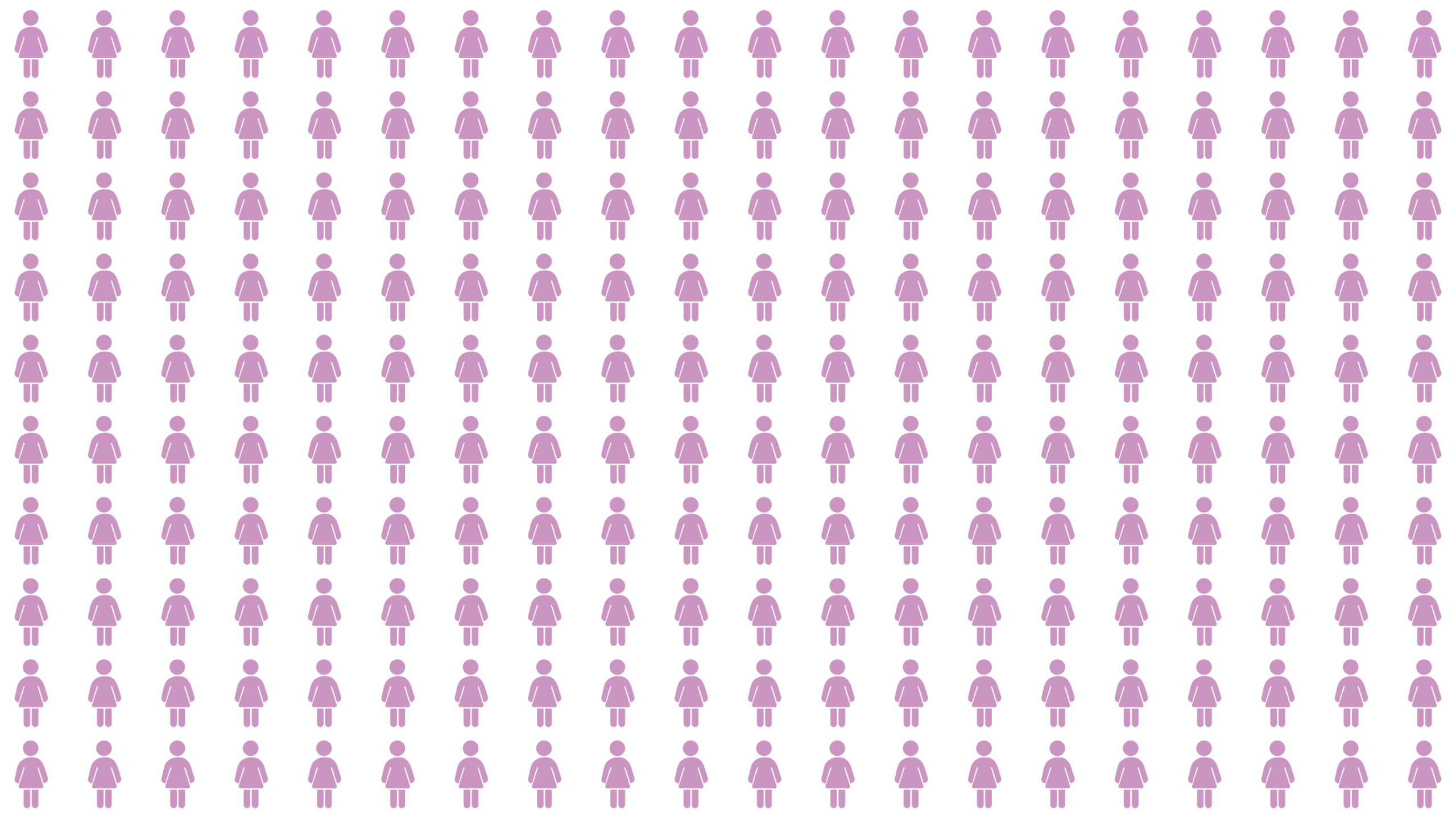
IMPROVING LUNG CANCER SCREENING FOR WOMEN

