

# Population-based Research Optimizing Screening through Personalized Regimens (PROSPR):

## An NCI Initiative to Improve the Cancer Screening Process

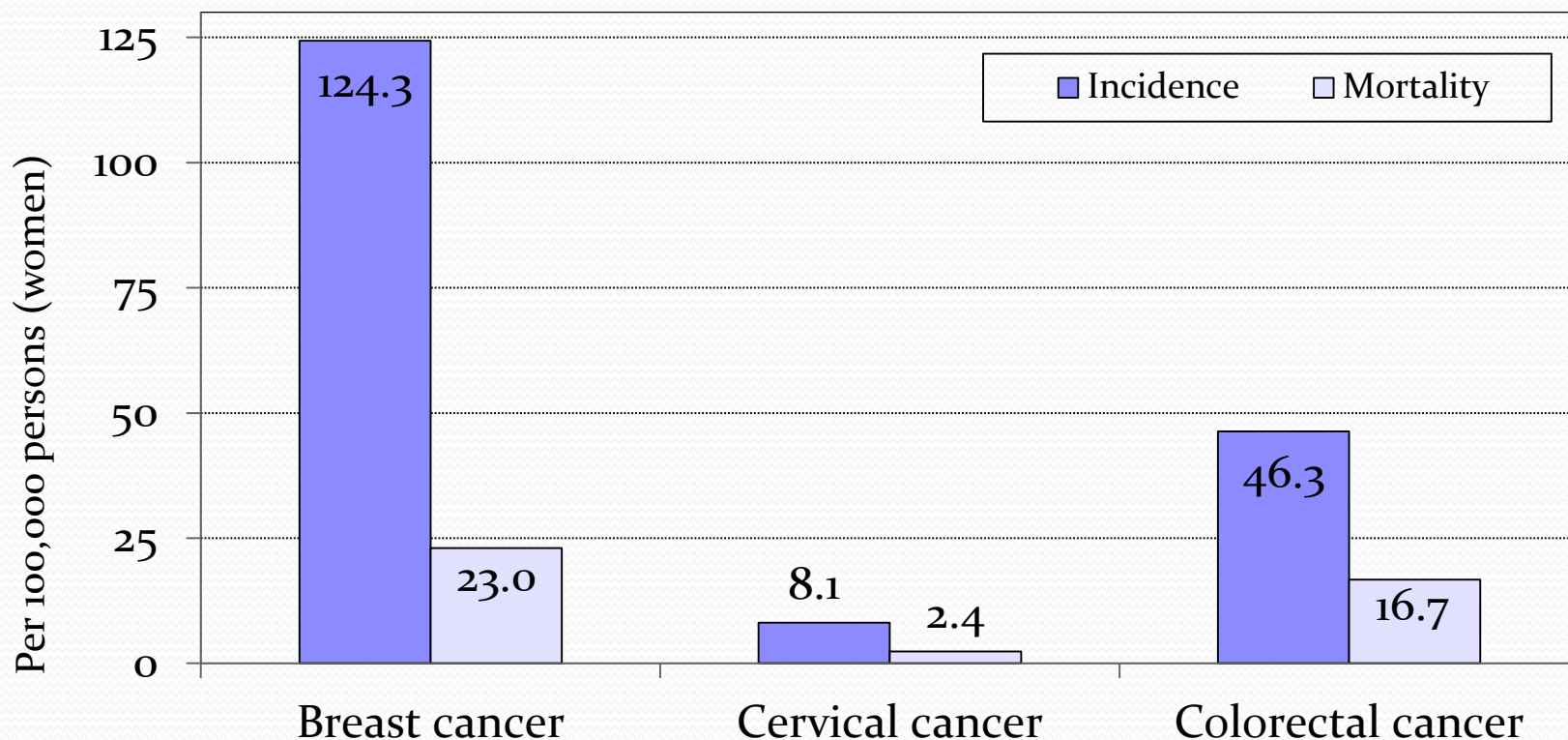
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Dialogue for Action: Right-Sizing Cancer Screening  
Baltimore, Maryland March 20, 2014

