

# Health Equity: Opportunities for Radiology to Drive Improvements in Patient Care

Lucy B. Spalluto, MD MPH

Vice Chair of Health Equity

Vanderbilt Department of Radiology

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VANDERBILT



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# Objectives

Summarize	Summarize concepts of health equity, health disparities, diversity, and inclusion.
Review	Review existing disparities in radiology.
Discuss	Discuss opportunities to drive improvements in patient care.

# HEALTH EQUITY



Health equity is the absence of avoidable or unfair differences in health outcomes among groups of people, whether those groups are defined socially, economically, demographically or geographically or by other means of stratification.

Everyone has the fair and just opportunity to be as healthy as possible.

# Equality



# Equity



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## **Diversity**

Representation of all our varied identities and differences collectively and as individuals.

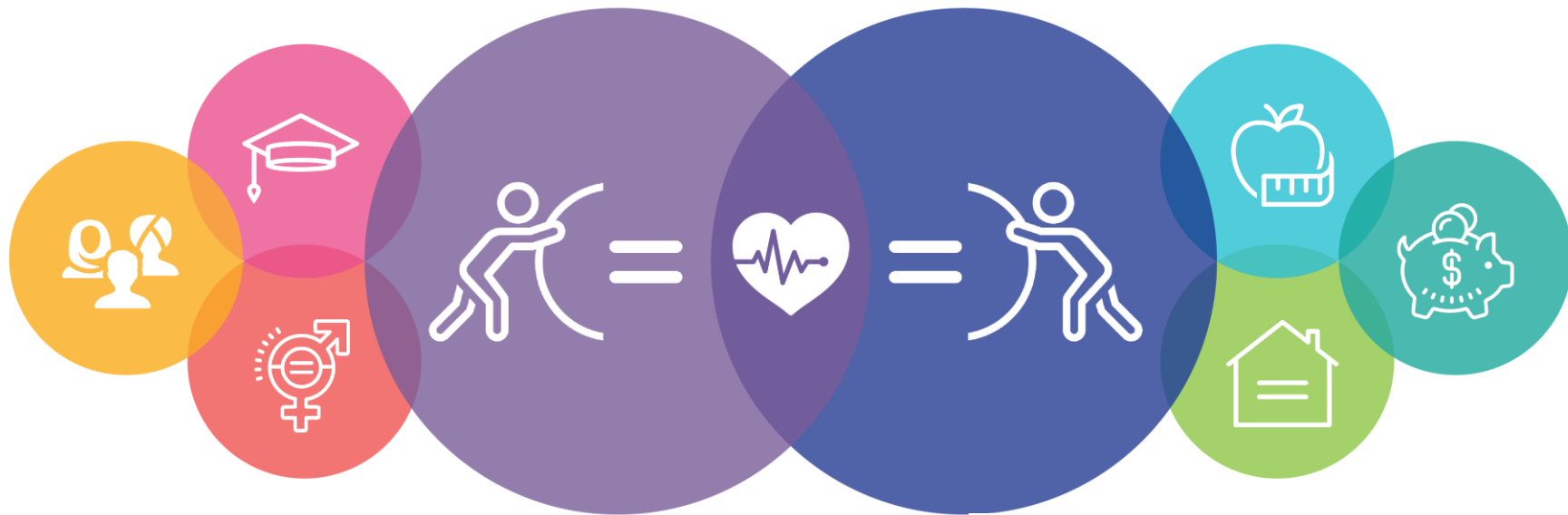
## **Equity**

Seeks to ensure fair treatment and access to information and resources for all.

## **Inclusion**

Builds a culture of belonging by actively inviting the contribution and participation of all people.

# DIVERSITY, INCLUSION AND EQUITY WORKING TOGETHER TO CREATE FAVORABLE PATIENT OUTCOMES



## DIVERSITY AND INCLUSION

**Diversity** encompasses the characteristics that make people or groups different from each other.

**Inclusion** is the act of creating environments for people of all backgrounds to feel welcomed, respected, supported and valued to fully participate.

## HEALTH EQUITY

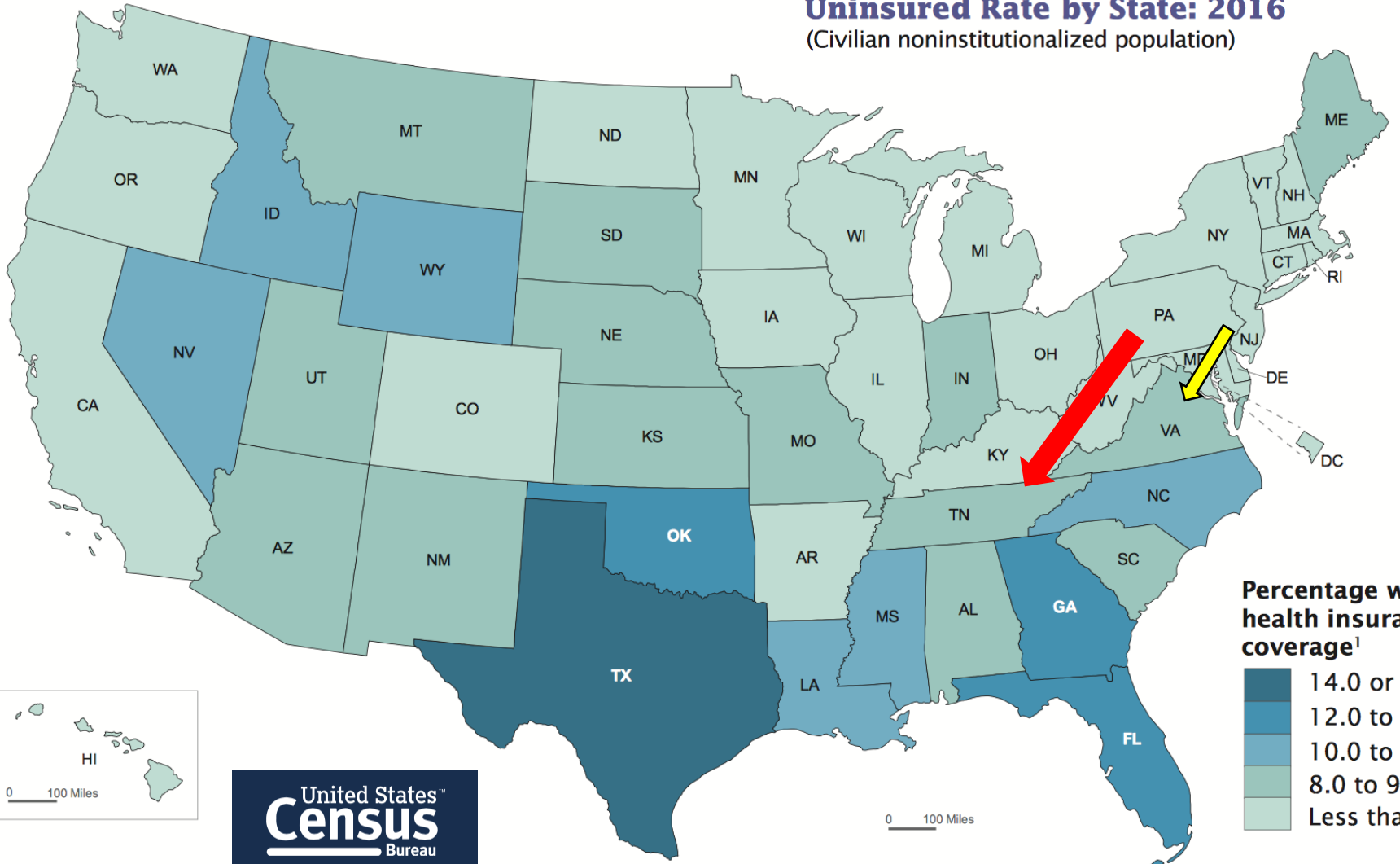
**Health equity** is the opportunity for all people to achieve their best health. Health equity takes into consideration the impact of the social determinants of health.

What challenges do patients in our communities face in receiving radiology care?

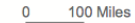
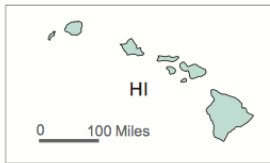
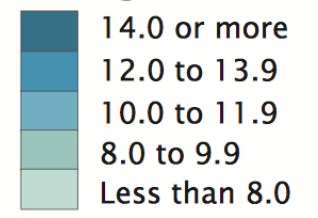


# Uninsured Rate by State: 2016

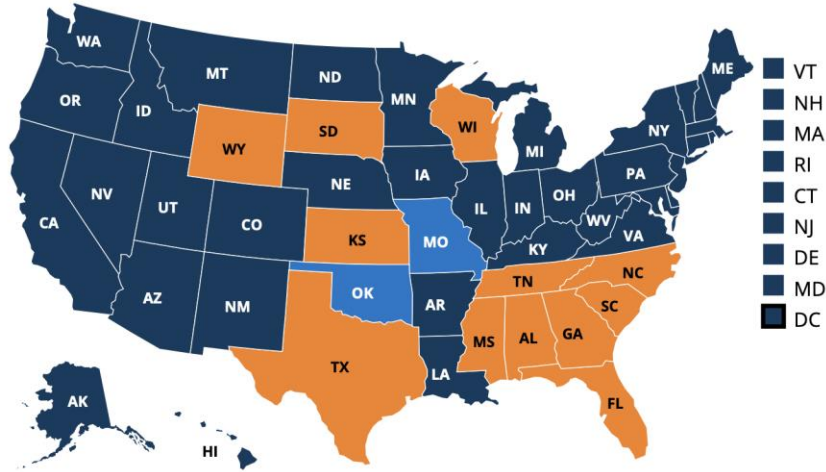
(Civilian noninstitutionalized population)