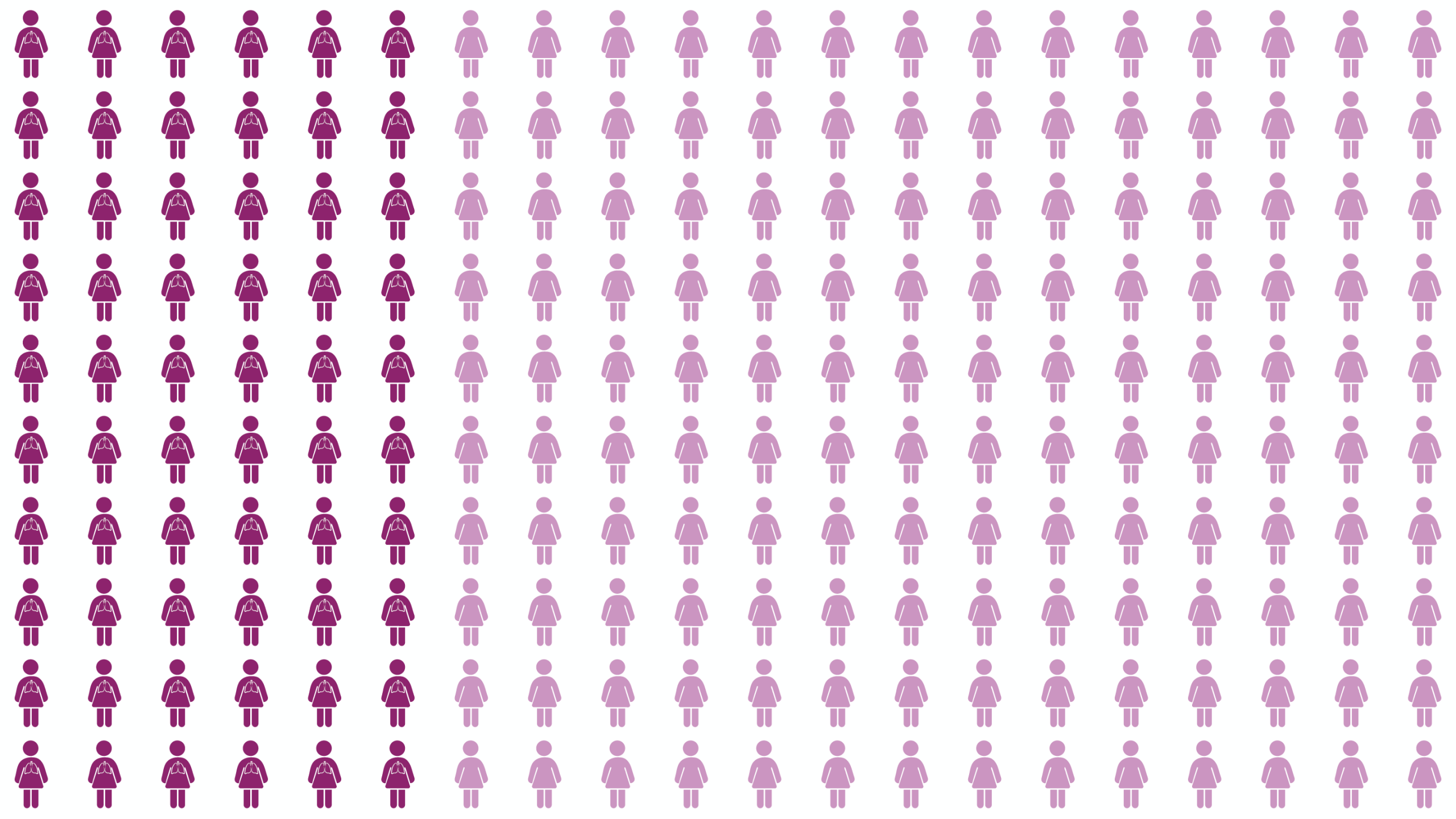
Kim L. Sandler, MD

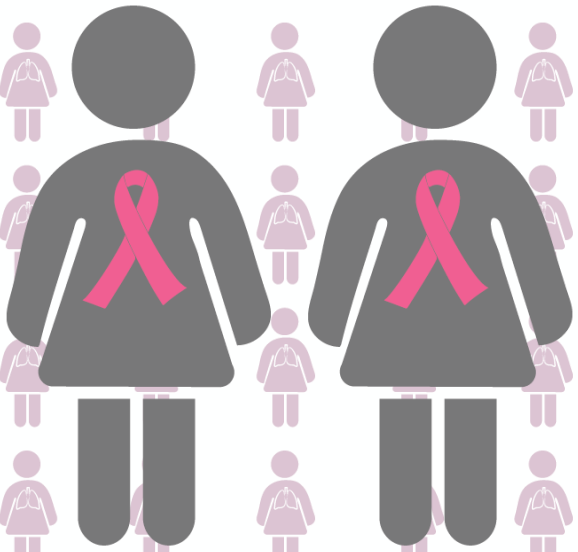
Assistant Professor of Radiology and Radiological Sciences

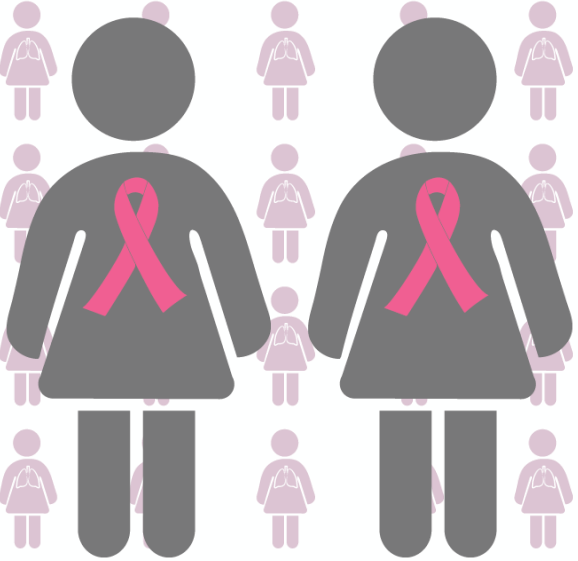
Co-Director, Vanderbilt Lung Screening Program

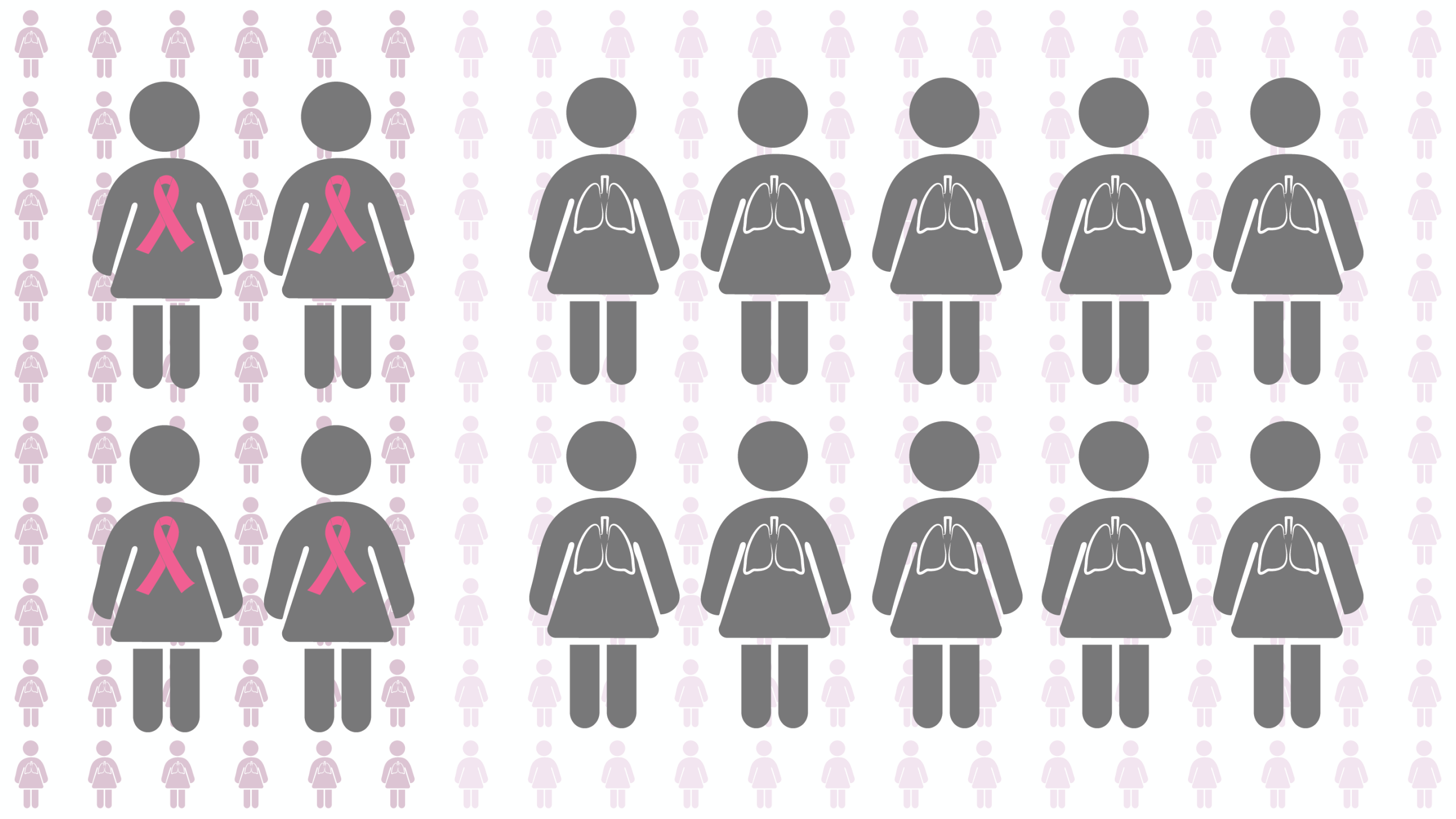
Vanderbilt University Medical Center

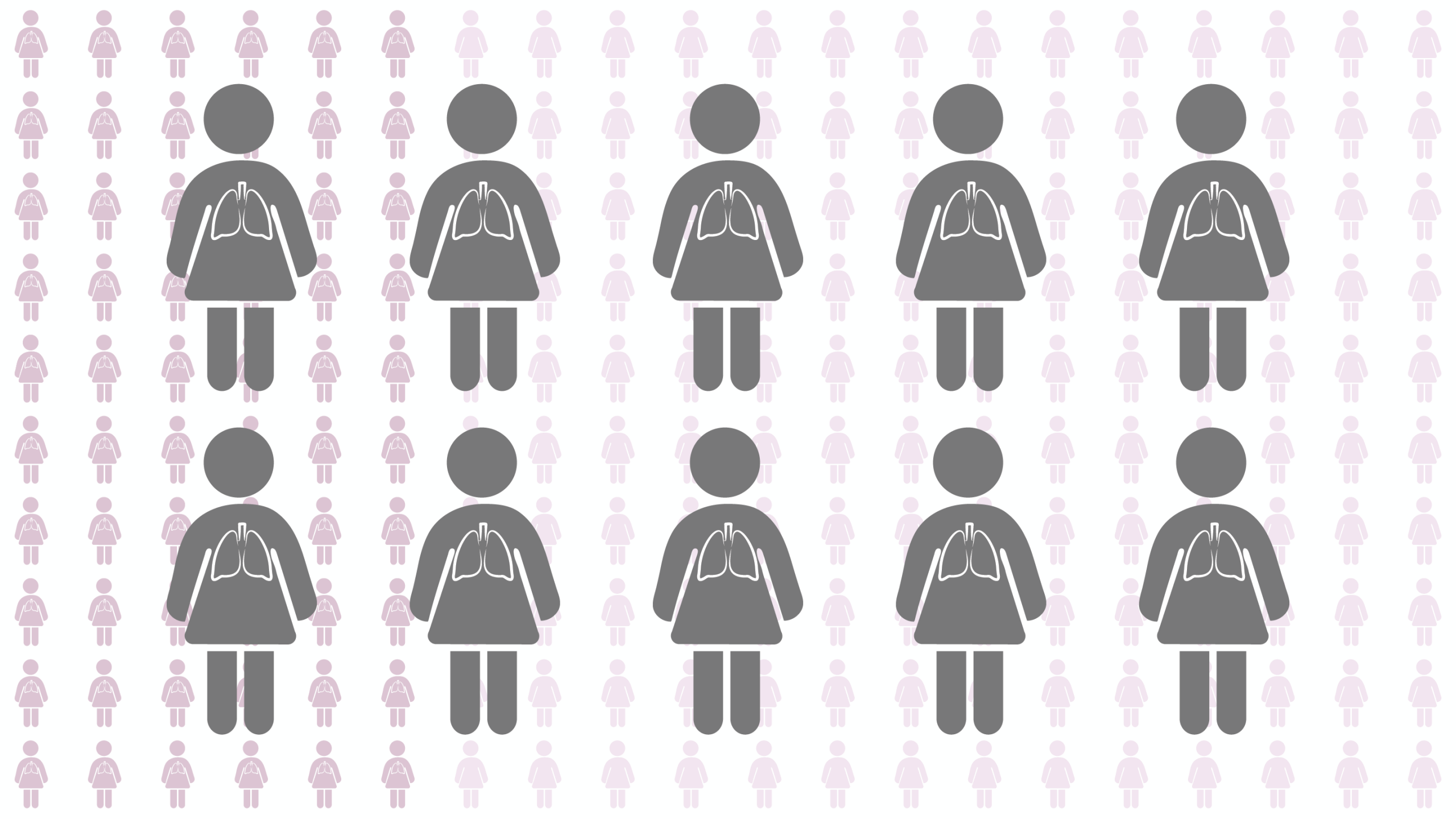


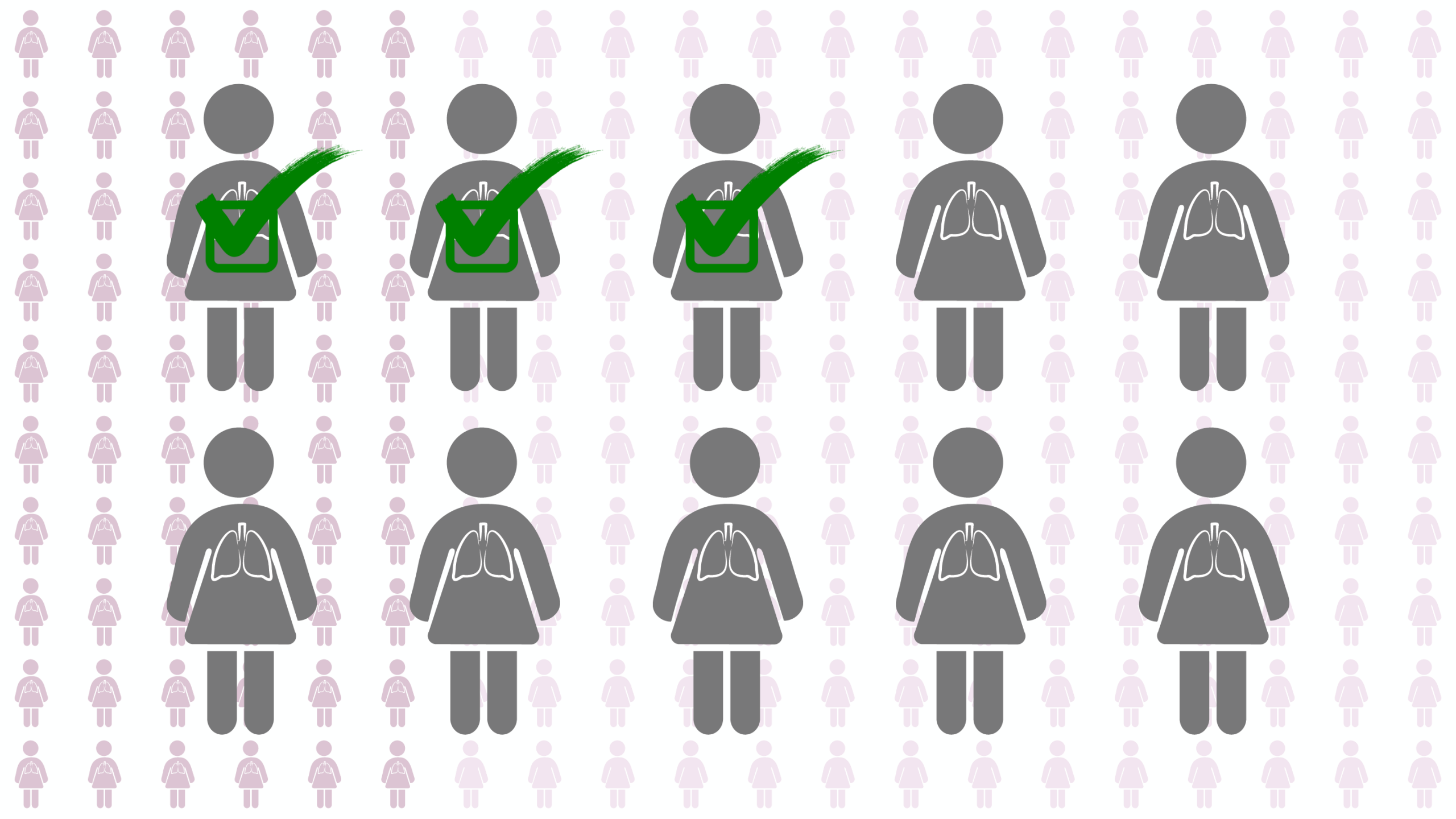


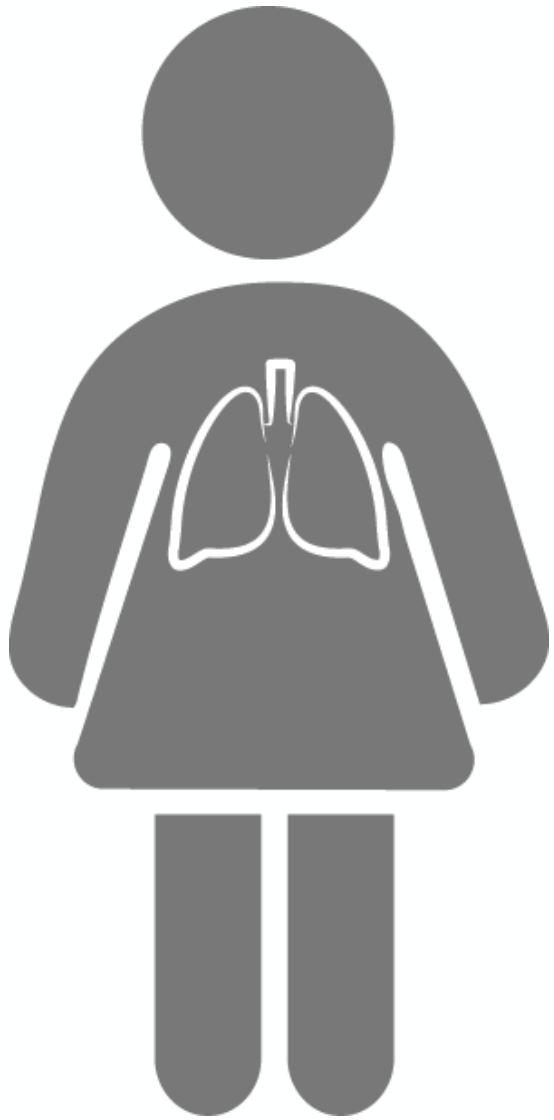








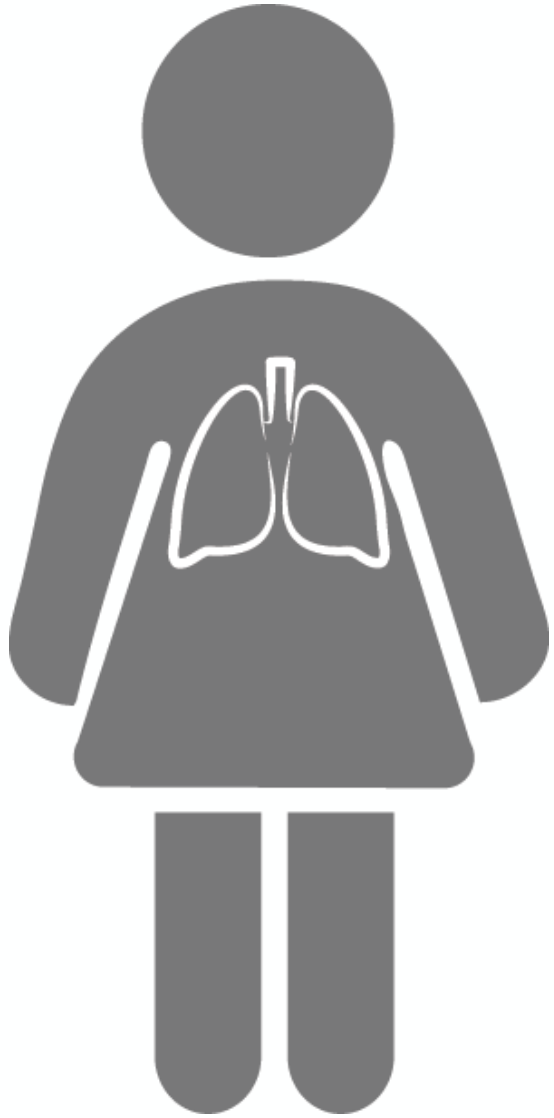


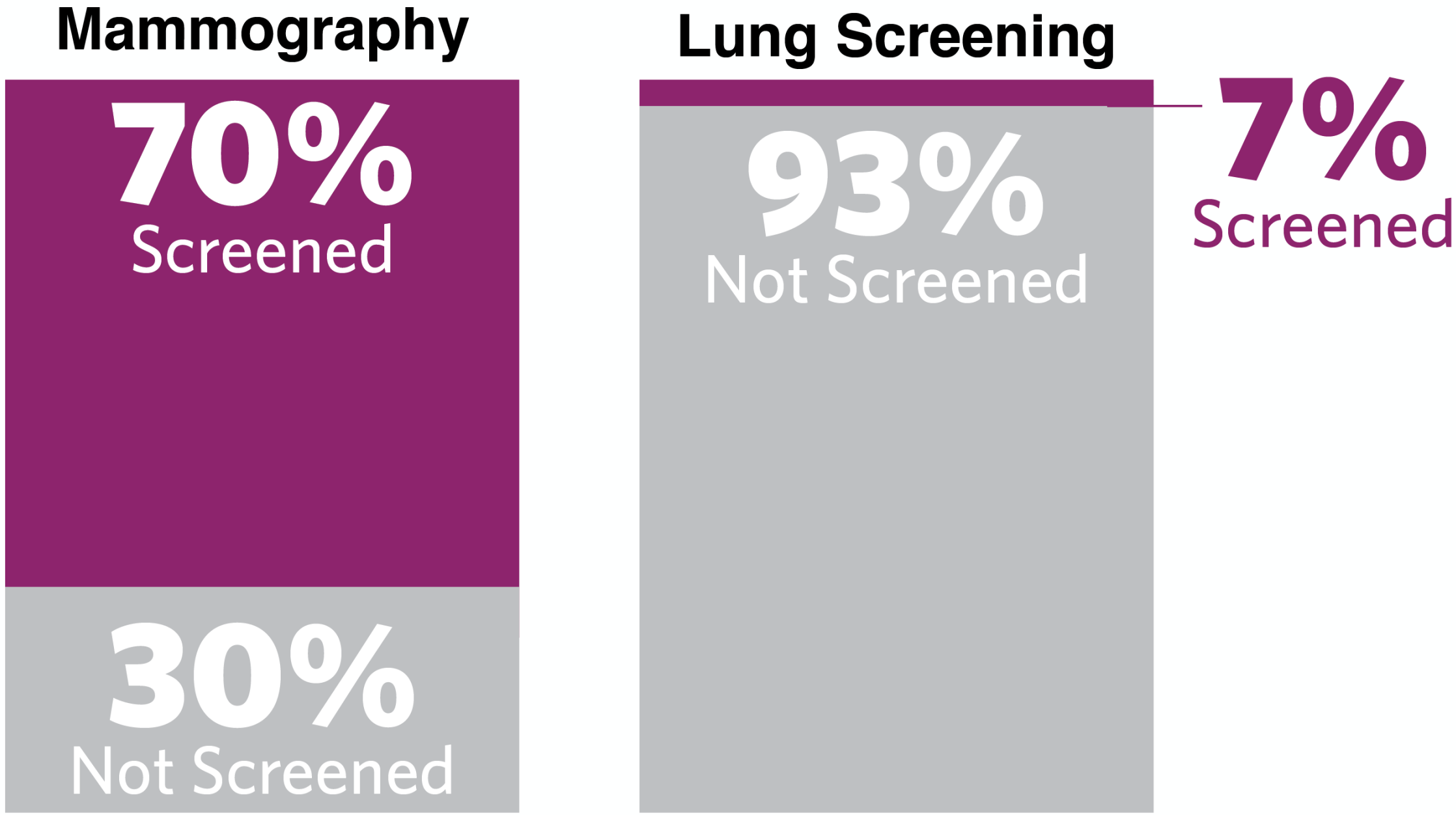


Mammography

70%
Screened

30%
Not Screened




Mammography
70%
Screened
30%
Not Screened
Lung Screening
93%
Not Screened
7%
Screened

LUNG FORCE™

American Lung Association.

