

# Strategies to Enhance Receipt of Tobacco-Related Lung Cancer Care in South Carolina

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**Hollings Cancer Center**

An NCI-Designated Cancer Center



# The Cancer Burden and Risk Factors in South Carolina



## Sociodemographic Characteristics, U.S. vs SC

	U.S. (331.8M)	SC (5.2M)
Female	51%	51%
White Alone	76%	69%
Black/African American Alone	14%	27%
Latine	19%	6%
Two or more races	3%	2%
Median HH Income	\$69,021	\$58,234
Per Capita Income	\$37,638	\$32,823
Population Below Poverty Level	12%	15%
Rural (RUCC $\geq$ 4)	19%	14%
Uninsured	11%	13%

### In Addition:

- 14% living in rural counties (RUCC 4+)
- 75% of counties include areas designated as rural
- One of fastest growing veteran populations in the U.S.
- Latine population has doubled in size in last 20 years
  - Median age of Latine population is 26 years
  - Median age of total SC population is 36 years
- Unique Sea Island population

# **Underuse of Surgical Resection among Non-Hispanic White People and Black/African American People in South Carolina**

**Independent Predictors of Surgical Resection in Patients With Localized, Non-small Cell Lung Cancer (N=2,506 NHW, 550 AA; Funded by an NIH/NIA Pilot Grant, PI: Esnaola, Mentor: Ford)**

<b>Variable</b>	<b>OR (95% CI)</b>	<b>p Value</b>
<b>Age 70-79</b>	<b>0.48 (0.28-0.82)</b>	<b>0.0078</b>
<b>Age &gt; 80</b>	<b>0.18 (0.10-0.32)</b>	<b>&lt;0.001</b>
<b>AA race</b>	<b>0.43 (0.34-0.55)</b>	<b>&lt;0.001</b>
<b>Separated or divorced</b>	<b>0.71 (0.52-0.97)</b>	<b>0.029</b>
<b>Widowed</b>	<b>0.60 (0.48-0.76)</b>	<b>&lt;0.001</b>
<b>Comorbidity</b>	<b>0.69 (0.62-0.78)</b>	<b>&lt;0.001</b>
<b>Living in poverty</b>	<b>0.67 (0.51-0.88)</b>	<b>0.005</b>
<b>HMO</b>	<b>0.47 (0.26-0.85)</b>	<b>0.013</b>
<b>Medicare</b>	<b>0.53 (0.39-0.72)</b>	<b>&lt;0.001</b>
<b>Medicaid</b>	<b>0.37 (0.22-0.64)</b>	<b>0.0003</b>
<b>Self-pay</b>	<b>0.41 (0.25-0.67)</b>	<b>0.0004</b>

Esnaola NF, Gebregziabher M, Knott K, Finney C, Silvestri GA, Reed CE, Ford ME. Underuse of surgical resection for localized, non-small cell lung cancer among whites and African Americans in South Carolina. Annals of Thoracic Surgery 2008;86:220-6; discussion 227.