Percentage without health insurance coverage<sup>1</sup>

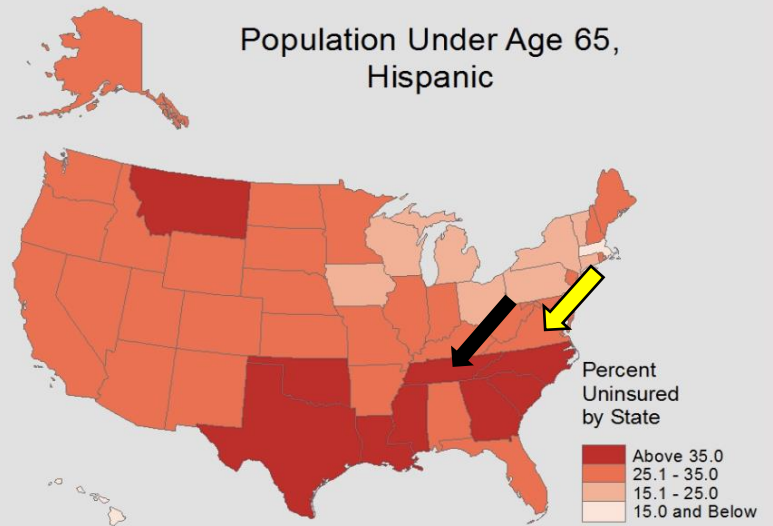
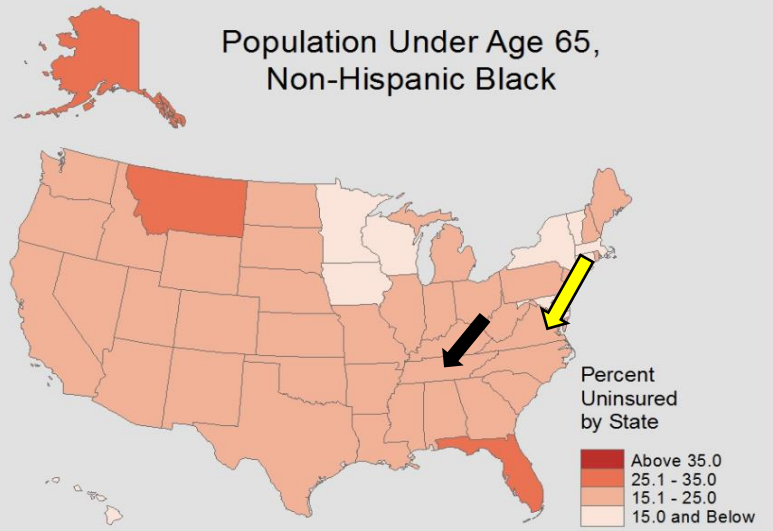


## Status of State Action on the Medicaid Expansion Decision

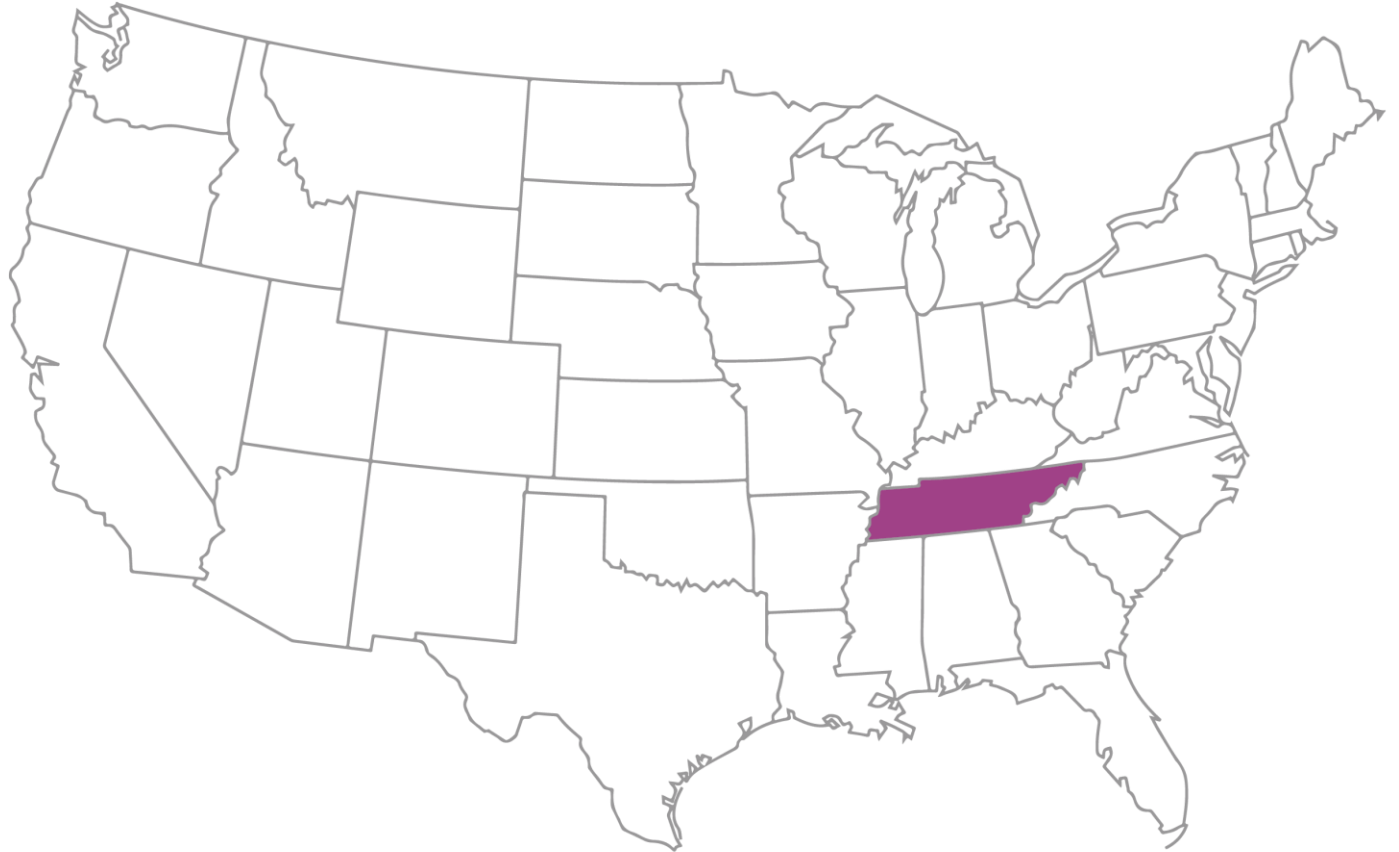
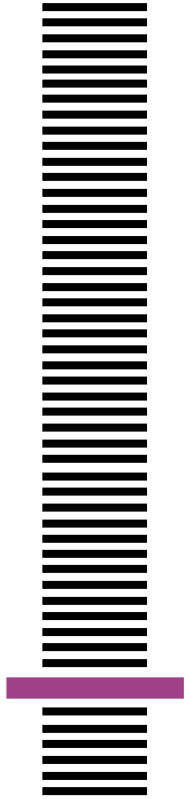


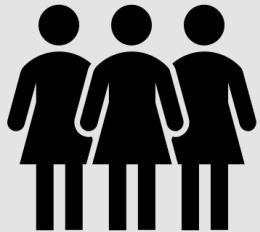
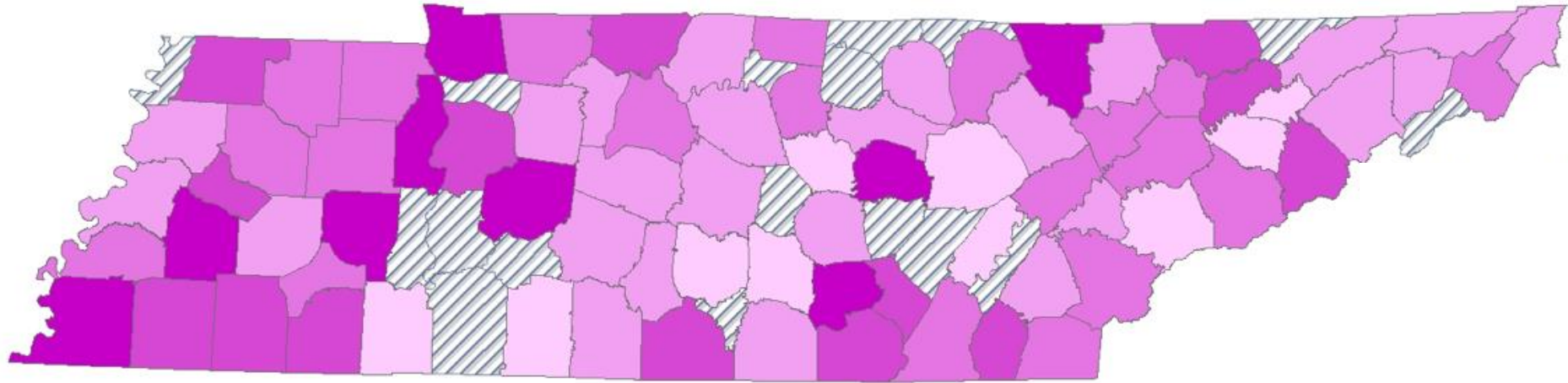
■ Adopted and Implemented ■ Adopted but Not Implemented ■ Not Adopted