Awareness Remains Low

Barometer findings reveal that only **8% of adults** know that lung cancer is the #1 cancer killer of women.

Study Aim 1

- To identify the population of women:
  - eligible for both breast screening with mammography and lung screening with low-dose CT (LDCT)
  - Will utilize EHR data, NLP, and patient surveys

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Study Aim 2

- To measure the efficacy of synchronous interventions to improve enrollment rates of women eligible for lung screening among women currently engaged in breast screening with mammography

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Identify Cohort

EMR

- Query of EMR for LCS eligibility
- Utilization of natural language processing at VUMC

In person at Breast Centers

- Survey women at the time of mammography
- Information collected on eligibility and interest in LCS

Outreach

To patients

- Direct to patient marketing at time of mammography
- Educational materials on lung and breast screening

To providers

- Education about LCS
- Inform them of patients who are eligible for LCS

Enrollment & Follow-up

- Enrollment
- Survey at the time of SDMV to determine success of implementation strategies
- Women enrolled in lung screening
- Lung screening and follow-up will be performed as standard of care

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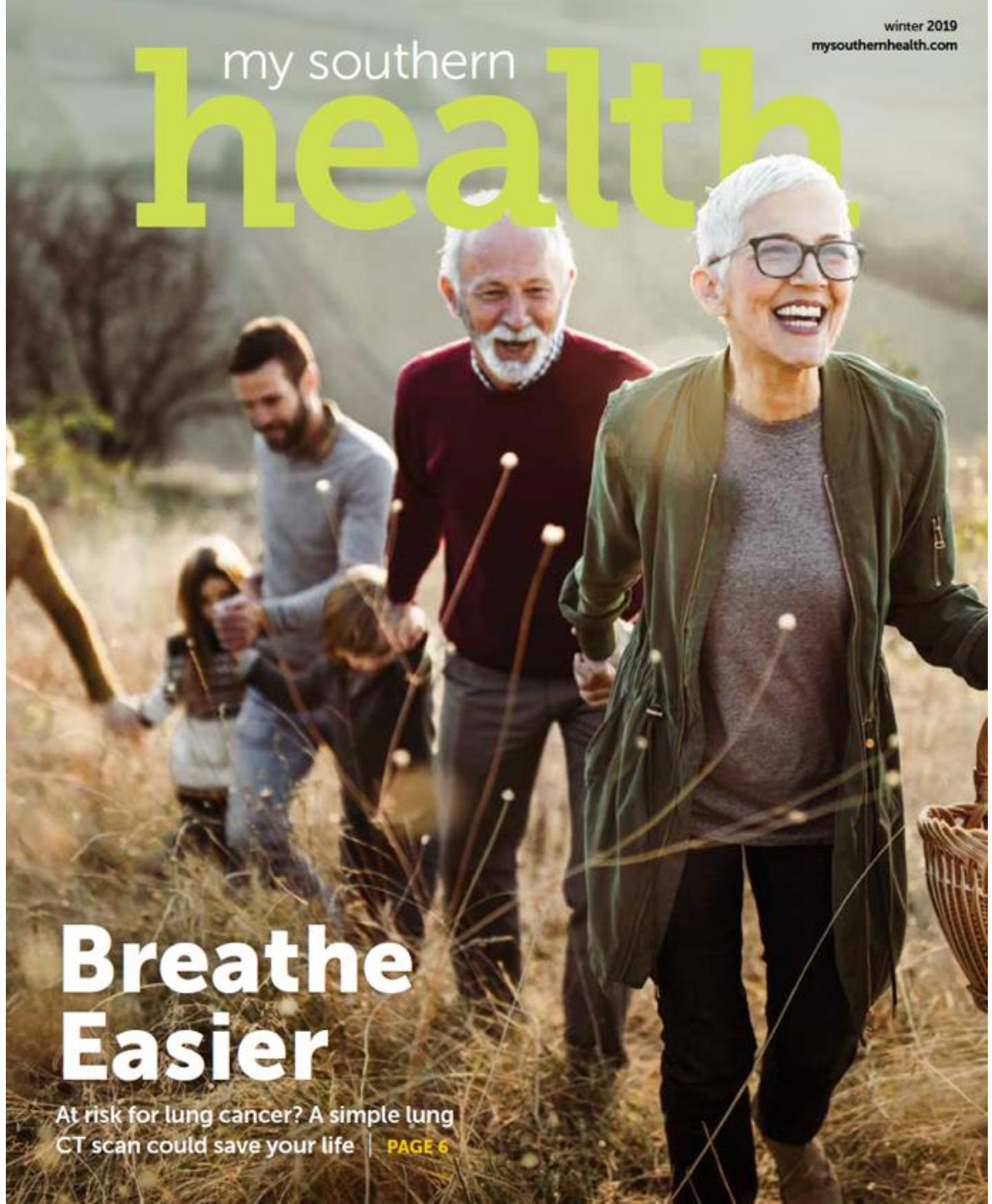