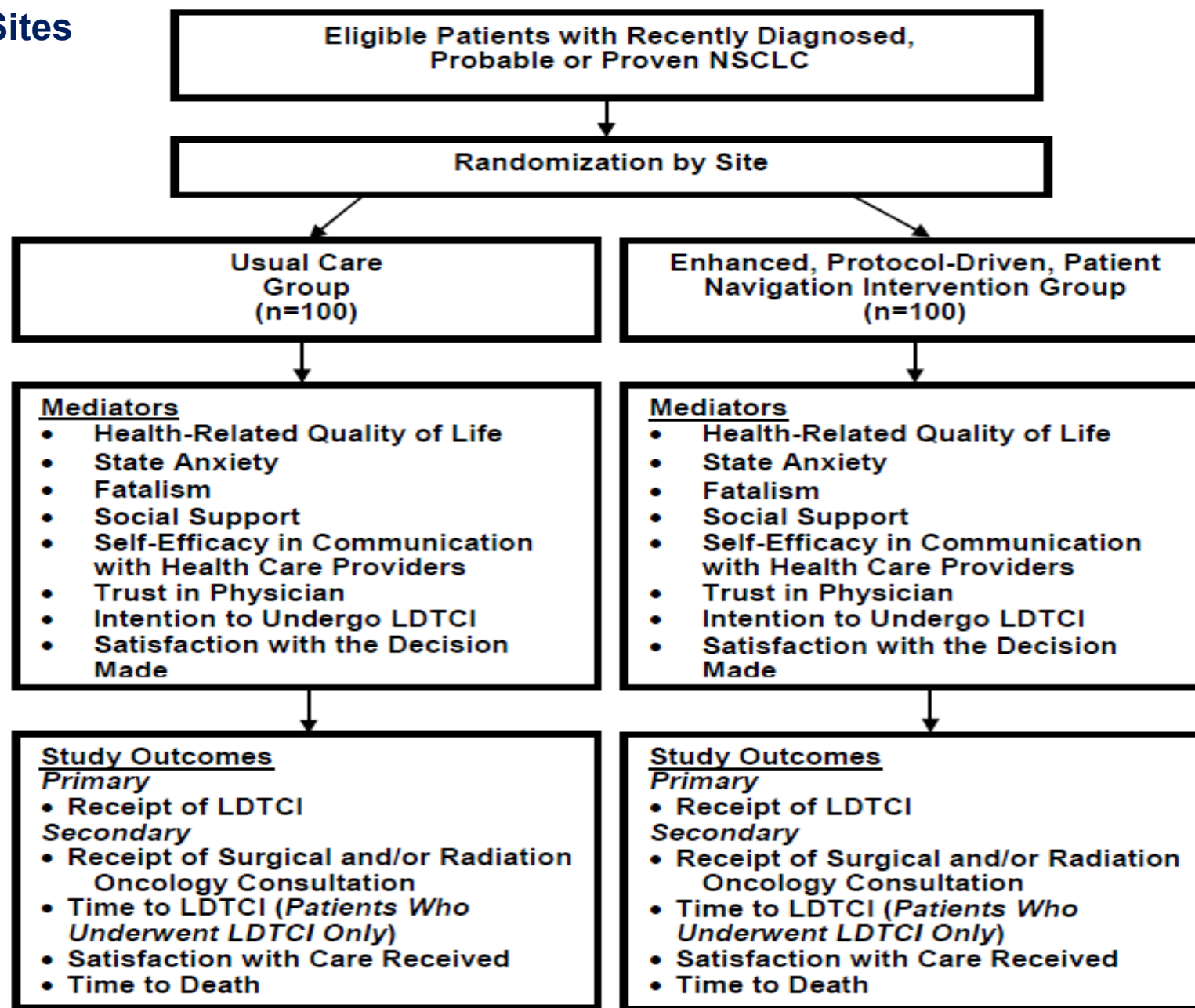
# Southern Lung Cancer Study (SLCS)

- **NIH/NIMHD:** R01MD005892
- **Multiple PIs:** Marvella E. Ford, PhD, Nestor F. Esnaola, MD, MPH, MBA
- **Study Coordinator:** Kendrea D. Knight, MSPH
- **Study Biostatistician:** Elizabeth Hill, PhD



# SCHEMA

Initial Number of Study Sites  
= 5 (4 in SC and 1 in GA)



## **II. Identification and Recruitment of Study Participants**

**Step 1.** Academic detailing to identify referring physicians

**Step 2.** Contact potential referral sources to:

- Inform them about the SLCS
- Give them your contact information
- Ask them for assistance in identifying potential study participants
  - Letters may be mailed or emailed to the referring MDs to describe the study
  - Flyers may also be mailed or posted in strategic work spaces/offices, such as:
    - Physician's offices
    - Clinics
    - Radiology Reading rooms
    - Bronchoscopy suites



# Academic Detailing

## Reaching Out to Referring Physicians:

- PCPs
- Diagnostic Radiologists
- Lung Cancer Screening Programs
- Nuclear Medicine
- Pulmonologists
- Bronchoscopy Suites
- Pathologists
- Cancer Registries
- General Surgeons
- (Cardio)thoracic Surgeons
- Medical Oncologists
- Radiation Oncologists

# National Cancer Institute Community Oncology Research Program



## Purpose

- NCORP brings cancer prevention clinical trials and cancer care delivery research (CCDR) to people in their communities