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# Breast Cancer Mortality Rate

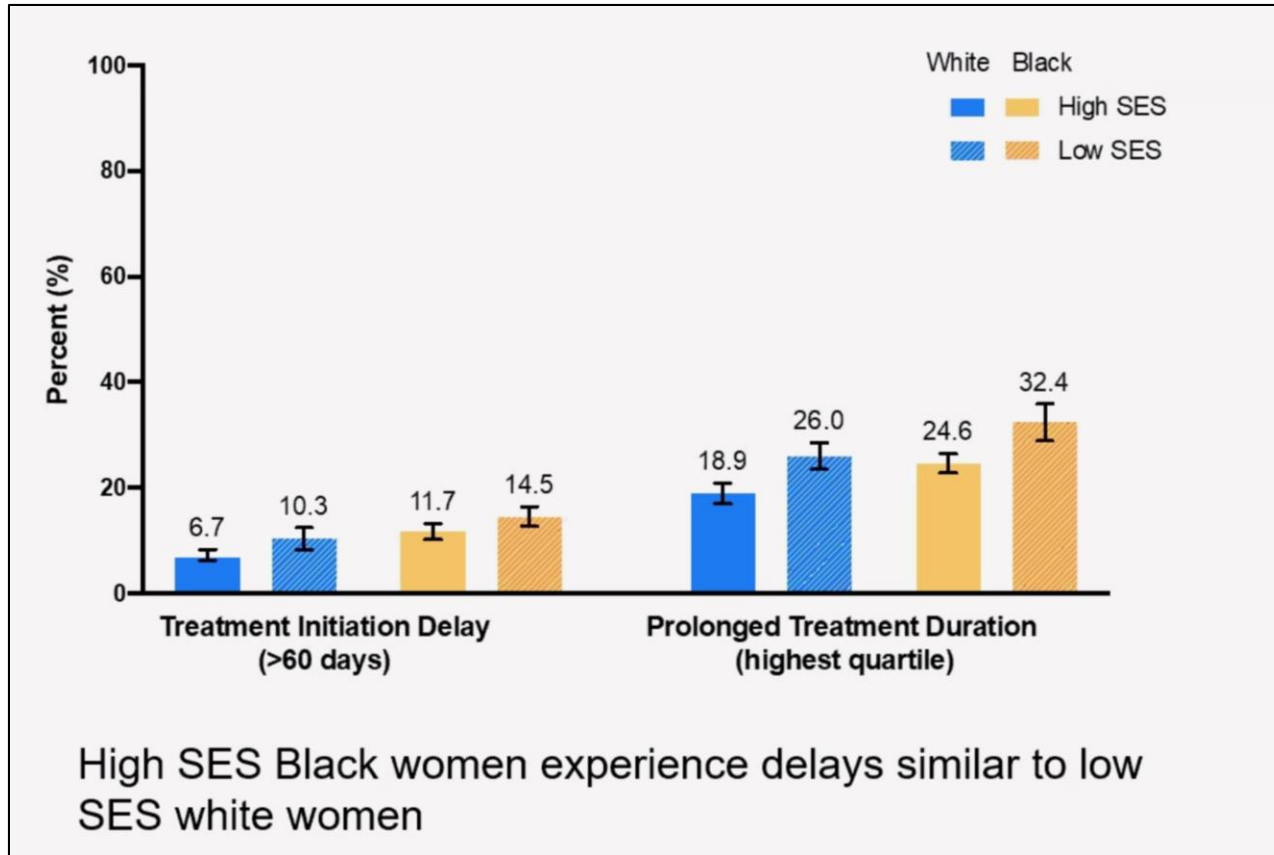




## TN Breast Cancer Mortality Rate by County

# Breast Cancer Treatment Delays by Socioeconomic and Health Care Access Latent Classes in Black and White Women

Marc A. Emerson, PhD <sup>1</sup>; Yvonne M. Golightly, PhD<sup>1</sup>; Allison E. Aiello, PhD<sup>1</sup>; Katherine E. Reeder-Hayes, MD <sup>2</sup>; Xianming Tan, PhD<sup>2,3</sup>; Ugwuji Maduekwe, MD <sup>2</sup>; Marian Johnson-Thompson, PhD<sup>4</sup>; Andrew F. Olshan, PhD<sup>1</sup>; and Melissa A. Troester, PhD<sup>1</sup>



Breast Cancer Disparities		
Characteristic (per 100,000)	Black women	White women
<b>Incidence Rate</b>		
All ages	122.9	124.4
25-39 years old	70.6	59.9
<b>Mortality Rate</b>		
All ages	28.2	20.3
25-39 years old	10.2	5.8

For every **10** White women who have a screening mammogram, only **8** of their Black counterparts will.

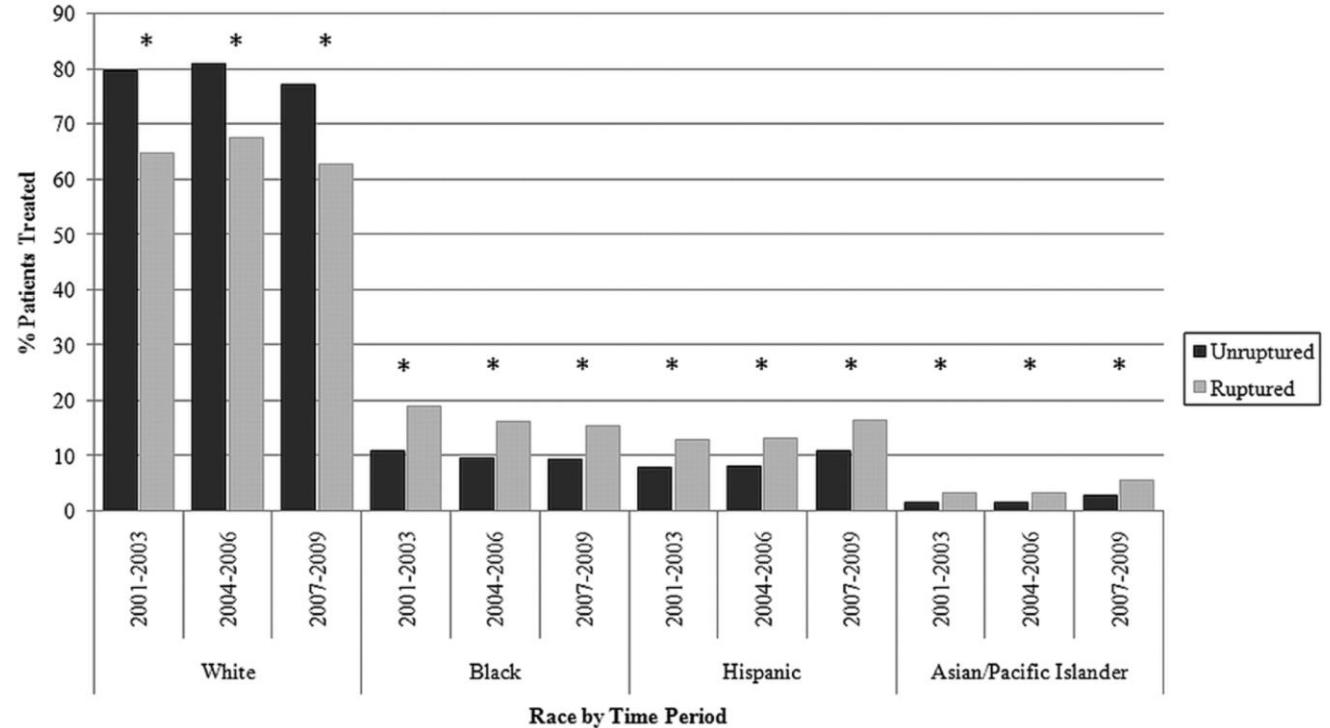
When you look at women of ALL ages, around the same number of Black and White women get breast cancer, but more Black women die from breast cancer.

When you look at younger women, more young Black women get breast cancer and more young Black women die from breast cancer.

# Racial and Ethnic Disparities in Treatment Outcomes of Patients with Ruptured or Unruptured Intracranial Aneurysms

# Stroke

Waleed Brinjikji, Alejandro A. Rabinstein, Giuseppe Lanzino, and Harry J. Cloft 



**Figure 2.** Comparison of treatment of unruptured and ruptured intracranial aneurysms by race over time. \* $P < 0.0001$ .

**A Tale of Two Head CTs...**



# Ellen's Day of Imaging



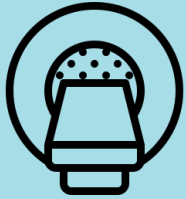
Ellen has an appointment at 9:30 am.

She has two young children who attend daycare.

She owns her own vehicle.

She is a salaried employee at a large company. She has insurance and can take sick leave and time off.

# Robert's Day of Imaging






Robert has an appointment at 10:00 am.

