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Cost-Effectiveness of Outreach Strategy for Stool-Based CRC Screening

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Karlitz JJ, et al. Cost-Effectiveness of Outreach Strategies for Stool-Based Colorectal Cancer Screening in a Medicaid Population. *Popul Health Manag.* 2021 Dec 24. doi: 10.1089/pop.2021.0185. Epub ahead of print. PMID: 34958279.



Disclosure:

Dr. Durado Brooks is an employee of Exact Sciences.



Study Purpose

- Outreach efforts have been shown to **increase uptake** of CRC screening in underserved populations
- **mt-sDNA incorporates patient navigation** into its screening system to facilitate test completion
- FIT does not routinely include navigation or outreach
- This study modeled a Medicaid population for **mt-DNA + built-in navigation** vs **outreach +/- mailed FIT** to evaluate cost-effectiveness



Study Design

- The CRC-AIM model was used to estimate the incremental cost-effectiveness ratio using quality-adjusted life years (QALY), direct costs, and clinical outcomes in 1 million Medicaid beneficiaries aged 50 – 64 over a lifetime time horizon
- Scenarios included 100% adherence and published real-world adherence rates for stool-based screening and/or follow-up colonoscopies (when indicated)
- All mt-sDNA orders include centralized patient navigation support provided by the Exact Sciences Laboratories customer support center. Therefore, for annual FIT screening, the authors modeled two outreach scenarios:
 - A mailed letter encouraging CRC screening completion along with instructions about how to obtain a FIT test (no actual FIT test provided)
 - Outreach via a mailed letter encouraging CRC screening completion



Methods: Reported Test-Specific Adherence Rates

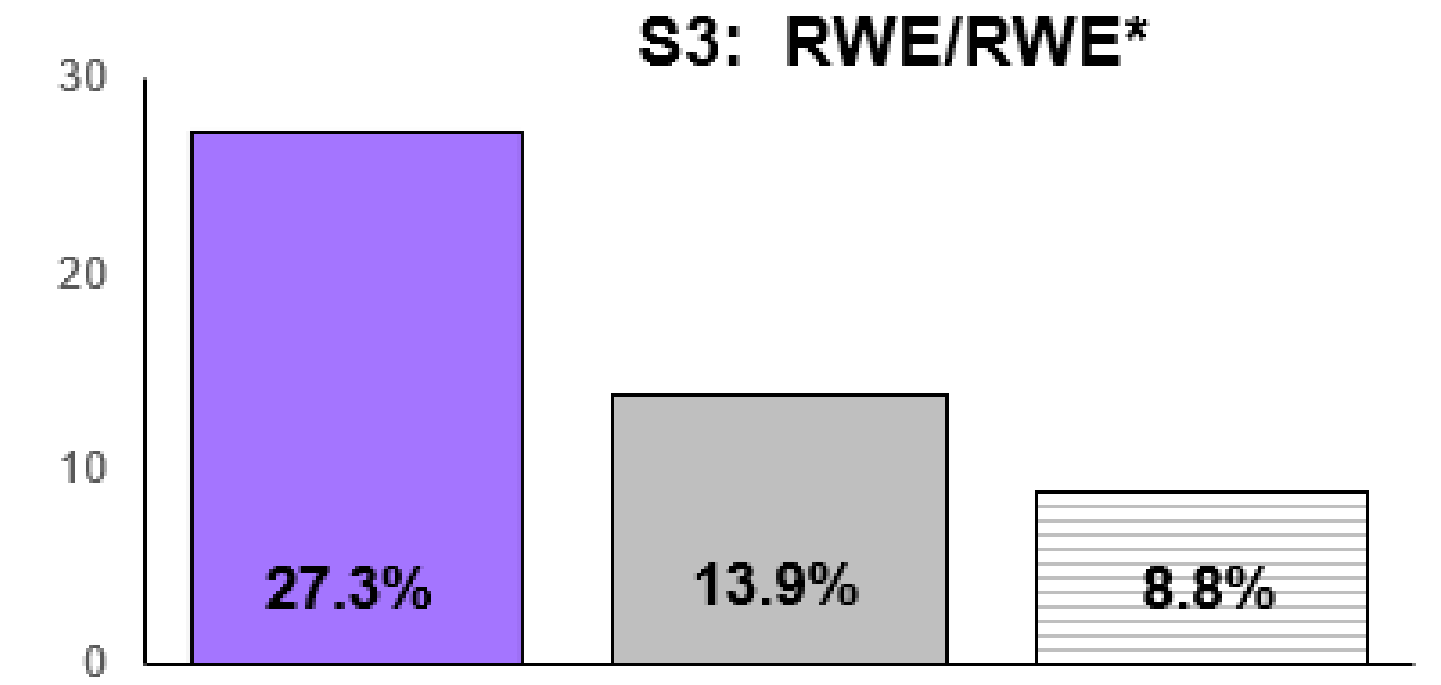
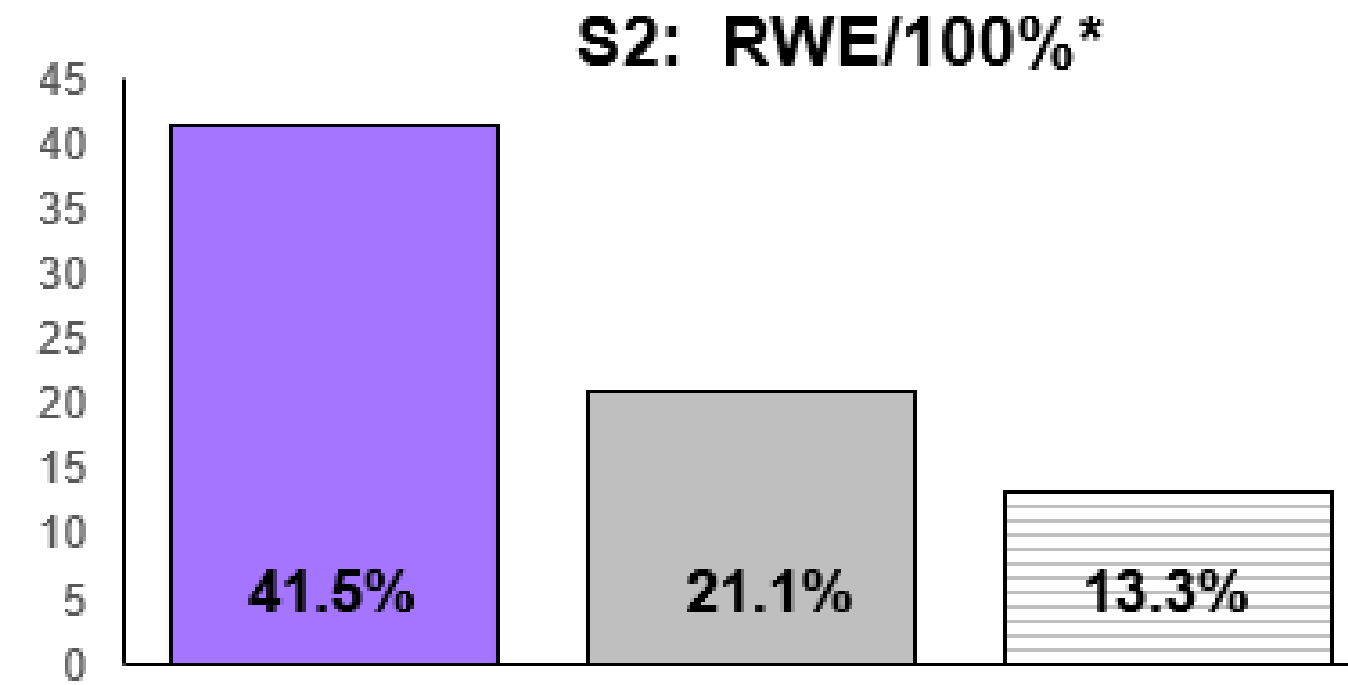
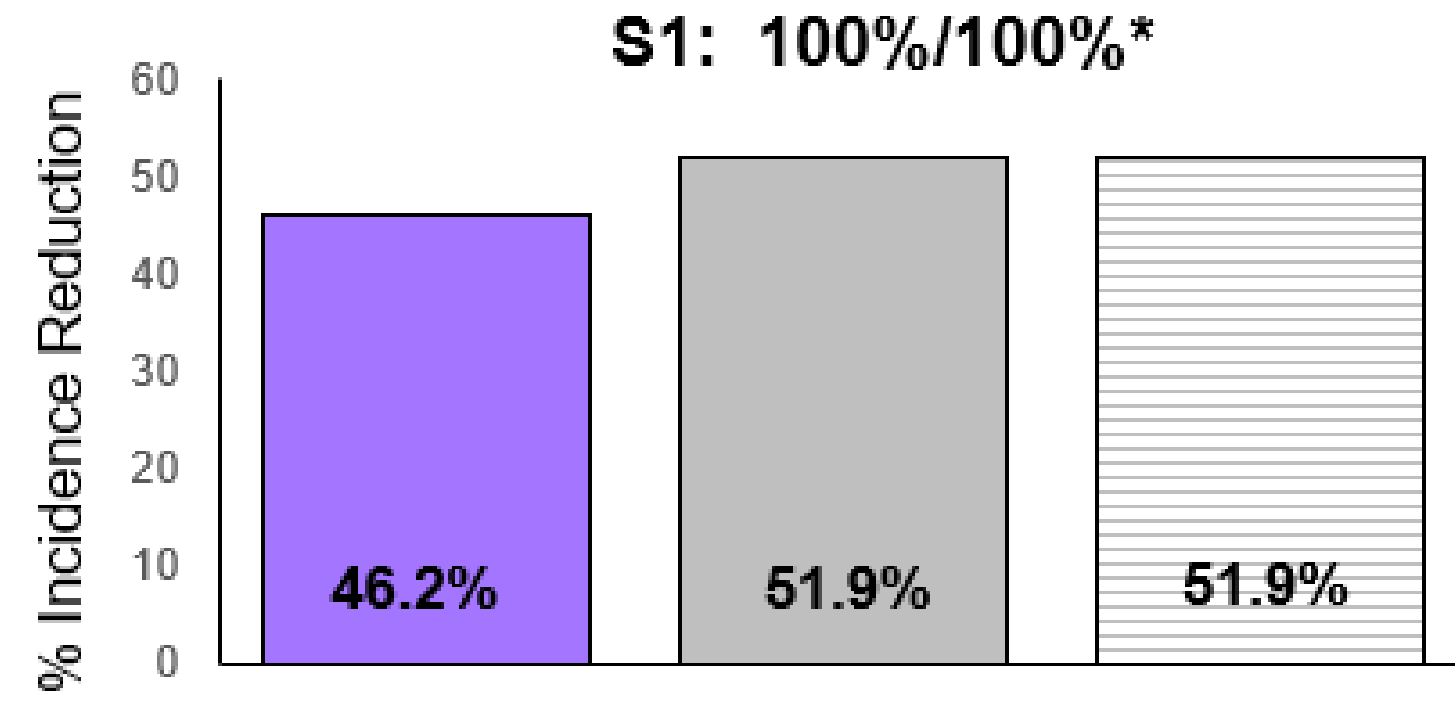
	mt-sDNA	outreach with FIT	outreach without FIT	Follow-up colonoscopy
Scenario 1 100% adherence for initial stool-based screening and follow-up colonoscopy	100%	100%	100%	100%
Scenario 2 Reported real-world adherence for initial stool-based screening and 100% adherence for follow-up colonoscopy	51.3%	21.1%	12.3%	100%
Scenario 3 Reported real-world adherence for both initial stool-based screening and follow-up colonoscopy	51.3%	21.1%	12.3%	66.7%

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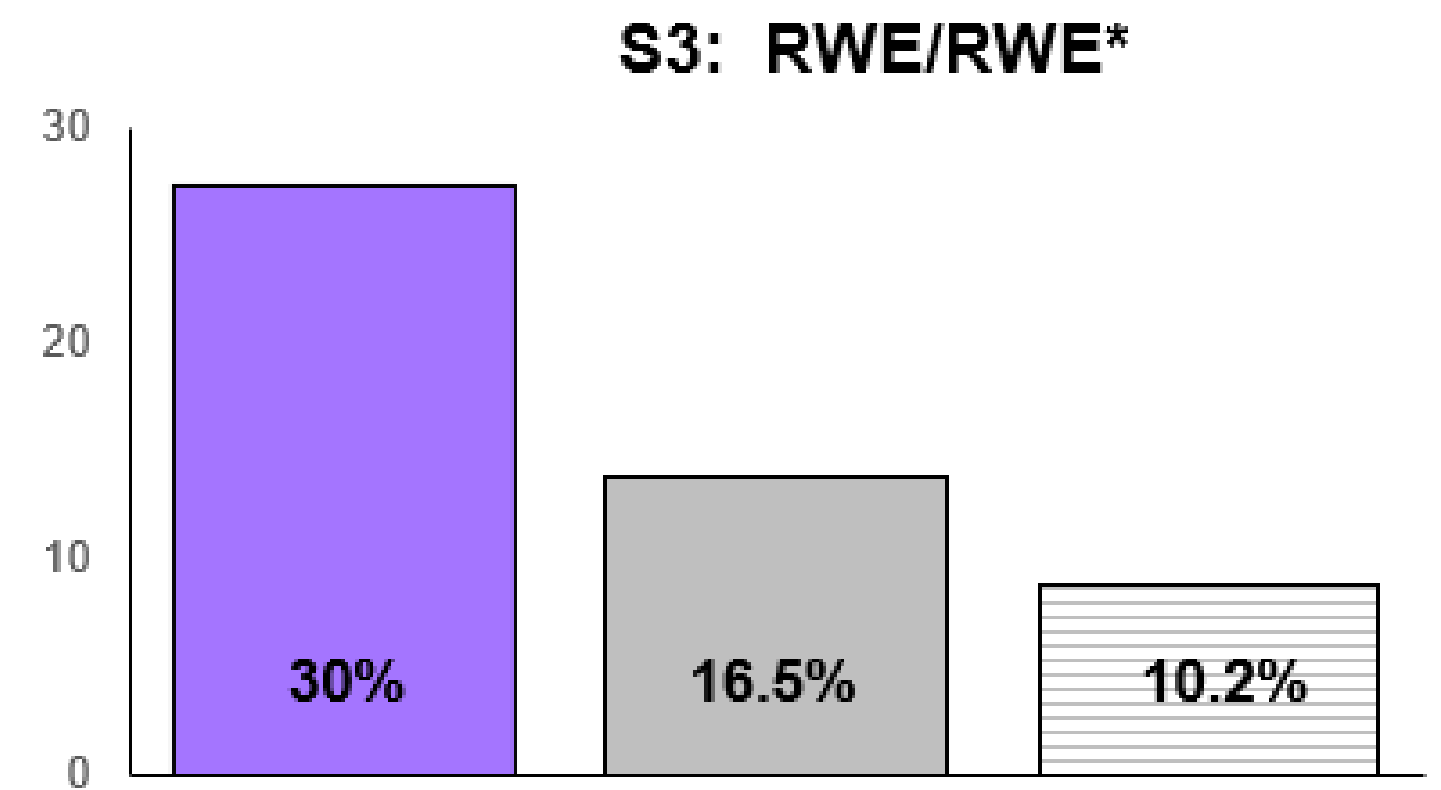
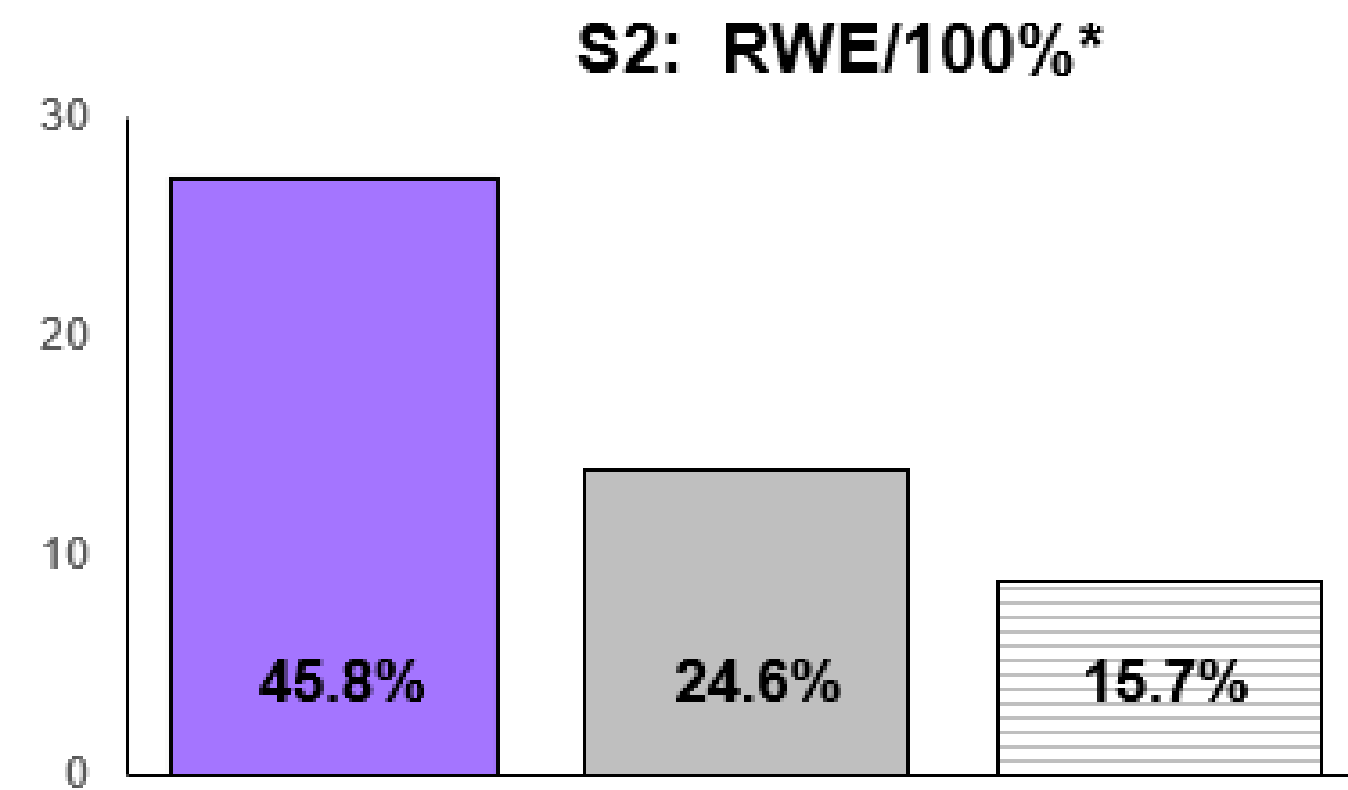
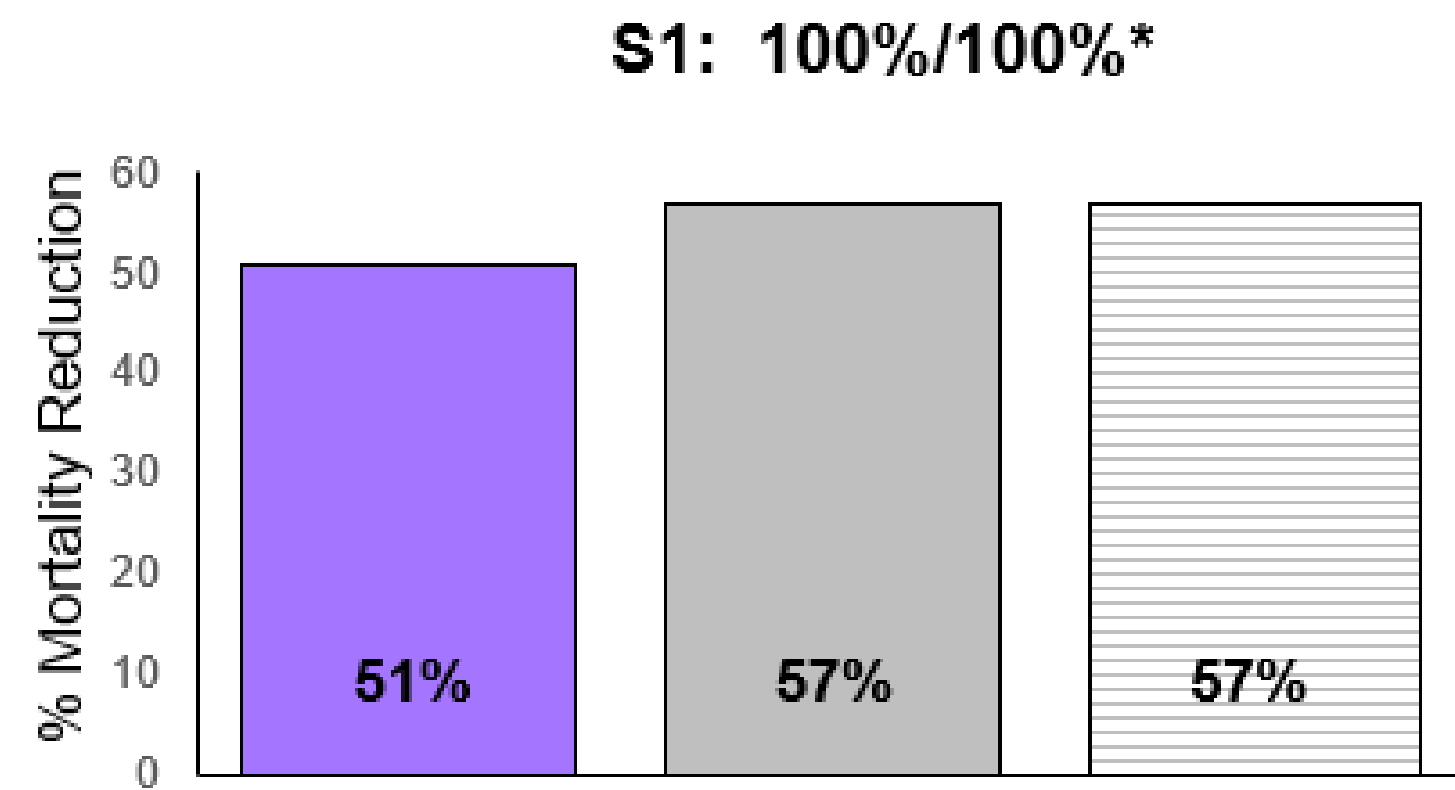


Results

CRC Incidence Reduction



CRC Mortality Reduction



*Adherence to initial screening/adherence to f/u screening

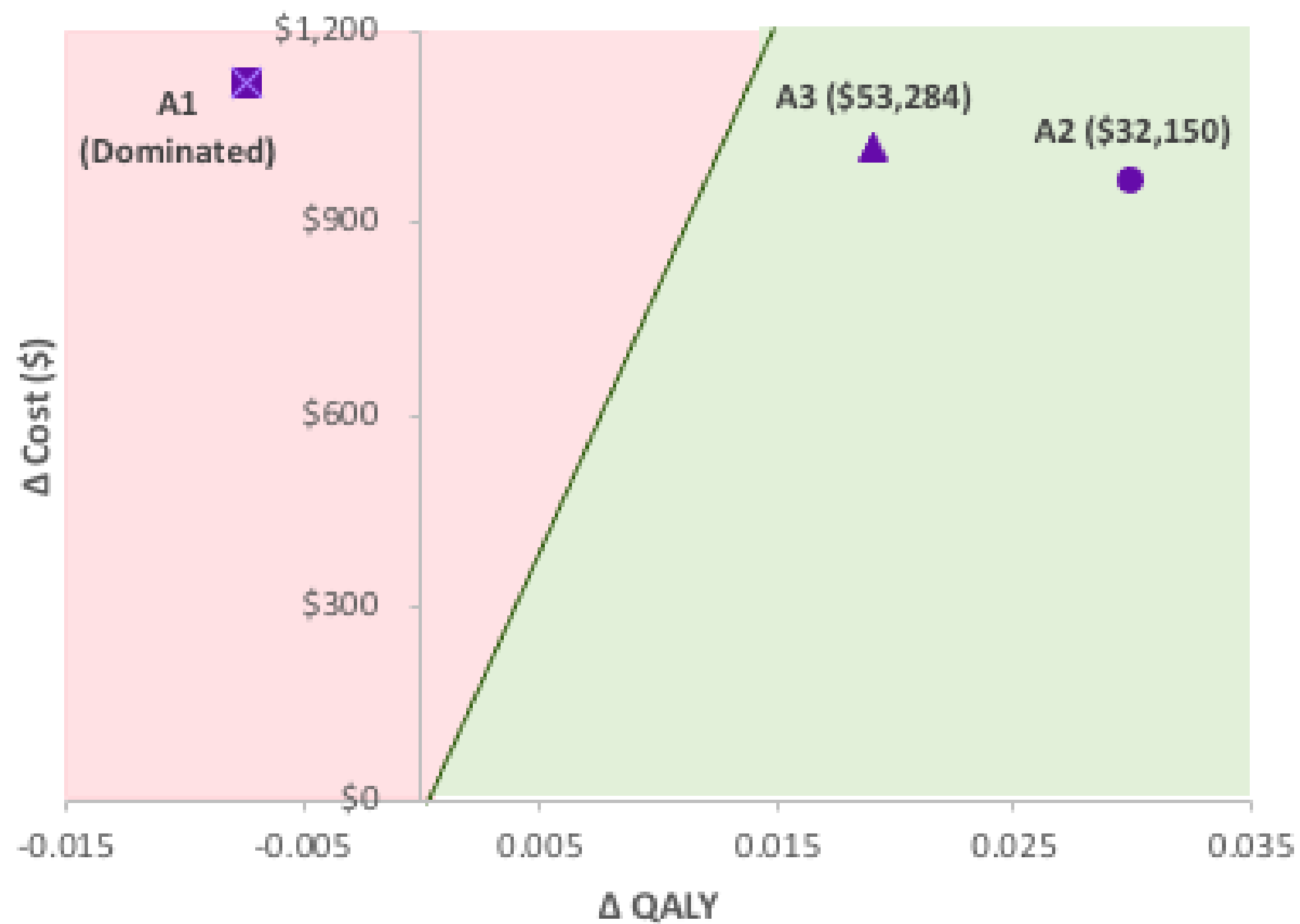
■ mt-sDNA
 ■ Outreach + FIT
 Outreach Only



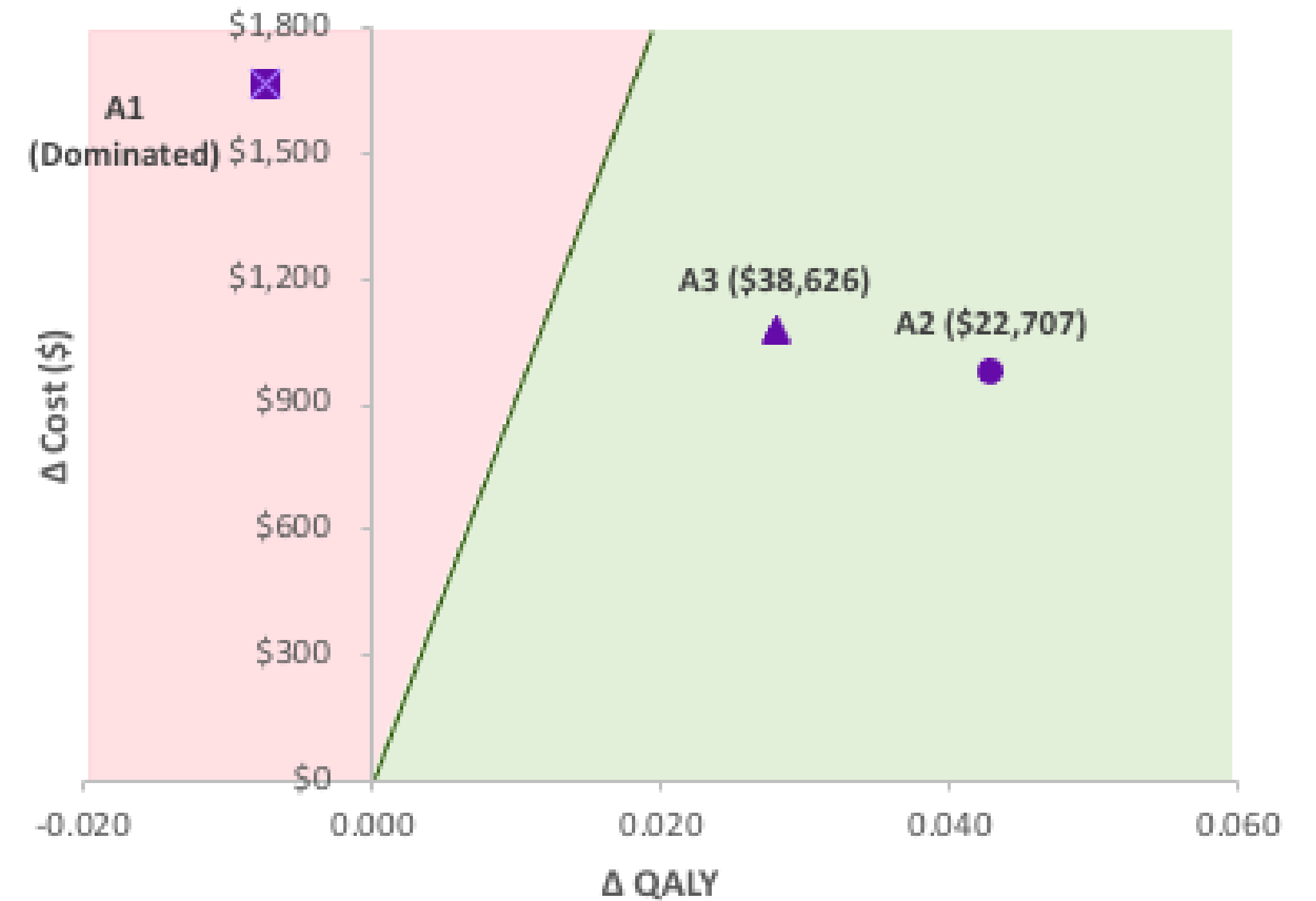
Cost-effectiveness outcomes

Using real-world adherence rates, mt-sDNA is cost-effective versus outreach with and without FIT (\$32,150/QALY and \$22,707/QALY, respectively)

mt-sDNA versus outreach + FIT



mt-sDNA versus outreach alone



- A1: 100%/100%*
- A2: RWE/100%*
- ▲ A3: RWE/RWE*

*Adherence to initial screening/adherence to follow-up screening

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Clinical Practice Application & Implications

- Multiple **outreach strategies have been shown to increase adherence** to CRC screening; however, the absolute increase in screening associated with these interventions is variable
- Both the type of outreach and their impact on real-world adherence rates to screening tests **should be considered when evaluating the cost-effectiveness** of CRC screening strategies in underserved populations

Study Limitations: No data were available for follow-up colonoscopy in patients with positive mt-sDNA, so a conservative assumption of equal adherence to follow-up colonoscopy was used; the cost of outreach for FIT may be underestimated.

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Audience Q&A





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