# National Cancer Institute Community Oncology Research Program

## The NCORP Network

- Includes 7 Research Bases and 32 Community Sites
  - 14 of the Community Sites are designated as Minority/Underserved Community Sites
    - These sites have a patient population comprised of at least 30% racial/ethnic minorities or rural residents
- <https://ncorp.cancer.gov>

# Southern Lung Cancer Study: Study Sites

STUDY SITE	LOCATION
Abbott Northwestern-Metro-Minnesota Oncology Research Consortium (Abbott)	Minneapolis, MN
Baptist Memorial Hospital-Memphis	Memphis, TN
Cancer Institute – Greenville Health System (GHS)	Greenville, SC
Fox Chase-Main Hospital Campus (Fox Chase)	Philadelphia, PA
Fox Chase-Temple (Temple)	Philadelphia, PA
Gibbs Cancer Center & Research Institute-Spartanburg Regional Healthcare System (Spartanburg/GCC)	Spartanburg, SC
Health Shreveport (LSU-Shreveport)	Shreveport, LA
Helen F. Graham Cancer Center at Christiana-Care (Christiana)	Newark, DE
Hennepin County Medical Center (Hennepin)	Minneapolis, MN
McLeod Cancer Center for Treatment & Research (McLeod)	Florence, SC
Medical University of South Carolina Hollings Cancer Center (MUSC/HCC)	Charleston, SC
Nancy N. and J.C. Lewis Cancer & Research Pavilion at St Joseph's/Candler (St. Joseph's/Candler)	Savannah, GA

# Southern Lung Cancer Study: Study Sites

STUDY SITE	LOCATION
North Memorial Health Care (North Memorial)	Robbinsdale, MN
Ochsner Cancer Institute-Ochsner Health System (Ochsner)	Jefferson, LA
SECU Cancer Center-Mission Health (Mission Health)	Asheville, NC
Self Regional Healthcare Cancer Center (Self)	Greenwood, SC
Stanley S. Scott Cancer Center-Louisiana State University Health New Orleans (LSU-NO)	New Orleans, LA
Stroger Hospital Cook County MUNCORP (Stroger)	Chicago, IL
The Comprehensive Cancer Center of Wake Forest University (WFU)	Winston-Salem, NC
Virginia Commonwealth University Massey Cancer Center (VCU)	Richmond, VA
Wichita NCORP (Wichita)	Wichita, KS
William Beaumont Health System	Royal Oak, MI; Troy, MI; Grosse Pointe, MI

# SLCS Patient Navigators Identify and Eliminate Patient's Real and Perceived Barriers to Care

Barrier	Examples
Acceptance/Refusal Barriers: Financial and Economic Issues	Inadequate insurance coverage/funds
Acceptance/Refusal Barriers: Lack of Transportation	Inability to get to & from appointments
Acceptance/Refusal Barriers: Assumptions	Inaccurate beliefs regarding cancer
Awareness Barriers: Communication and Language	Difficulty telling desires/needs
Opportunity Barriers: Health care system	Fragmentation of care
Acceptance/Refusal Barriers: Bias based on race/age/culture	Fear, mistrust and cultural beliefs May lead to delay or refusal of care

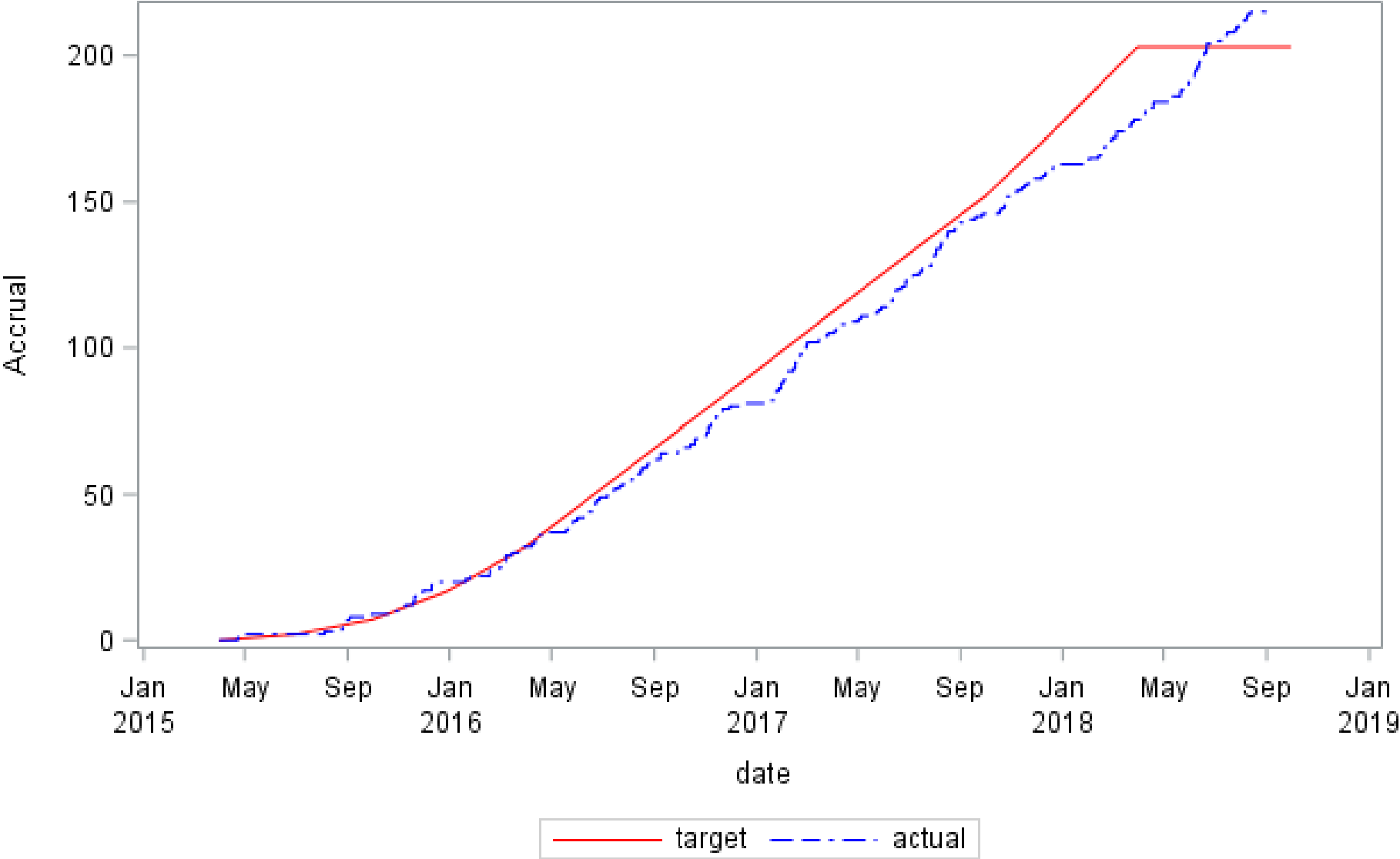
***May lead to delay or refusal of care***

Modified from Freeman HP, Reuben SH. *Voices of a Broken System*. Bethesda, Md: NIH, NCI; 2001.



**To Recruit 200 Black  
Patients with Stage I-II  
NSCLC:**

- **Pre-NCORP: 5 Study  
Sites**
- **Post-NCORP: 22 Study  
Sites**



# Southern Lung Cancer Study Enrollment (2/20/2019)

Study Arm	# Pre-Screened	# Potentially Eligible for Enrollment	# Eligible	# Enrolled*
Usual Care Arm	5,071	307	143	100
Navigation Arm	4,192	419	147	102
Grand Total	9,263	726	290	202

\*Consent Rate  $\approx$  70%



LINEBERGER  
COMPREHENSIVE  
CANCER CENTER



Hollings Cancer Center

# Southeastern Consortium for Lung Cancer Health Equity



# Collaborative Team History



## Addressing Disparities in Lung Cancer Screening Eligibility and Healthcare Access

### An Official American Thoracic Society Statement

6 M. Patricia Rivera, Hormuzd A. Katki, Nichole T. Tanner, Matthew Triplette, Lori C. Sakoda, Renda Soylemez Wiener, Roberto Cardarelli, Lisa Carter-Harris, Kristina Crothers, Joelle T. Fathi, Marvella E. Ford, Robert Smith, Robert A. Winn, Juan P. Wisnivesky, Louise M. Henderson\*, and Melinda C. Aldrich\*; on behalf of the American Thoracic Society Assembly on Thoracic Oncology

THIS OFFICIAL STATEMENT OF THE AMERICAN THORACIC SOCIETY WAS APPROVED SEPTEMBER 2020

**Background:** There are well-documented disparities in lung cancer outcomes across populations. Lung cancer screening (LCS) has the potential to reduce lung cancer mortality, but for this benefit to be realized by all high-risk groups, there must be careful attention to ensuring equitable access to this lifesaving preventive health measure.

**Objectives:** To outline current knowledge on disparities in eligibility criteria for, access to, and implementation of LCS, and to develop an official American Thoracic Society statement to propose strategies to optimize current screening guidelines and resource allocation for equitable LCS implementation and dissemination.

**Methods:** A multidisciplinary panel with expertise in LCS, implementation science, primary care, pulmonology, health behavior, smoking cessation, epidemiology, and disparities research was convened. Participants reviewed available literature on historical disparities in cancer screening and emerging evidence of disparities in LCS.

**Results:** Existing LCS guidelines do not consider racial, ethnic, socioeconomic, and sex-based differences in smoking behaviors or lung cancer risk. Multiple barriers, including access to screening and cost, further contribute to the inequities in implementation and dissemination of LCS.

**Conclusions:** This statement identifies the impact of LCS eligibility criteria on vulnerable populations who are at increased risk of lung cancer but do not meet eligibility criteria for screening, as well as multiple barriers that contribute to disparities in LCS implementation. Strategies to improve the selection and dissemination of LCS in vulnerable groups are described.

**Keywords:** lung cancer screening; disparities in lung cancer screening; barriers to lung cancer screening



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### AIM 1

- To initiate and evaluate a high-impact, multimodal, and multilevel navigation intervention to promote LCS among Black/African American (AA) individuals, from both rural and urban medically underserved communities in VA, NC and SC

### AIM 2

- To develop a robust, shared population-based cohort and biorepository to further support research in understanding biological determinants or risk factors for poor lung cancer outcomes among Black/AAs



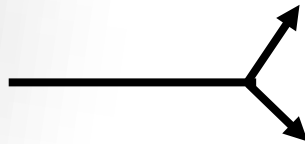


	VCU/MCCC	MUSC/HCC	UNC/LCCC
Catchment area population	4M (Central/ Eastern VA)	5M (State)	10M (State)
Black/AA	28%	27%	22%
Counties HRSA-designated MUAs	54/65	35/46	93/100
Residents living in rural counties (RUCA 4+)	12%	18%	23%
Adult cigarette use (% Black/AA Men)	14% (19.3%)	17.6% (22.4%)	18.5% (25.3%)
Medicaid Expansion	Yes	No	Yes