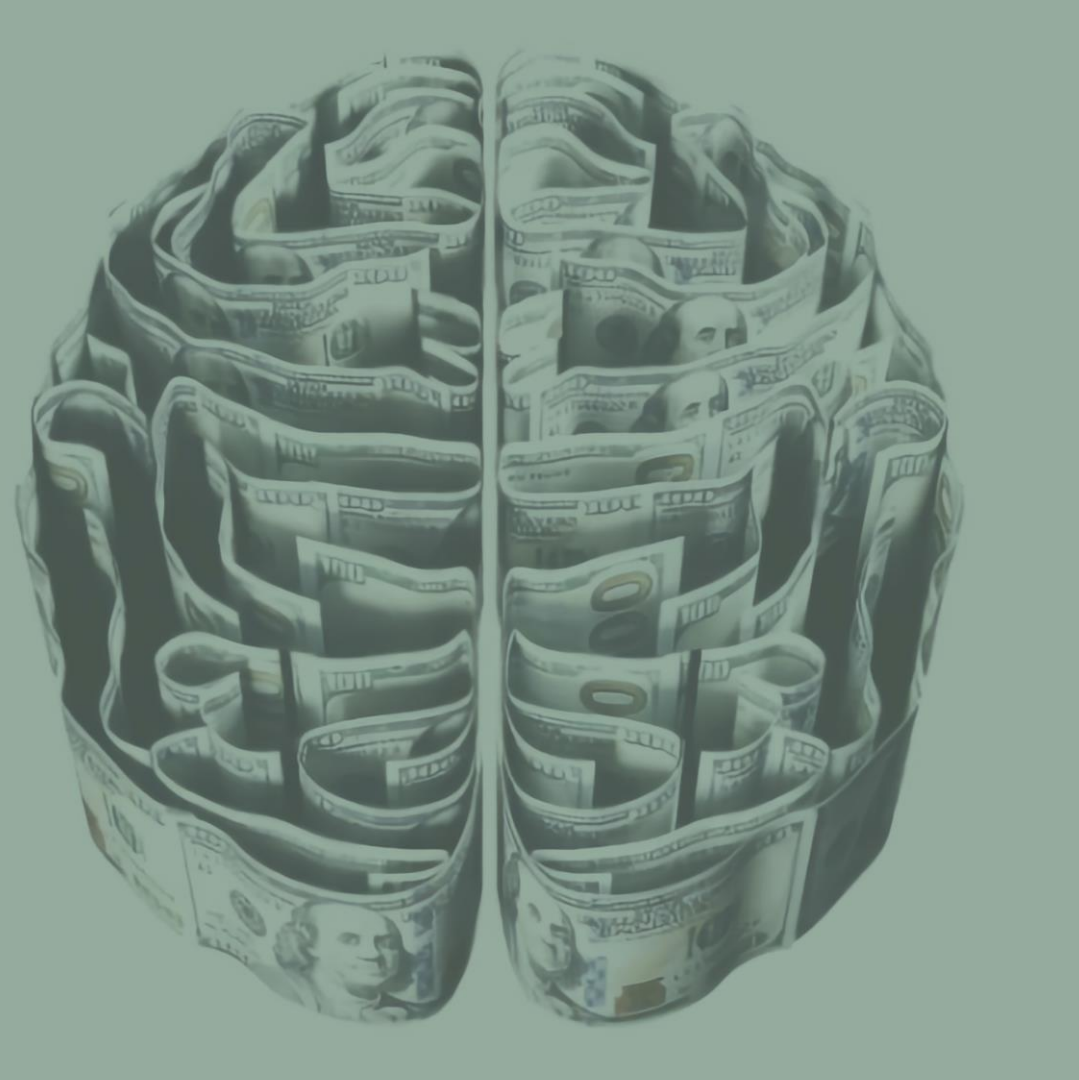
He has two young children are usually watched by his mother. His mother is sick.

He uses public transportation.

He is an hourly employee. He does not have insurance and does not have sick leave available.

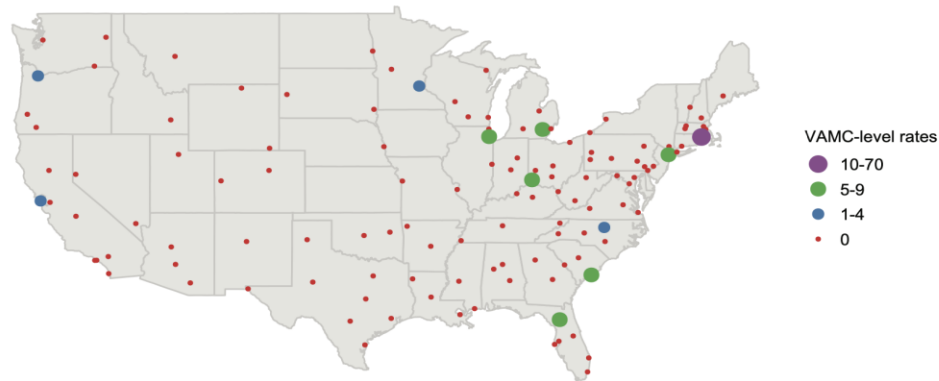
# Comparison of Ellen's and Robert's Days

	Ellen	Robert
	Transportation – own car, 15 minutes Appointment – on time, 1 hour	Transportation – bus, 1 hour late Appointment – 1 hour late, waited additional hour
	Sick leave – no pay lost Insurance – did not have to pay for radiology study	No sick leave – lost pay No insurance – self paid for radiology study
	Children – at daycare	Children – brought with him

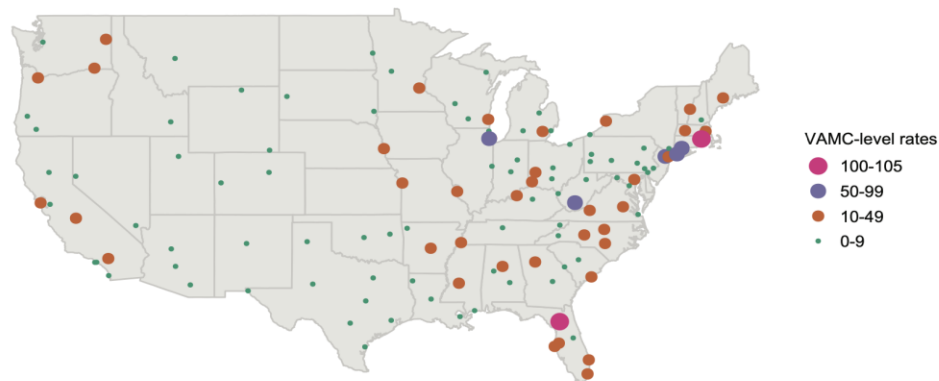


# National Lung Cancer Screening Utilization Trends in the Veterans Health Administration









**A** 2011-2014



**B** 2015-2018

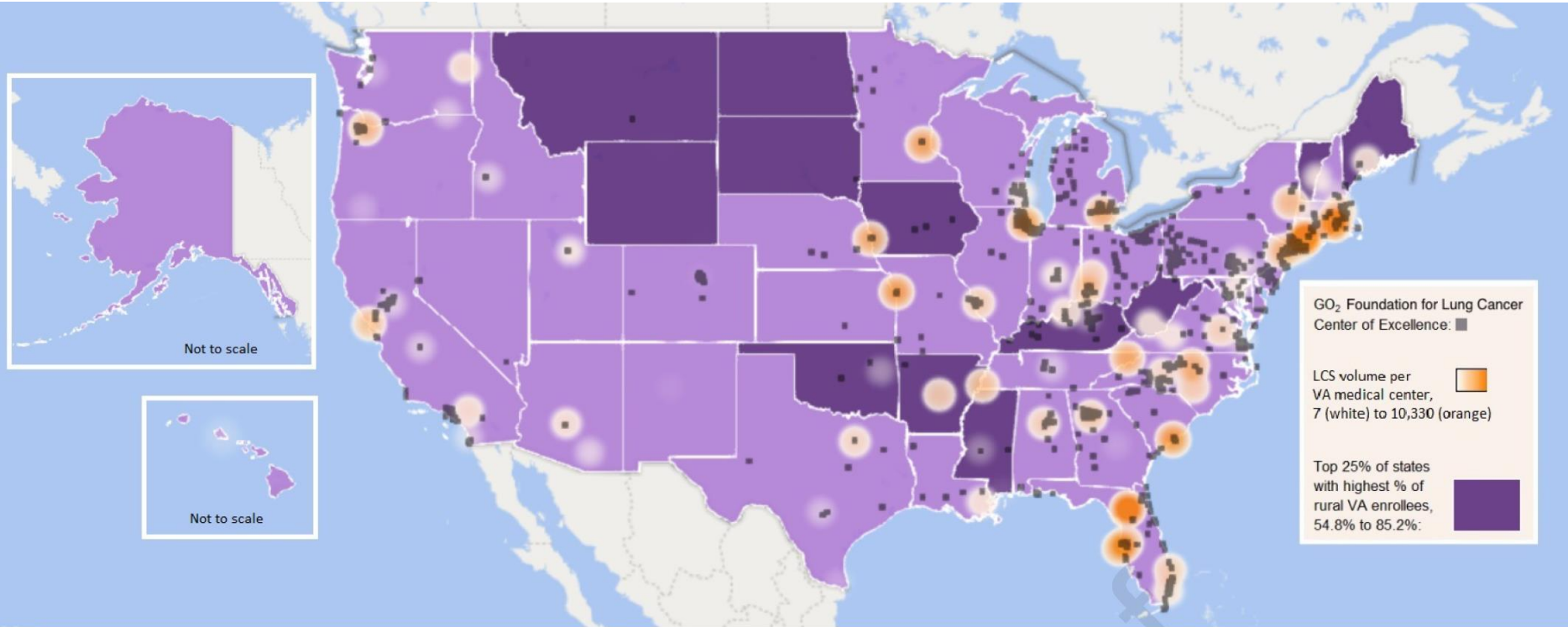


*JNCI Cancer Spectrum* (2020) 4(5): pkaa053

Jennifer A. Lewis , MD, MS, MPH,<sup>1,2,3,\*</sup> Lauren R. Samuels , PhD,<sup>1,4</sup> Jason Denton,<sup>1,5,6</sup>  
Gretchen C. Edwards , MD, MPH,<sup>1,7</sup> Michael E. Matheny , MD, MS, MPH,<sup>1,5,6</sup> Amelia Maiga, MD, MPH,<sup>7</sup>  
Christopher G. Slatore, MD, MSc,<sup>8</sup> Eric Grogan, MD, MPH,<sup>9</sup> Jane Kim , MD, MPH,<sup>10</sup> Robert H. Sherrier, MD,<sup>11</sup>  
Robert S. Dittus, MD, MPH,<sup>1,6</sup> Pierre P. Massion , MD,<sup>3,12,13</sup> Laura Keohane , PhD,<sup>14</sup> Sayeh Nikpay, PhD,<sup>14</sup>  
Christianne L. Roumie , MD, MPH<sup>1,6</sup>