# What is PROSPR?

- Began in September 2011
- Multi-center, collaborative research program
- Funded through NCI's Division of Cancer Control and Population Sciences
- Overall purpose is to promote coordinated, multidisciplinary research to evaluate and improve the cancer screening process:
  - Breast, cervical, and colorectal cancer screening

# U.S. Incidence and Mortality Rates for 3 Cancers, 2005-2009



Source: SEER

# PROSPR's Goal

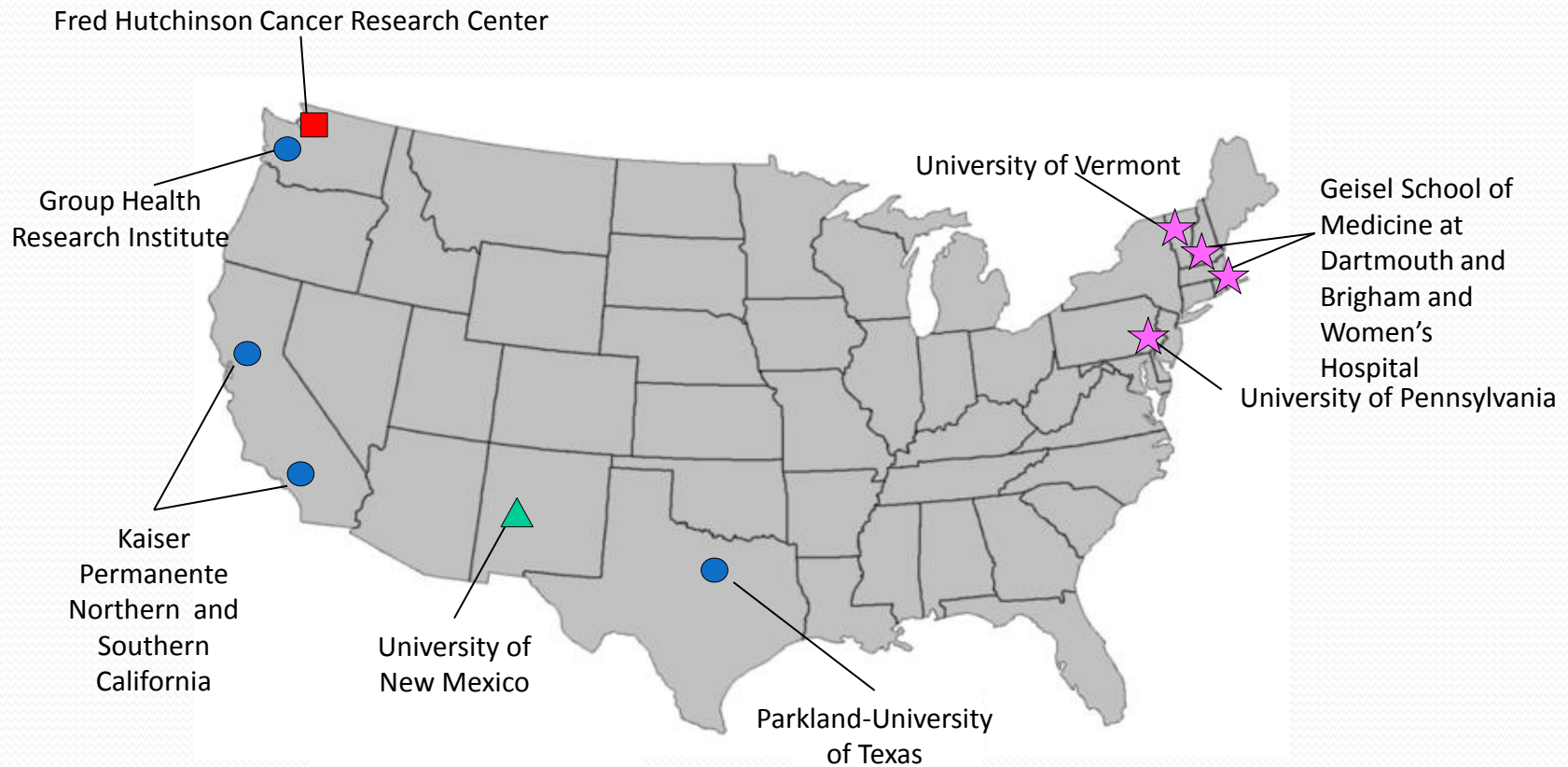
- Advance knowledge that leads to improvements in the screening process by making it more consistent with the Institute of Medicine's Goals for health care:
  - More satisfying and coordinated for the person being screened
  - More effective
  - More efficient
  - More timely
  - More equitable and safe