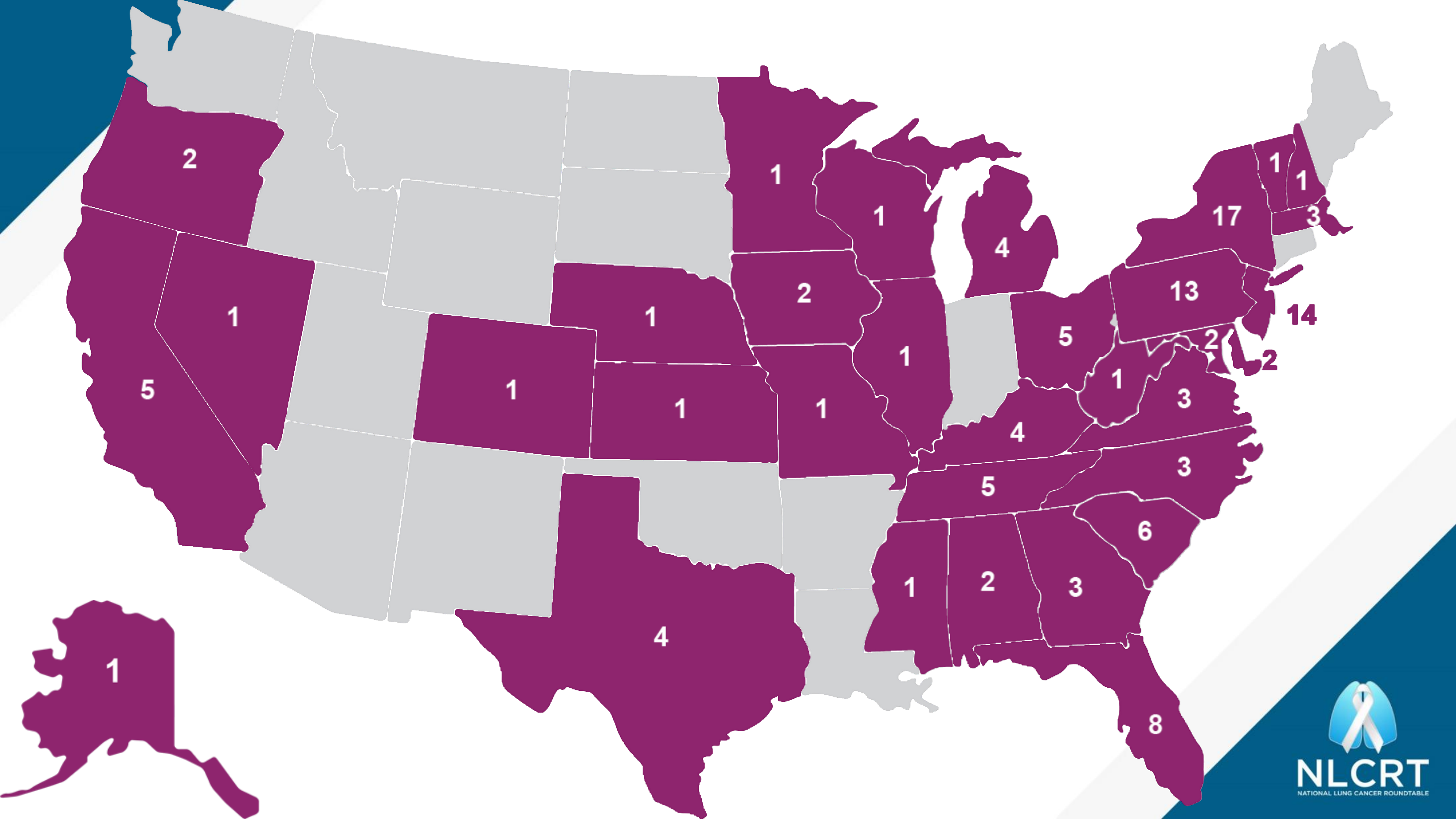
LUNG SCREENING PROGRAM

EARLY DETECTION SAVES LIVES

VANDERBILT HEALTH

Mammography saves lives.

So does lung screening.