# Access to lung cancer screening in the Veterans Health Administration: Does geographic distribution match need in the population?

Jacqueline H. Boudreau, MPH, Donald R. Miller, ScD, Shirley Qian, MS, Eduardo R. Nunez, MD, MS, Tanner J. Caverly, MD, MPH, Renda Soylemez Wiener, MD, MPH



How can radiology begin to address these disparities?

## COMMISSION FOR WOMEN AND DIVERSITY

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### GOALS

1. To increase awareness and recognition of the value created by diversity, and make the radiological professions welcoming and inclusive for women and minorities underrepresented in medicine
2. To improve professional opportunities, participation, representation, and contribution of women and minorities to the radiological profession
3. To improve organizational and institutional performance by leveraging diversity







**Advocacy and  
Awareness**



**Professional  
Development Support**



**Institutional  
Performance Improvement**

# RADIOLOGY HEALTH EQUITY COALITION



## Our Vision



### Commit to Act

Pledge to join the community advancing health equity in radiology.



### Submit Resources

Share resources to help your colleagues achieve equity in their practice.



### Spread the Word

Talk with your colleagues and community partners about how radiology can advance equity in healthcare.



### Grow

Utilize solution-oriented tools to bring more of the community into your practice.

# Radiology Health Equity Coalition Framework

**Executive Committee** (7- to 8-person subset of Mobilization Team)

**Operational decision making**

- Direct ongoing Coalition operations, including forming workgroups for specific, time-bounded deliverables, e.g., governance framework, budgets for Mobilization Team approval, etc.
- Deliver quarterly report to Mobilization Team
- Attend and participate in monthly Pulse Team meetings, quarterly Mobilization Team meetings

**Mobilization Team** (Representatives of Coalition founding groups)

**Coalition formation and strategic guidance**

- Contribute financially at founding level to support Coalition administration
- Approve Coalition framework
- Define Coalition operational plan
- Identify and approve Coalition strategy and goals periodically
- Seek input from Coalition Partners to support the development of interventions to address imaging health equity disparities

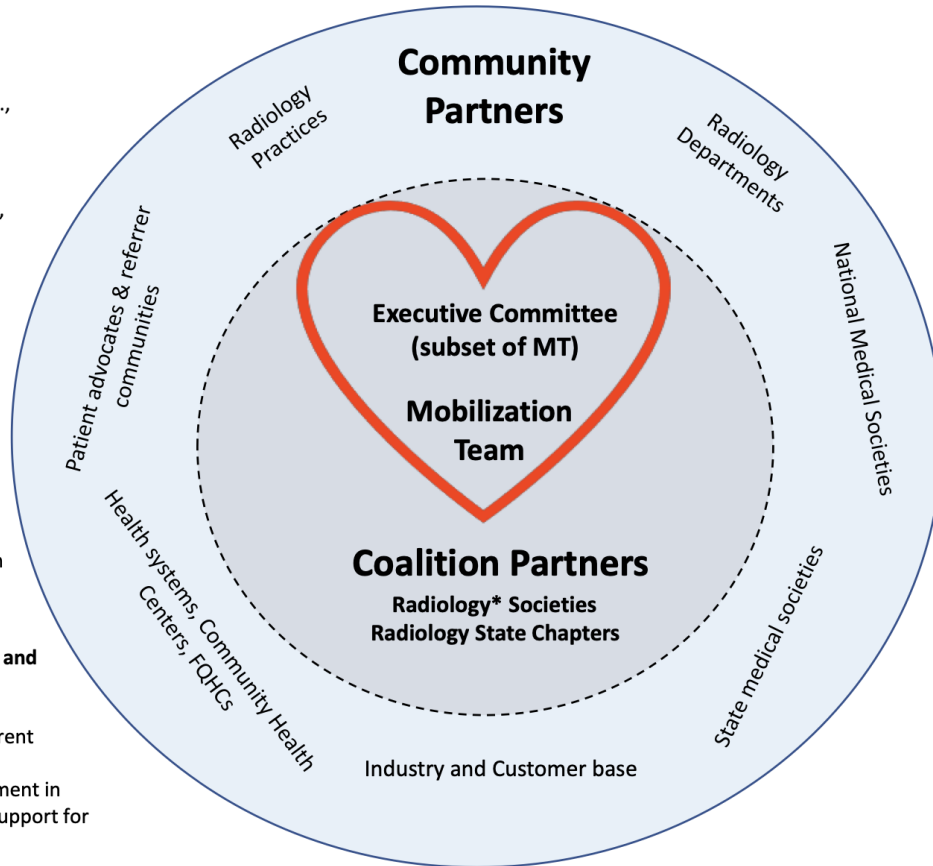
**Coalition Work Focus:**

**Complementary to and amplifications of Mobilization Team and Coalition and Community Partner activities**

- Research & support development of best practices for dissemination; e.g., review and propose changes to current policies/procedures that promote disparities
- Creation of and support for volunteer member engagement in health equity-related work in their communities; e.g., support for low-performing practices or underserved communities

**Coalition Goal:**

- Radiologists and the application of radiology reduces health disparities in local communities; e.g., screening access in rural communities improved



**Coalition Partners**

**Influencers**

- Contribute financially at Coalition Partner level to support Coalition activities
- Attend and participate in periodic Coalition meetings
- Provide input to Mobilization Team as requested, e.g., identify health equity support opportunities in their communities
- Support Coalition statements and positions as approved
- Disseminate Coalition programs and opportunities to their communities

**Community Partners**

**Implementers**

- Engage with Coalition Partners to deliver real-world experience and recommendations for best practices within their communities
- May participate in periodic Coalition meetings
- May support Coalition statements and positions as approved

\*Radiology = all aspects of imaging, interventional, nuclear medicine, RO, physics, etc.



# SB 2771

(b) A health benefit plan that provides coverage to a patient who is thirty-five (35) years of age or older must include coverage for an annual screening by all forms of low-dose mammography for the presence of breast cancer.

(c) A health benefit plan that provides coverage for a screening mammogram must provide coverage for diagnostic imaging and supplemental breast screening.

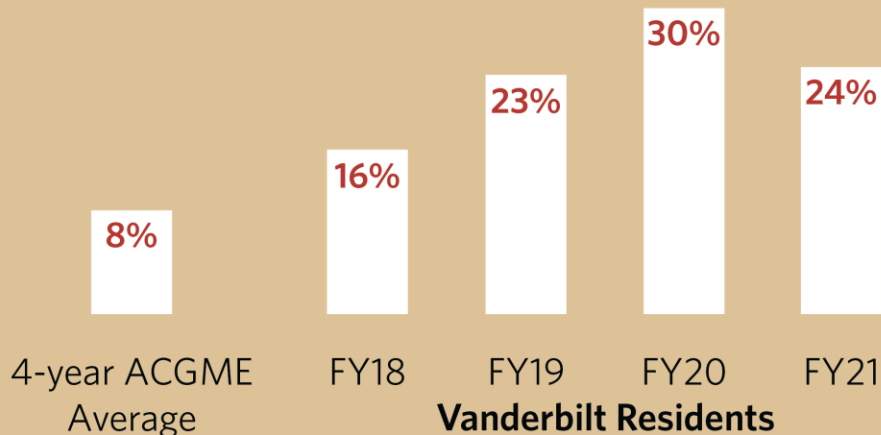
T E N N E S S E E  
GENERAL ASSEMBLY

# VANDERBILT RADIOLOGY OFFICE OF DIVERSITY AND INCLUSION

## OUR MISSION

To foster a department that embraces diversity of backgrounds, experiences and perspectives as a stimulus for innovation and problem solving, for achieving excellence in education, research and scholarship, and for achieving equity in patient care.

## URM IN DIAGNOSTIC RADIOLOGY RESIDENCY PROGRAM



## RESIDENT RECRUITMENT AND TRAINING OPPORTUNITIES



Cultural Proficiency Seminars



Diversity Grand Rounds



Minority Housestaff for Academic and Medical Advancement



Second Look Weekend



Visiting Externship



Women in Radiology

## VISIT US

### High School Students

The **VUMC Observational Experience (VOE)** program allows students to learn about careers in radiology.

### First-year Medical Students

The **ACR PIER Internship Program** is an eight-week clinical and research internship. Interns work side-by-side with experienced radiologists and researchers.

### Fourth-year Medical Students

Through the **AAMC Visiting Student Learning Opportunities (VSLO)** program students have the opportunity to come to Vanderbilt Radiology for a short-term elective rotation.



Our **diversity** enhance empathy, quality of ideas and decision-making, which in turn *advance radiology and improve patient care.*

- Dr. Reed Omary, Radiology Chair



CONNECT WITH US



[vumc.org/radiology](http://vumc.org/radiology)



@VUMCRadiology



@VUMCRadiology



[marques.bradshaw@vumc.org](mailto:marques.bradshaw@vumc.org)

Scan the QR code for more info



# VANDERBILT RADIOLOGY HEALTH EQUITY

## OUR MISSION

To **strengthen and amplify health equity** efforts through learning, research and collaborative partnerships

## CORE AREAS

- **Increase awareness** of health equity principles
- **Generate interest** amongst trainees in health equity
- **Foster research** that addresses health disparities

## OUR VISION

To drive **systematic** change to achieve health equity

“**Vanderbilt Radiology is committed to educating our faculty and trainees on how to provide high-quality, equitable care for our patients.** - Dr. Reed Omary  
Radiology Chair

## OUR LEADERSHIP TEAM



**Lucy Spalluto, MD, MPH**  
Vice Chair, Health Equity



**Andrea Birch, MD**  
Associate Director



**Alexis Paulson, MSN**  
Associate Director

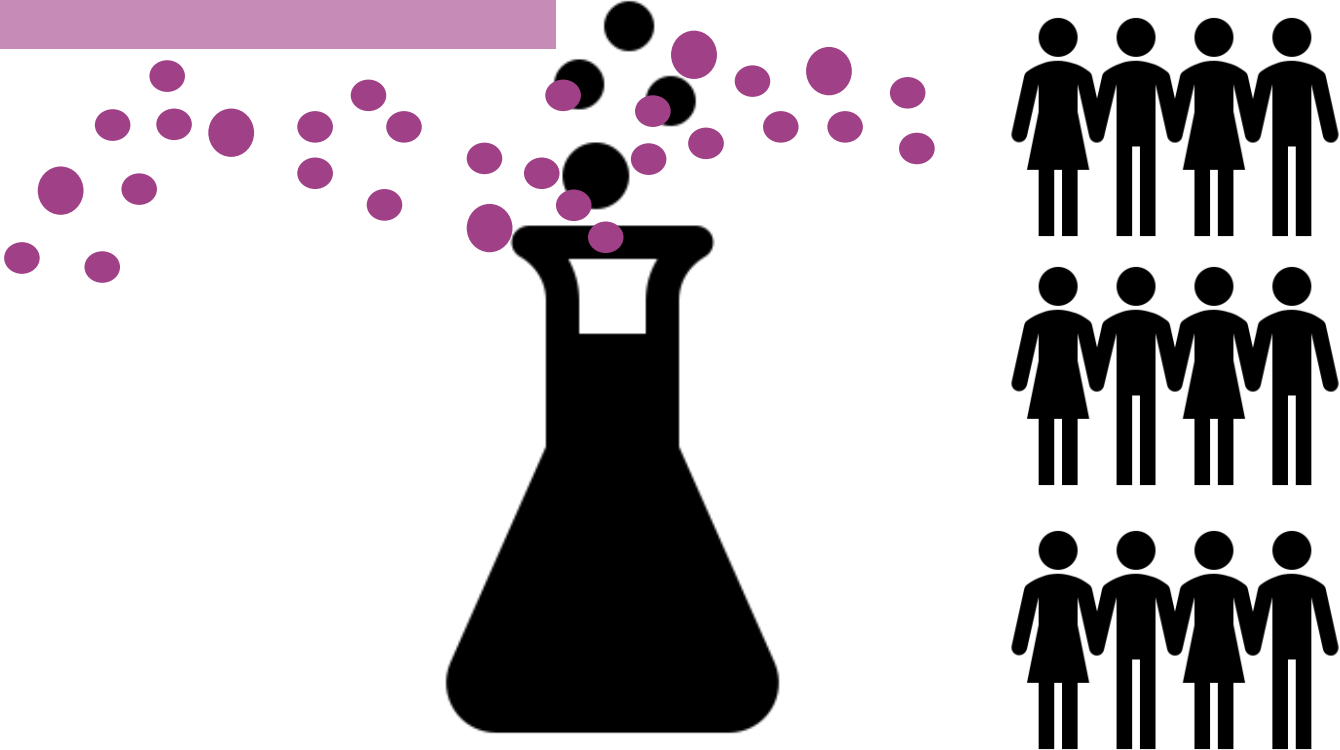


**Chirayu Shah, MD**  
Associate Director



**Angelina Cords, MD**  
Resident Liaison

# Community-engaged research



# Why is community-engaged and patient-centered research important?

- PCOR (patient centered outcomes research) includes patient direction in the actual planning and conduct of research
- PRO (patient reported outcomes research) captures patient voice as research subjects, improves patient experience
- Considers patients as **PARTNERS** rather than **SUBJECTS**