IOM: *Crossing the Quality Chasm*, 2001

# PROSPR's Objectives

1. Study the comparative effectiveness of existing and emerging screening processes in community practice;
2. Study the balance of benefits and harms across recognized cancer risk profiles
3. Conduct preliminary studies to inform future research to optimize screening processes and outcomes;
4. Actively share data and findings with potential collaborators through publications, web portals, and interaction with a consulting panel in order to foster related research.

# PROSPR Research Centers



- ★ PROSPR Breast Site
- ▲ PROSPR Cervical Site
- PROSPR Colorectal Site
- Statistical Coordinating Center

# Composition of PROSPR Research Centers

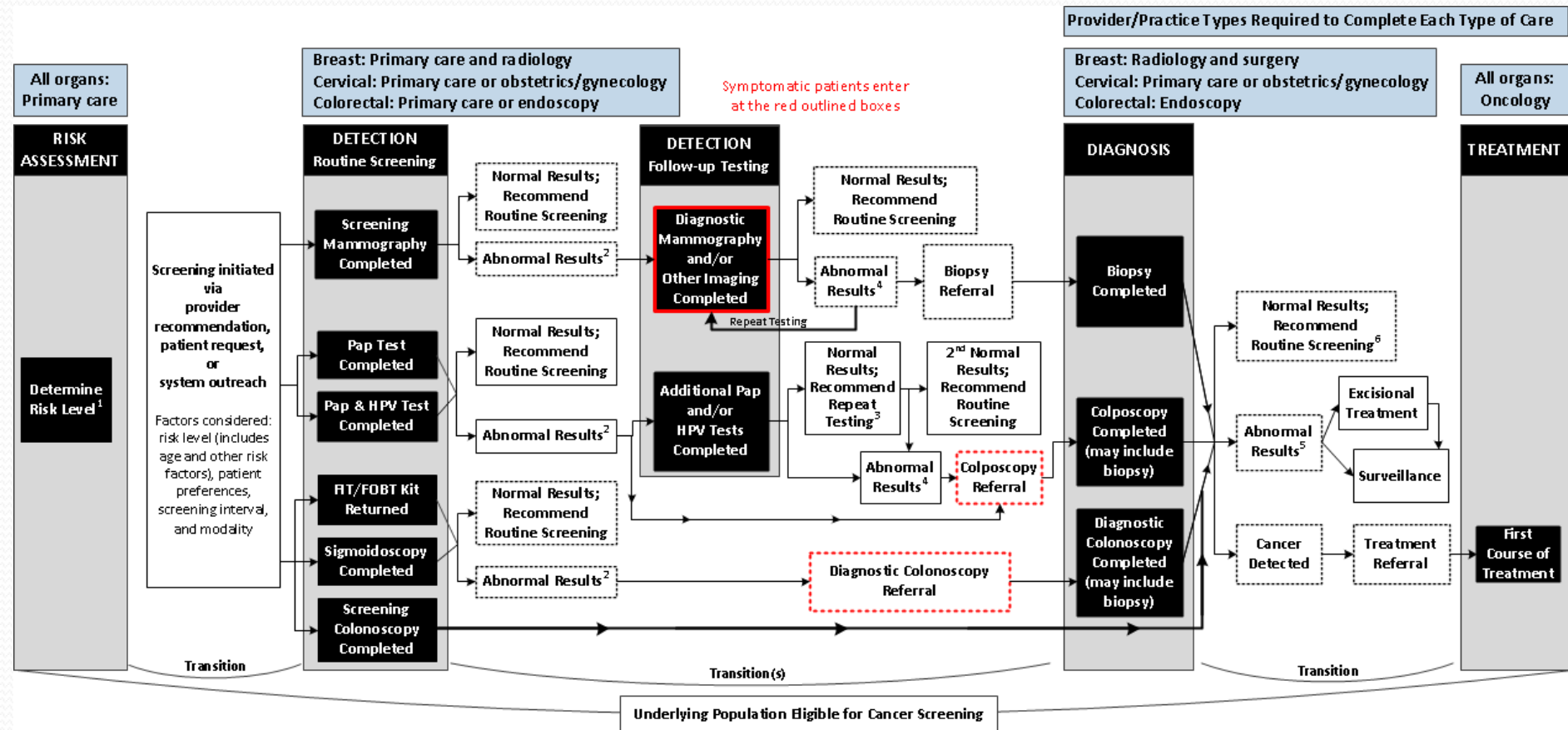
PROSPR Research Center	High-Risk Groups Included	System
University of New Mexico (Cervical)*	Hispanic Native American Low-income rural	State-wide registry
Group Health Cooperative (Colorectal)	Asian American Medicaid	Integrated health care delivery system
Parkland-UT Southwestern (Colorectal)	African American Hispanic Low-income urban Under- or uninsured	Safety-net clinical provider network
Kaiser Permanente Northern and Southern California (Colorectal)	African American Hispanic Asian American	Integrated health care delivery system
University of Pennsylvania (Breast)	African American Low-income urban	Integrated health care delivery system
Dartmouth Institute and Brigham and Women's Hospital (Breast)	African American Hispanic Medicaid Low-income urban	Primary care clinical networks
University of Vermont (Breast)	Rural	State-wide registry