6 locations in Richmond, VA



Over 30 locations in North Carolina



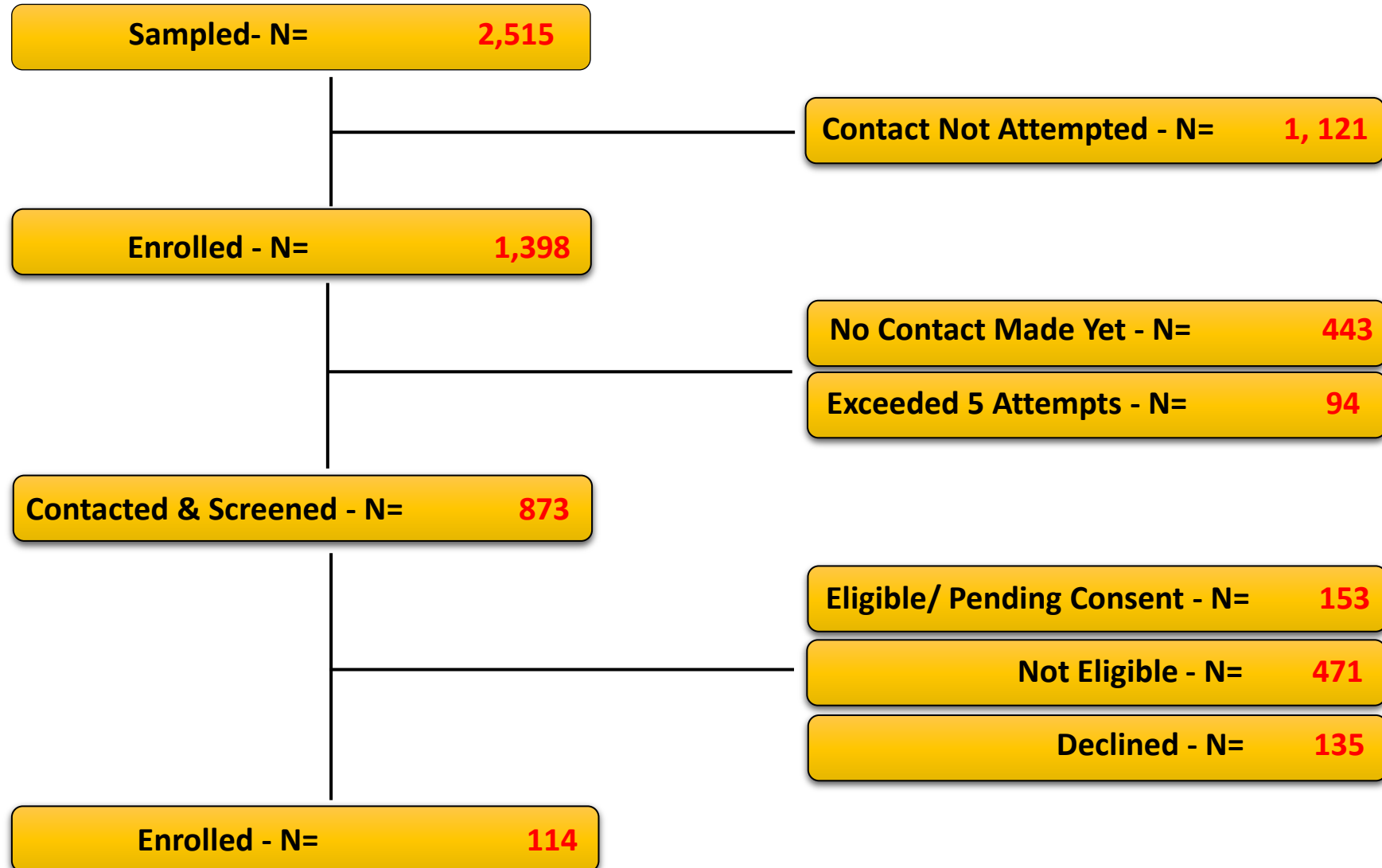
5 locations throughout North Carolina



Over 20 locations throughout  
Berkeley, Charleston, Colleton and  
Dorchester counties



## Contact & Enrollment Summary



## *Preliminary Findings*

Common Reasons for Declining Participation	Common Concerns/ Obstacles To complete Lung Cancer Screening	Initial Trends on the Multimodal Navigation Approach
<ul style="list-style-type: none"> <li>• Hearing the word cancer</li> <li>• Not interested in study or getting screened</li> <li>• Not comfortable enrolling in the study, citing the injury language in the ICF form</li> <li>• Study is not a good fit</li> <li>• Too busy, no time, no interest in answering questions</li> <li>• Already decided to get LCS</li> <li>• Unwilling to go through the consent process</li> <li>• Currently dealing with other health problems</li> <li>• No reason provided – hung up</li> </ul>	<ul style="list-style-type: none"> <li>• Cost concerns</li> <li>• Insurance coverage</li> <li>• Recent medical history that prevents participation</li> </ul>	<ul style="list-style-type: none"> <li>• Majority of participants would recommend others to participate</li> <li>• Some have mentioned no changes to quality of life</li> </ul>

- **Multimodal Navigation**
  - Create a new, novel strategy for navigation that could become the gold standard and improve access to LCS and early detection for medically underserved communities
  - Allow more individuals to screen and to become involved in research and clinical trials

**Questions?**