# Tennessee

BREAST & CERVICAL SCREENING PROGRAM

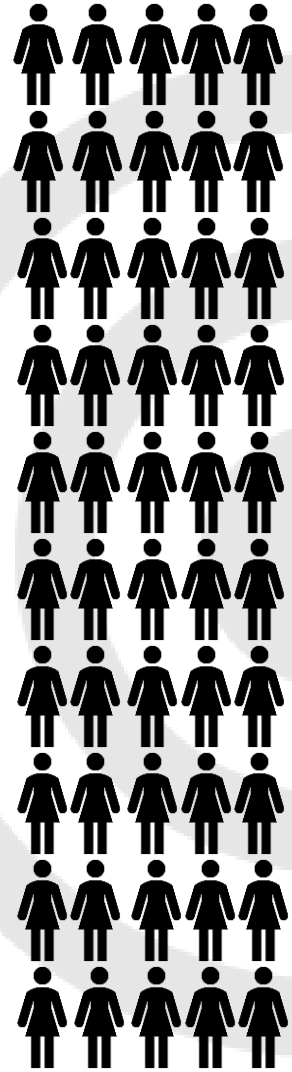


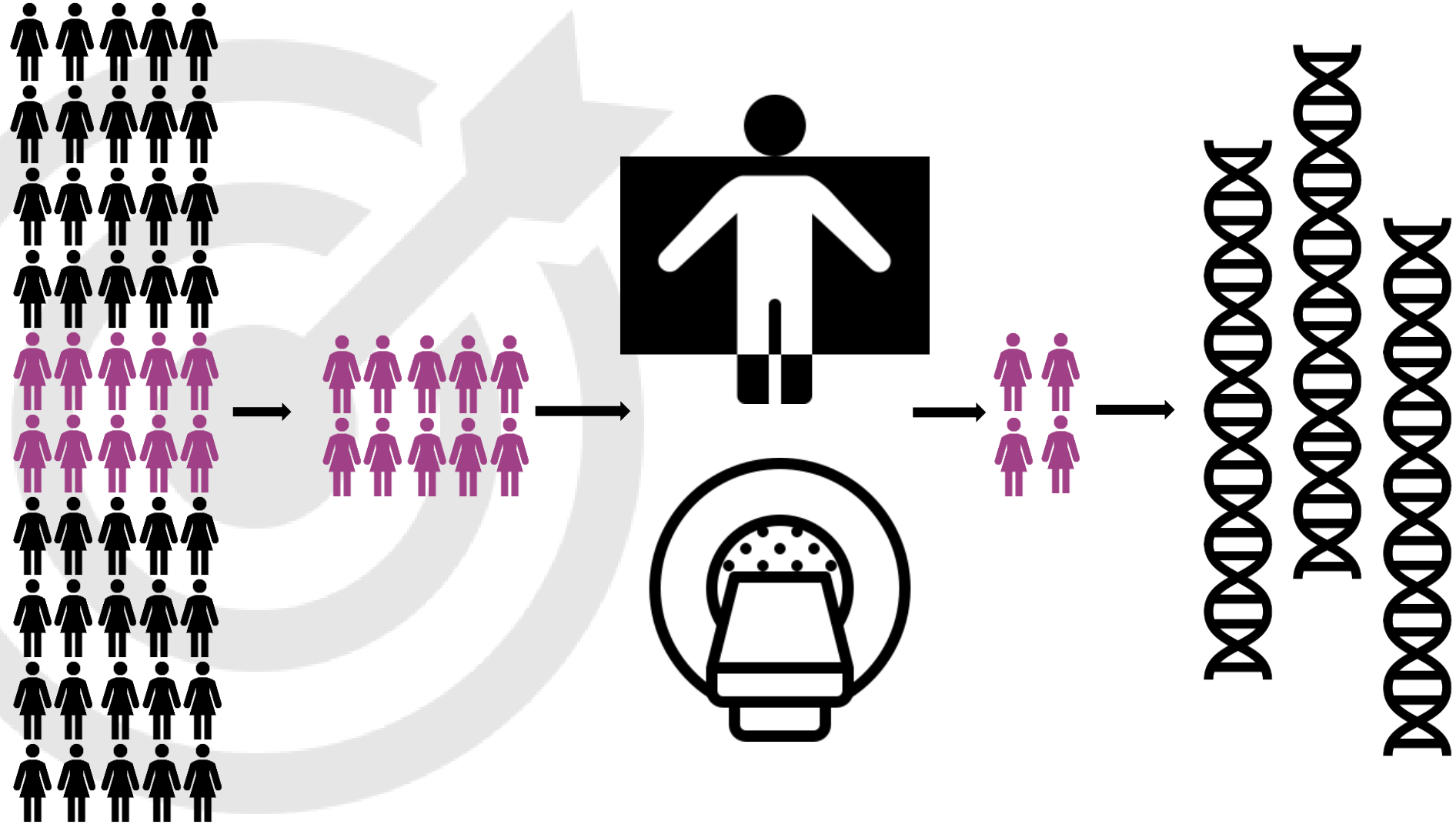
CENTER FOR WOMEN'S  
HEALTH RESEARCH  
MEHARRY MEDICAL COLLEGE

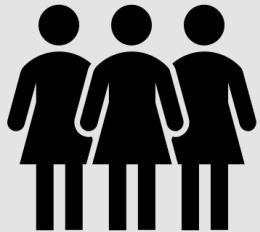
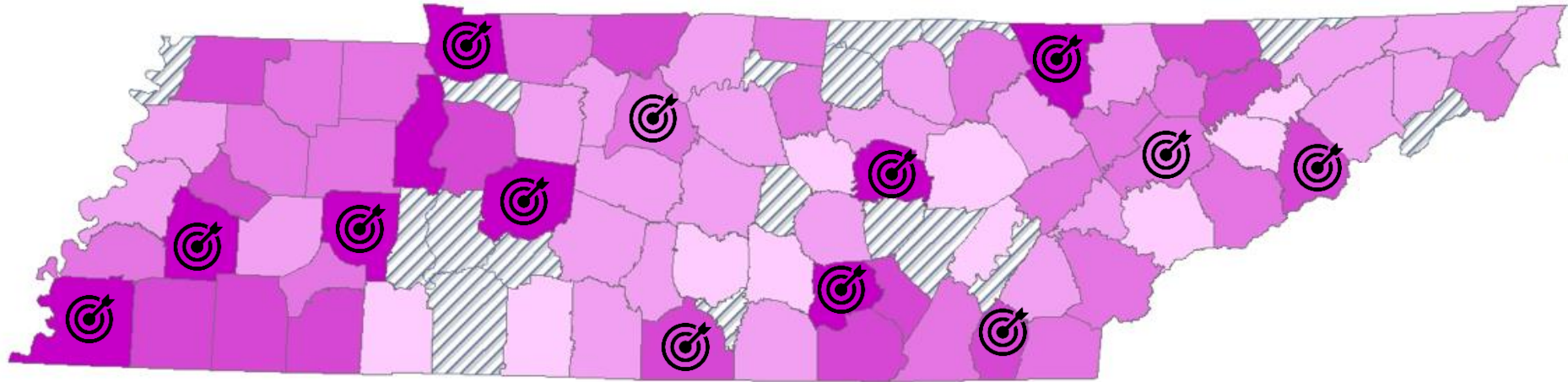
# BRAVE

Breast Cancer Risk Assessment:  
Achieving Equity in Breast Cancer  
Outcomes

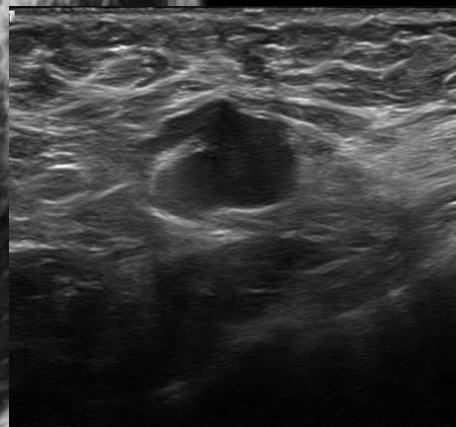
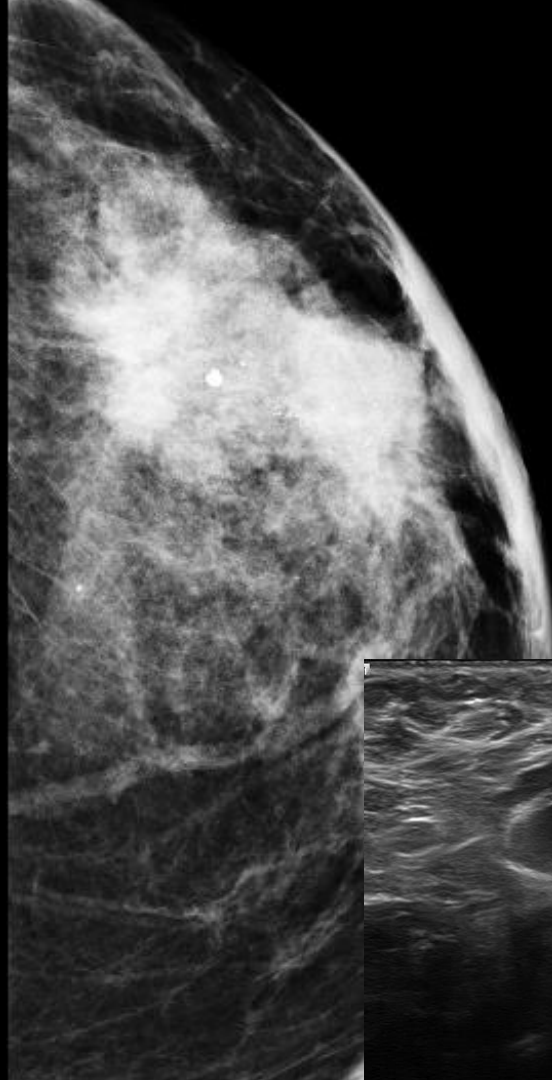
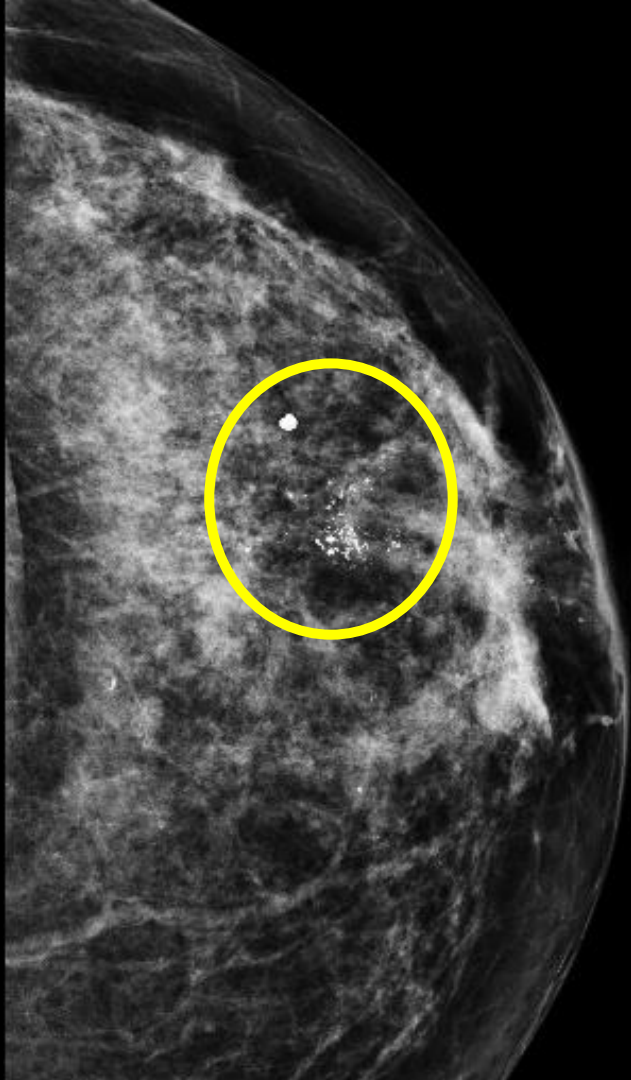