# Statistical Coordinating Center (SCC)

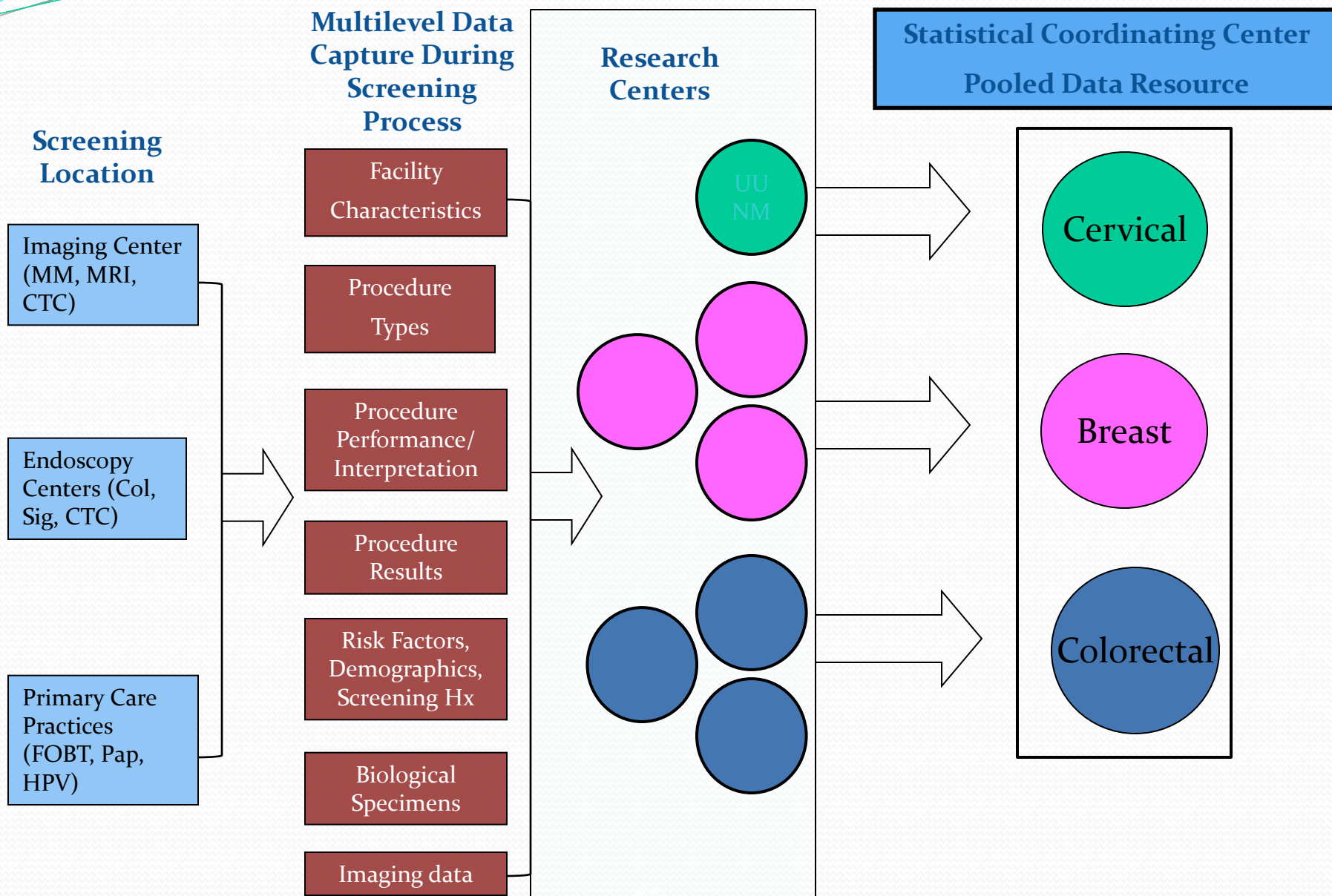
- Located at Fred Hutchinson Cancer Research Center in Seattle, WA.
- Serves as a repository for pooled data (to be gathered by the Research Centers) on the screened populations, the screening processes, and ultimate clinical outcomes.
- Provides necessary expertise and leadership for standardizing pooled data and their analyses.
- Facilitates other trans-PROSPR activities and collaborative research.



# PROSPR: The Cancer Screening Process



# PROSPR: Research Data Infrastructure



# Pooled Data as of February 2014

	PRC System	Defined Population	Population Tested	# of Providers
<b><i>Cervical</i></b>				
U. of New Mexico	State Registry	225,649	225,649	3,063
<b><i>Colorectal</i></b>				
Group Health	Integrated DS	217,962	91,250	6,887
UT Southwestern	Safety-net DS	51,565	24,064	1,093
KP California	Integrated DS	2,581,585	1,586,886	
<b>Colorectal Totals</b>		<b>2,851,112</b>	<b>1,702,200</b>	<b>7,980</b>
<b><i>Breast</i></b>				
U. of Vermont	State Registry	92,864	92,864	144
Dartmouth/Brigham & Women's	Primary Care Network	130,832	46,878	3,694
U. of Pennsylvania	Integrated DS	37,933	37,933	741
<b>Breast Totals</b>		<b>261,629</b>	<b>177,675</b>	<b>4,579</b>
<b>Grand Total</b>		<b>3,338,390</b>	<b>2,105,524</b>	<b>15,622</b>

# Disparities-Focused Analyses from Pooled Data

- Role of patient, provider, practice, and system factors on process breakdown for timely screening
- Variation in the cancer screening process by age and comorbidity in older adults
- Racial/ethnic disparities in screening and follow-up of abnormal results
- Influence of health care coverage, including state Medicaid expansion decisions, on the cancer screening process