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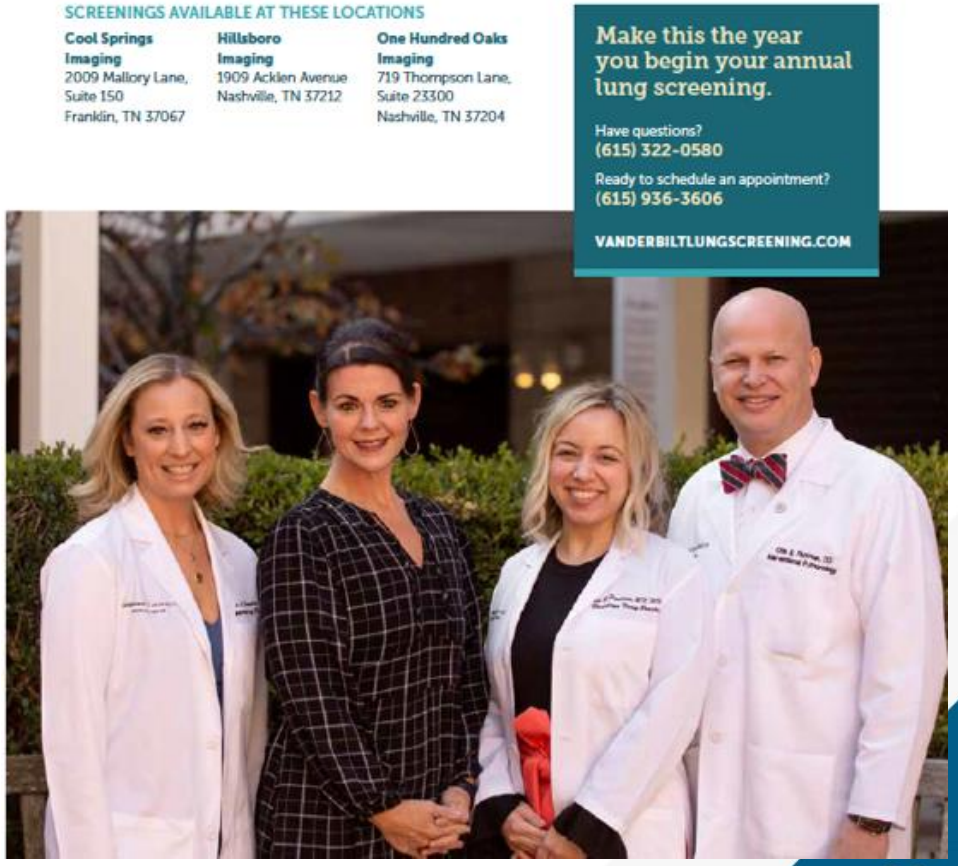
VUMC Lung Screening Program

- Centralized lung screening program
- SDMV performed by dedicated radiology nurse practitioners, can be completed same day as mammography
- Patient navigator to assist with scheduling and follow up
- Patients can be referred directly to the Vanderbilt Lung Nodule Clinic and discussed by multidisciplinary thoracic tumor board



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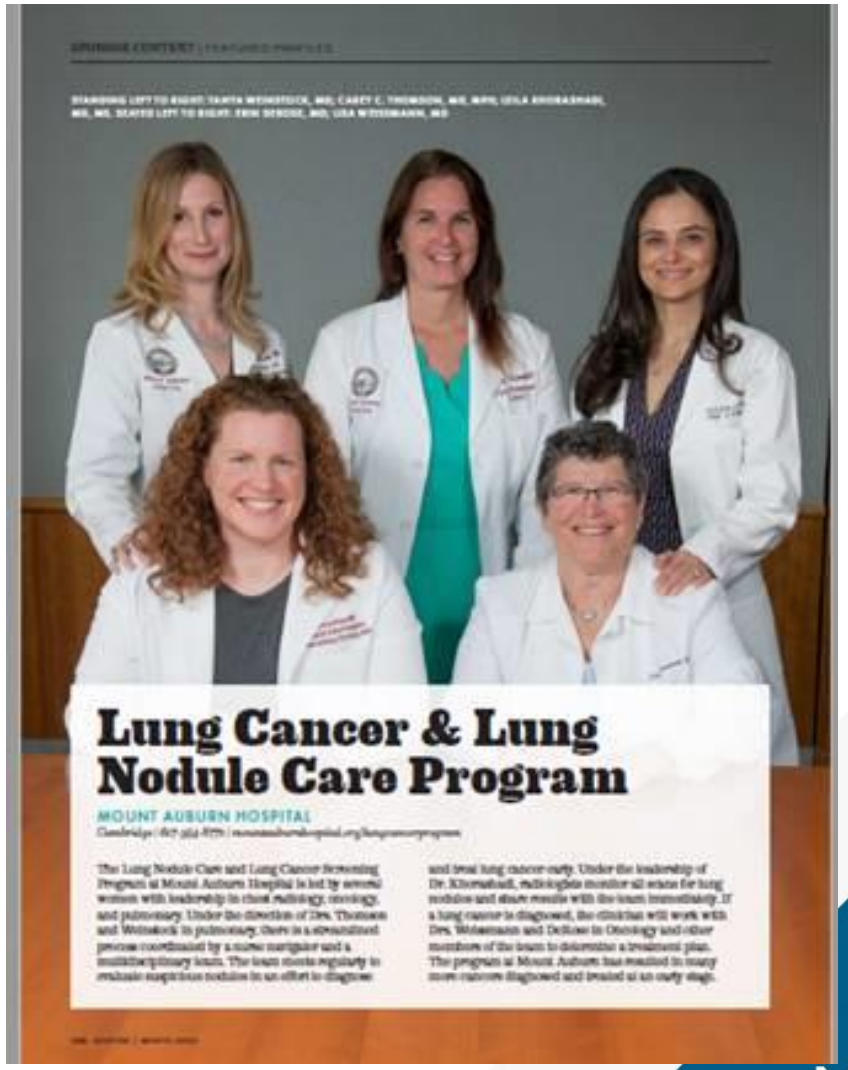
MAH Lung Screening Program

- Decentralized ordering process for lung screening examinations
- Centralized tracking and navigation of findings
- Patient navigator available to perform SDMV for women identified as eligible for lung screening through mammography
- Cases presented to multidisciplinary thoracic oncology team



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Our Team

Vanderbilt University

- Kim Lori Sandler, MD
- Stephen A. Deppen, PhD
- Grace Henderson, BS
- Travis Osterman, DO, MS
- Alexis Paulson, MSN, APRN
- Jeffrey Blume, PhD

Mount Auburn Hospital

- Carey C. Thomson, MD, MPH
- Susan Pories, MD, PACS

American Cancer Society

- Robert A. Smith, PhD

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Thank You!

Kim L. Sandler, MD

Assistant Professor Radiology & Radiological Sciences, VUMC

Co-Director, Vanderbilt Lung Screening Program

kim.sandler@vumc.org

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Thank You

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