



**Panel:**  
**Current and Emerging  
Colorectal Cancer Test  
Technologies**

2:25 PM – 3:15 PM

CELEBRATING  
**25**  
YEARS

colorectal  
cancer  
alliance

# NCCRT Annual Meeting

Current and Emerging Colorectal Cancer Test  
Technologies Panel





**Michael Sapienza**

Chief Executive Officer  
Colorectal Cancer Alliance



**Djenaba A. Joseph, MD, MPH**  
**CAPT, U.S. Public Health Service**

Chief, Program Services Branch  
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National Center for Chronic Disease Prevention  
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Centers for Disease Control and Prevention



**Richard Wender, MD**

Professor and Chair Family Medicine and  
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Pennsylvania

# Agenda

- **Provide Context for Today's Discussion**
- **Share a Practical Framework for Evaluating Colorectal Cancer Screening Options**
- **Discuss Integration of Screening Tests**
- **Q&A**

# Context

## Current Situation

- Screening modality innovation has accelerated
- Resulting in a complex and confusing landscape for both healthcare professionals and patients due to absence of robust discussion around the current and emerging tests
- Leading to difficulty in making informed decisions about screening options because of the lack of head-to-head clinical studies
- Highlighting barriers for adoption and equitable access to newly launched tests

## CCA's Actions

- Synthesized comprehensive data on key CRC screening methods that are currently marketed along with those that are soon to be available
- Collaborated with Dr. Djenaba Joseph and Dr. Rich Wender to establish a framework that compares data on current and emerging screening tests
- Convened stakeholders at 2024 DDW to provide an opportunity where key stakeholders can discuss and evaluate various (expanded) data on current and emerging CRC detection tests





# Evaluating CRC Screening Options: A Practical Framework

# Background assumptions

- Having a choice of tests is an asset that will increase screening rates.
- Every screening strategy relies on completion of colonoscopy to be effective.
- Every test has strengths and weaknesses.
- Consideration of cost is complicated.
  - Cost to whom?
  - Cost to individual vs. to the health care system as a whole.



# Factors Influencing Choice of Test

- **Performance**

- Sensitivity
- Specificity

- **Test Characteristics**

- Interval
- Accessibility
- Acceptability – patient, provider
- Adherence – initial test, repeat testing, follow-up colonoscopy

- **Contextual Factors**

- Stakeholder - Organization, provider, patient

# Contextual Factors

- Stakeholder perspective
  - Patient
  - Provider
  - Healthcare systems
  - Organization
- Geography/climate
- Availability of primary care and specialty services
- Population specific (unhoused, migrant)