# Disparities-Focused Analyses: Research Centers

- University of New Mexico (Cosette Wheeler, PI)
  - New Mexico has sizable Hispanic, Native American, rural, and uninsured populations
  - PROSPR research projects focus on:
    - Self-collection for HPV screening
    - Examining screening process failures
    - Mathematical modeling of various cervical cancer screening strategies
- UT Southwestern (Celette Skinner and Ethan Halm, Co-PIs)
  - 70% of patients in Parkland clinic system (Dallas metro area) lack health insurance; sizable Hispanic and African American populations
  - PROSPR research projects focus on:
    - Evaluating risk-based CRC screening in a large safety-net health care system
    - Identifying provider and health system factors that optimize CRC screening in practices serving vulnerable populations

# Comparative Effectiveness of FIT Outreach, Colonoscopy Outreach, and Usual Care for Boosting Colorectal Cancer Screening Among the Underserved: A Randomized Clinical Trial

Gupta S, Halm E, Rockey D, et al. JAMA Intern Med. 2013;173:1725-1732. doi:10.1001/jamainternmed.2013.9294

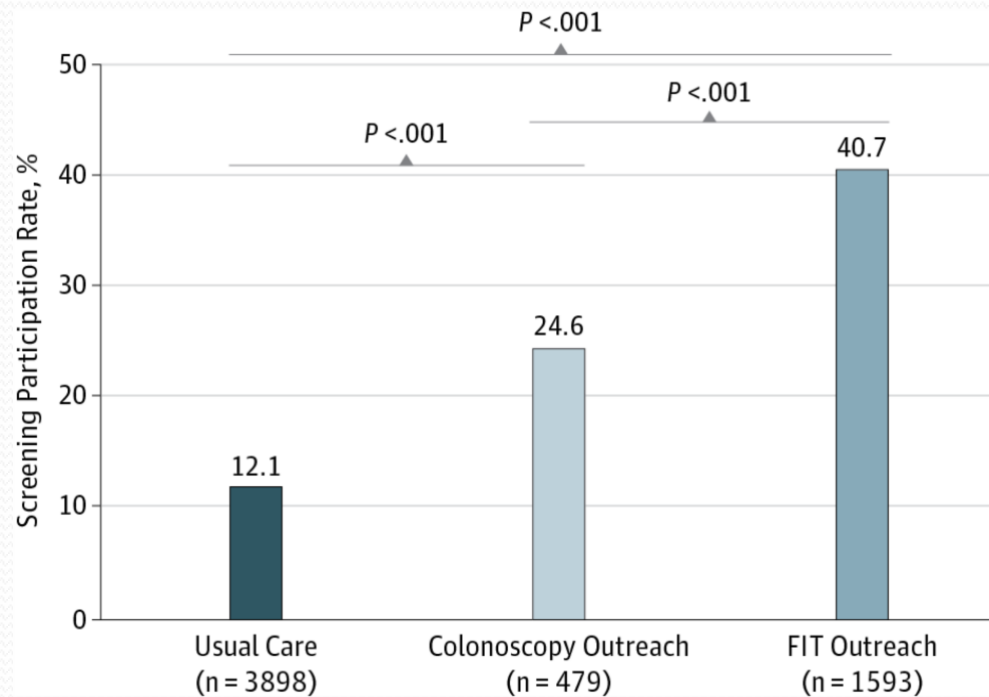


Figure shows CRC Screening Participation For Usual Care, Colonoscopy Outreach, and FIT Outreach  
CRC = colorectal cancer; FIT = fecal immunochemical test.

# Potential Impact of PROSPR

After PROSPR, we should:

- Have information on how to efficiently and effectively screen diverse patient groups:
  - Differing levels of disease risk
  - Differing levels of access to care
  - Differing preferences for screening
- Have a better understanding of how various screening tests perform in community practice
- Know how to implement the screening process in community practice so that benefits are maximized and harms minimized

# Contact Information

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