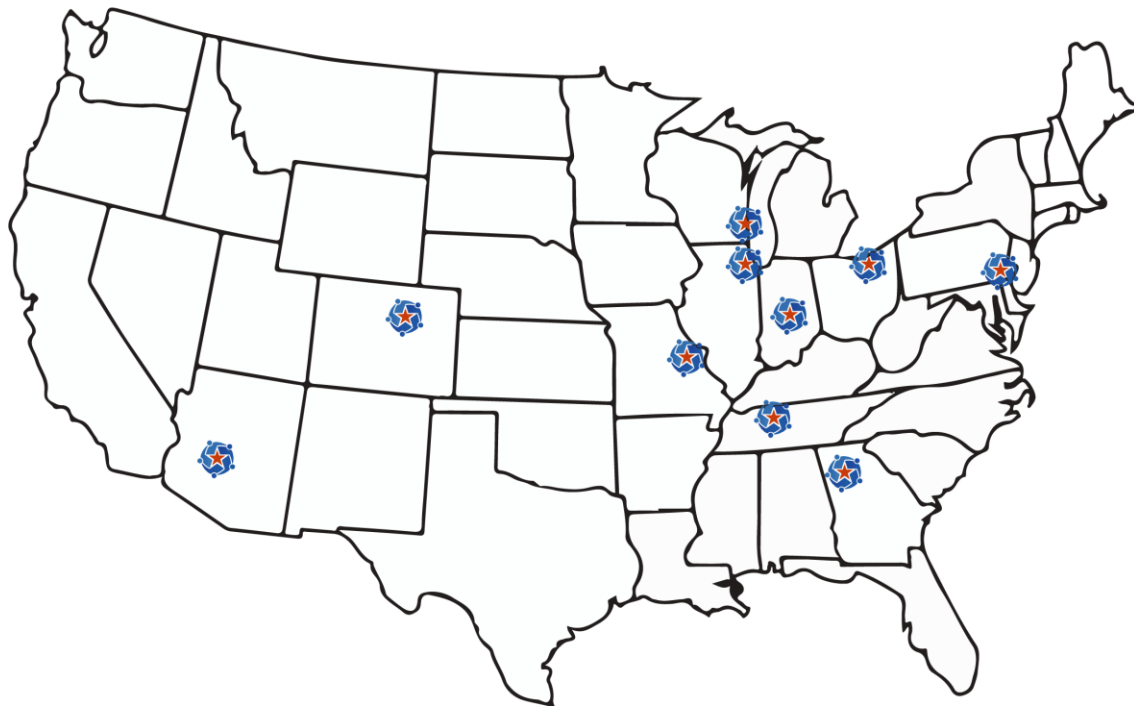


## TN Breast Cancer Mortality Rate by County





ATLANTA | CHICAGO | CLEVELAND | DENVER | INDIANAPOLIS  
MILWAUKEE | NASHVILLE | PHILADELPHIA | PHOENIX | ST. LOUIS



**VA-PALS SITES:**

Atlanta | Chicago | Cleveland | Denver | Indianapolis | Milwaukee | Nashville | Philadelphia | Phoenix | St. Louis

Funding for the VA-PALS program  
provided by the Office of Rural Health.  
Visit [www.ruralhealth.va.gov](http://www.ruralhealth.va.gov) to learn  
more.

## Quantitative Work

### Organizational Readiness:

Total Sample Size –  
Approx 3,000

### Veteran Experience:

Total Sample Size – 1,000  
Veterans

### Provider Experience:

Total Sample Size – 2,000  
radiology & primary care  
providers



## Qualitative Work

### Understanding Barriers and Facilitators:

Total Sample Size –  
Approximately 50  
Providers, Staff,  
Administrators

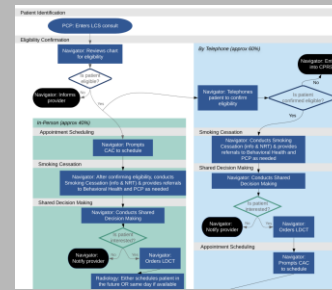


## Process Maps

### Developing/Reporting Process Maps:

Continuous re-evaluation  
of Processes at 10 sites

Understanding Adaptations



## Clinical/Process Outcomes

To be measured/evaluated  
using VA Corporate Data  
Warehouse and with VA-  
PALS ELCAP



# Health Professional Readiness for Implementing Lung Cancer Screening

## Method

A cross-sectional survey aimed at evaluating organizational readiness for implementing change (ORIC) and change valence specific to implementation of lung cancer screening was distributed to clinical providers, staff, and administrators in radiology and primary care at a single Veterans Affairs Medical Center.



ORIC and change valence were scored on a scale from **1-7**



*Journal of the American College of Radiology DOI: (10.1016/j.jacr.2020.12.010)*

## Key Results



Self-identified leaders in lung cancer screening had both higher

**ORIC**

**+**

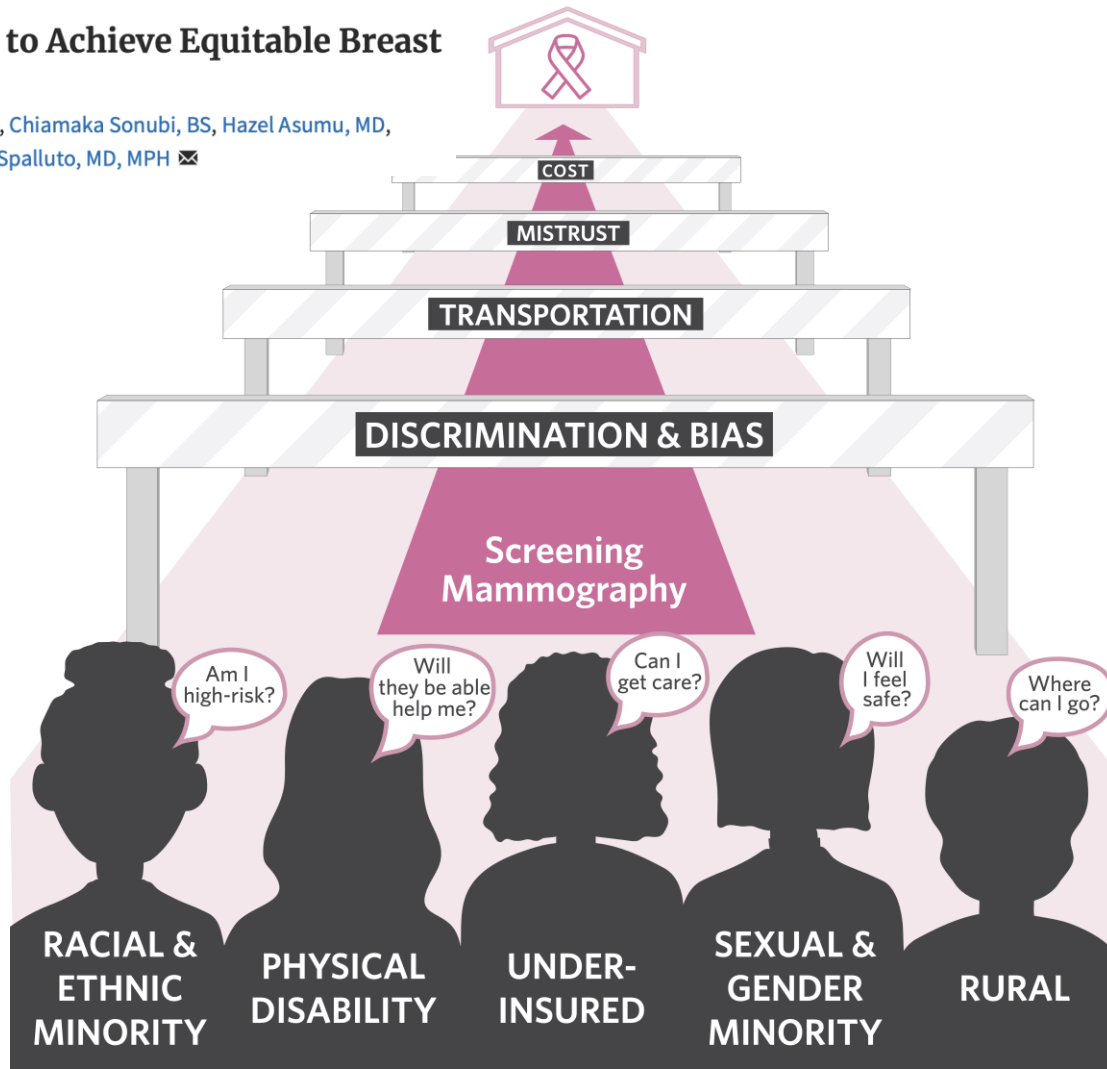
change valence scores

**Health professionals working in radiology have higher levels of readiness for change than those in primary care for implementing lung cancer screening.**



# Educational Strategies to Achieve Equitable Breast Imaging Care FREE

Katie M Davis, DO, Natasha Monga, MD, Chiamaka Sonubi, BS, Hazel Asumu, MD, Carolyn M DeBenedictis, MD, Lucy B Spalluto, MD, MPH ✉

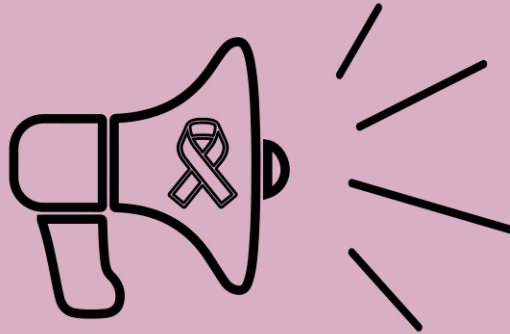


# Educational Strategies to Achieve Equitable Breast Imaging Care

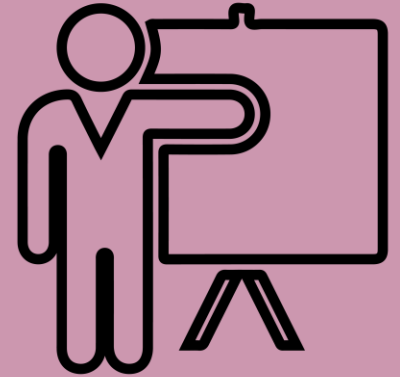
Diversify the  
Workforce



Raise Awareness of Existing  
Health Disparities



Cultural Sensitivity  
and Bias Training



Acknowledge	Acknowledge existing health and healthcare disparities
Understand	Understand need to address existing inequities
Increase	Increase awareness of health equity principles
Provide	Provide organizational infrastructure/resources to support health equity
Act	Take action to improve equitable patient care



# THANK YOU!

lucy.b.spalluto@vumc.org  
@LBSrad