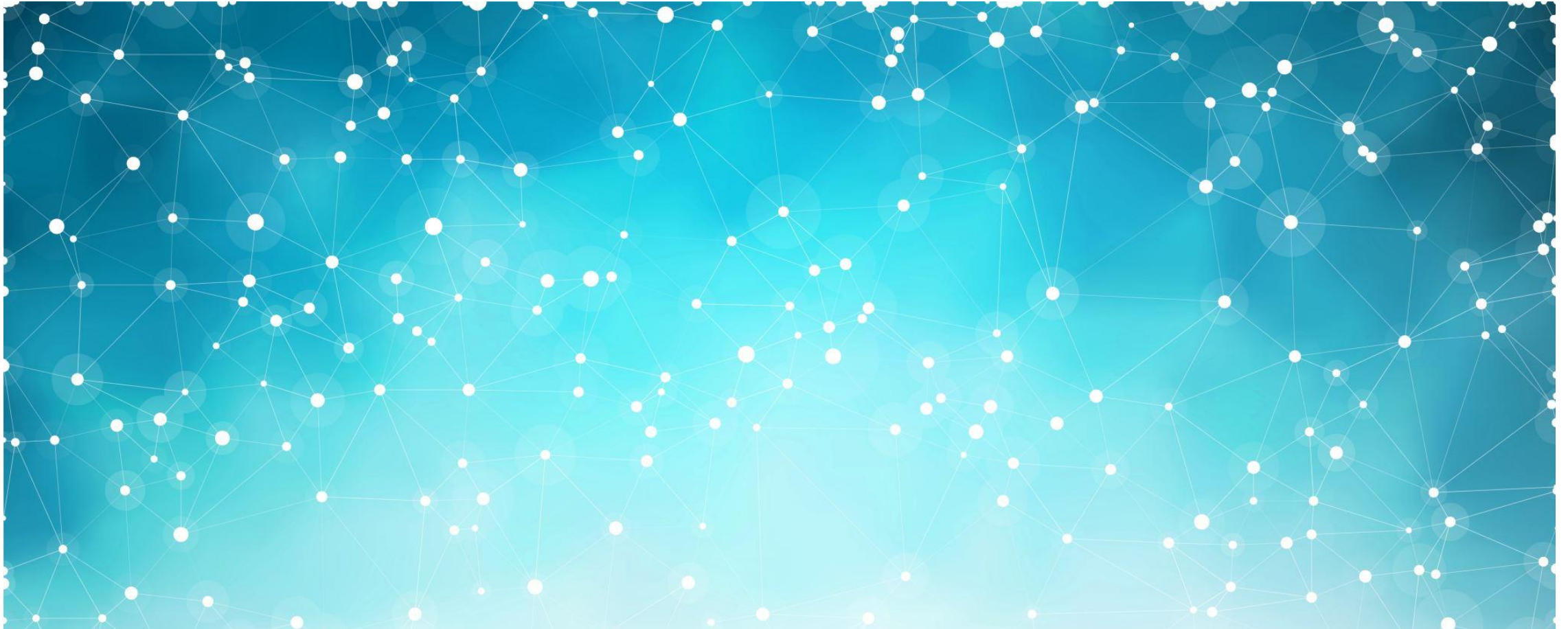
# Acceptability - Patient

- All roads lead to colonoscopy
  - Prep and potential barriers to access.
- Stool tests
  - Sample vs whole stool. Clarity of instructions. Navigation available?
- Blood tests
  - Coverage and cost will be key to acceptability.
  - Transportation and time for testing will be barriers for some people.
- Patient preference

# Acceptability – health care system & provider

- Provider perceptions of following characteristics:
  - Accuracy
  - Effectiveness
  - Availability
  - Acceptability to patients
  - Organizational burden, including test interval
  - Incentive to achieve high practice-wide screening rate

# Overview of Tests



<b>Sensitivity</b>	<b>Colonoscopy</b>	<b>FIT</b>	<b>Cologuard</b>	<b>Cologuard Plus</b>	<b>ColoSense</b>	<b>Shield</b>	<b>Freenome</b>
<b>Test Type</b>	Visual (endoscopy)	Hemoglobin in stool	Mt-sDNA	Mt-sDNA	Mt-sRNA	Cell-free DNA blood test	Blood
<b>CRC overall</b>	95%	79%	92%	94%	94%	83%	79.2%
<b>Stage I</b>	75-80%	75%	90%	87%	92%	65%(55% clinical)	57.1%
<b>Stage II</b>	85-90%	88%	100%	94%	92%	100%	100%
<b>Stage III</b>	85-90%	82%	90%	97%	100%	100%	82.4%
<b>Stage IV</b>	>95%	89%	75%	100%	No IV CRCs	100%	100%
<b>APL/AA</b>	90-95%	24% (APL)	42% (APL)	43% (APL)	43% (APL) 46% (AA)	13.2%	12.5% (AA)
<b>High grade dysplasia</b>	75-93%	-	69%	75%	65% (HGD or ≥10 adenomas)	—	29%
<b>Sessile serrated</b>	70-80%	5%	42%	46%	17% (hyperplastic and SS ≥10 mm combined)	—	—

APL = advanced precancerous lesion = Includes advanced adenomas (high-grade dysplasia or with ≥25% villous histologic features or measuring ≥1 cm in the greatest dimension) and sessile serrated polyps measuring 1 cm or more in diameter  
AA = Advanced Adenoma



<b>Specificity</b>	<b>All</b>	<b>Negative Colonoscopy</b>
<b>Colonoscopy</b>	90%	—
<b>FIT</b>	93%	—
<b>Cologuard</b>	87%	93%
<b>Cologuard Plus</b>	91%	93%
<b>ColoSense</b>	85.5%	87.9%
<b>Shield</b>	89.6% (advanced neoplasia)	—
<b>Freenome</b>	91.5% (non-advanced colorectal neoplasia)	—

References are included in the notes section.



	Interval (years)	Adherence (%)
<b>Colonoscopy</b>	10	55-60%
<b>FIT</b>	1	35% (w/o intervention) 41.5% (w intervention) (real-world and study)
<b>Cologuard</b>	3 (1-3)	51% - 71% (real-world)
<b>Cologuard Plus</b>	3 (anticipated)	–
<b>ColoSense</b>	3 (anticipated)	80% (study)
<b>Shield</b>	1-3 (TBD)	96% (study)
<b>Freenome</b>	3	96% (study)

	Follow-up colonoscopy	Access	Cost
<b>Colonoscopy</b>	n/a	○ Medicare.gov	\$2,750 (avg. cash price)
<b>FIT</b>	58% - 83%	Widely available/covered	\$18 – \$21
<b>Cologuard</b>	71.5% – 84.9% (real-world)	Widely available/covered	\$508 (Medicare)
<b>Cologuard Plus</b>	–	Not currently available	–
<b>ColoSense</b>	80% 73% combined test and follow up (study)	Not currently available	Unknown
<b>Shield</b>	44% (study)	Not currently available	\$895 (Cash)
<b>Freenome</b>	–	Not currently available	–

# Thank You

Please find the presentation and references here:

