



**WEO**

The voice of world  
endoscopy

# Adherence to FIT Screening

**Paul Limburg, MD, MPH, AGAF**

Chief Medical Officer, Screening

Exact Sciences Corporation

Presented: May 20, 2022

Study Authors:

Deborah A Fisher, Nicole Princic, Lesley-Ann Miller-Wilson, Kathleen Wilson, Kathryn DeYoung, A Burak Ozbay, Paul Limburg

Fisher DA, et al. *Int J Colorectal Dis.* 2021 Nov 2. doi:10.1007/s00384-021-04055-w



## Disclosure:

Dr. Limburg serves as Chief Medical Officer for Exact Sciences through a contracted services agreement with Mayo Clinic. Dr. Limburg and Mayo Clinic have contractual rights to receive royalties through this agreement.



# Background

Annual fecal immunochemical test (FIT) completion is commonly recommended for average-risk colorectal cancer (CRC) screening in clinical practice.

However, reported longitudinal adherence rates for annual FIT screening vary widely across studies, for example:

- 75.3% to 86.1% in an organized screening program, versus
- 15.8% to 28.8% in a safety-net health system

Despite these disparate, imperfect results, simulation studies often assume 100% adherence to annual FIT over a screen-relevant period of 25 or more years.

To facilitate more informed inputs for modelling analyses and other applications, we examined longitudinal FIT adherence in a large, retrospective study, using claims data from diverse health plans to represent the real-world, population-level experience.



# Study Design

This retrospective study used MarketScan Commercial and Medicare Supplemental Databases to identify average-risk adults, ages 50-75 years, who had a procedure code for FIT testing between January 1, 2014 and June 30, 2019.

**Adherence to FIT was examined over three time periods:**

**T0**  
The date of the first claim for FIT

**T1**  
The first follow-up screening window

**T2**  
The second follow-up screening window

**Study Participants:**

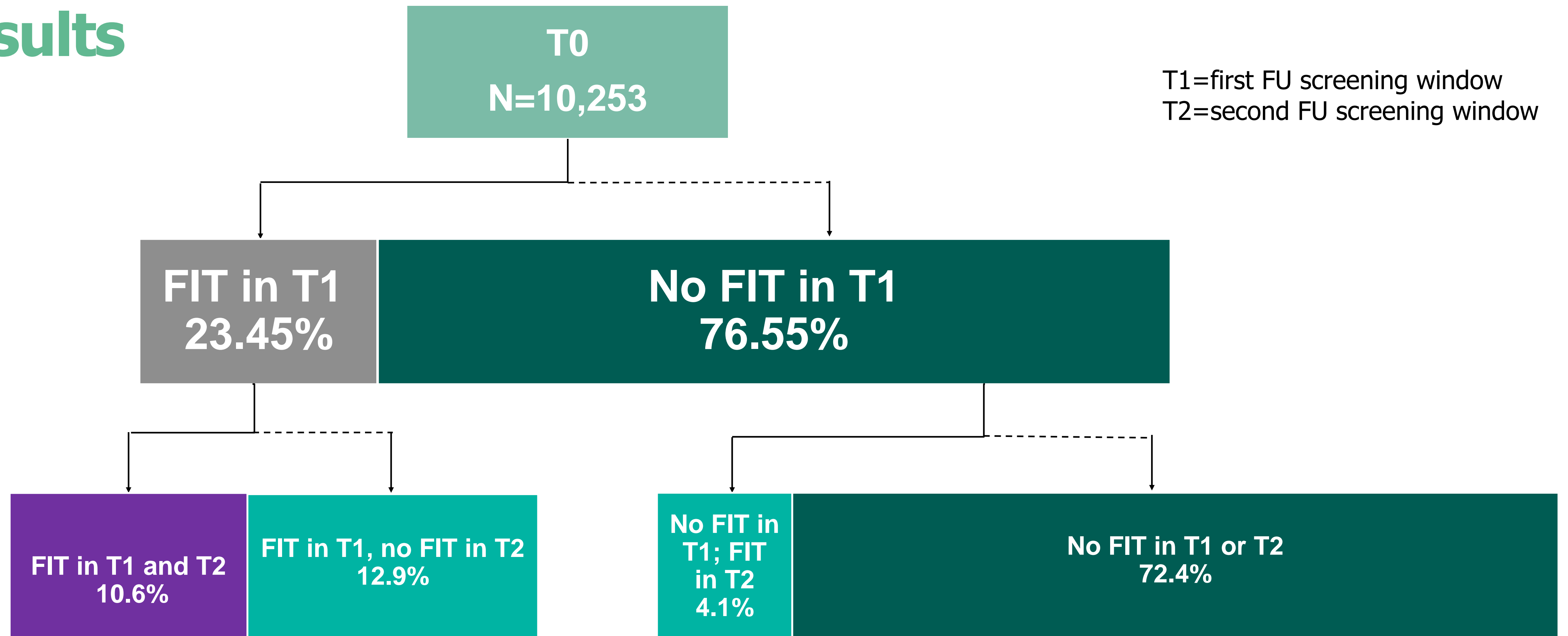
**10,253 Participants**

**67.2% Female**

**Average Age  
56.0 years**

**Insurance  
breakdown**  
Commercial: 94.7%  
Medicare: 2.6%

# Results



Over the full study period: **23.5%** of participants were adherent with FIT in T1  
**10.6%** of participants were consistently adherent with FIT in T1 and T2  
**17.0%** were partially adherent with FIT in T1 or T2  
**72.4%** were consistently nonadherent with no FIT in T1 or T2  
**Median time between 1st and 2nd FIT and 2nd and 3rd FIT was 12.7 months**

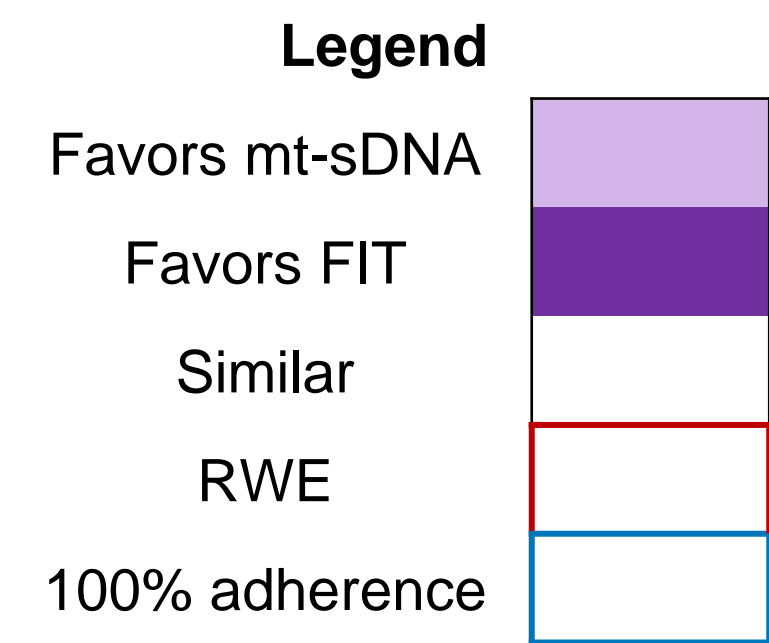
# Conclusions and Implications

- Claims data suggest that both cross-sectional and longitudinal **adherence to annual FIT are suboptimal**, substantially minimizing the achievable benefits from these tests.
- Findings can help inform modeling efforts, which have traditionally assumed 100% adherence rates, providing **important information to clinical decision-makers**.



# Comparison of Life-Years Gained (LYG) from stool-based CRC screening strategies, under real-world adherence assumptions

At reported adherence rates, LYG was highest for mt-sDNA resulting in 17.6% more LYG (309.0) versus FIT (262.7).



Adherence rate	mt-sDNA										Annual FIT LYG/1000 individuals	
	10	20	30	40	50	60	70	80	90	100		
FIT	10	40.9	110.2	145.5	167.3	180.9	191.1	198.8	202.5	206.8	210.7	110.2
	20	-29.3	40.0	75.3	97.1	110.7	120.9	128.6	132.3	136.6	140.5	180.4
	30	-78.8	-9.5	25.8	47.6	61.2	71.4	79.1	82.8	87.1	91.0	229.9
	40	-111.6	-42.3	-7.0	14.8	28.4	38.6	46.3	50.0	54.3	58.2	262.7
	50	-135.4	-66.1	-30.8	-9.0	4.6	14.8	22.5	26.2	30.5	34.4	286.5
	60	-153.2	-83.9	-48.6	-26.8	-13.2	-3.0	4.7	8.4	12.7	16.6	304.3
	70	-166.5	-97.2	-61.9	-40.1	-26.5	-16.3	-8.6	-4.9	-0.6	3.3	317.6
	80	-176.5	-107.2	-71.9	-50.1	-36.5	-26.3	-18.6	-14.9	-10.6	-6.7	327.6
	90	-183.6	-114.3	-79.0	-57.2	-43.6	-33.4	-25.7	-22.0	-17.7	-13.8	334.7
	100	-189.6	-120.3	-85.0	-63.2	-49.6	-39.4	-31.7	-28.0	-23.7	-19.8	340.7
Triennial mt-sDNA LYG/1000 individuals	151.1	220.4	255.7	277.5	291.1	301.3	309.0	312.7	317.0	320.9		

**Resource:**

Piscitello A, Saoud L, Fendrick AM, Borah BJ, Hassmiller Lich K, Matney M, et al. (2020) Estimating the impact of differential adherence on the comparative effectiveness of stool-based colorectal cancer screening using the CRC-AIM microsimulation model. PLoS ONE 15(12): e0244431. <https://doi.org/10.1371/journal.pone.0244431>.

**Abbreviations:**

FIT, fecal immunochemical test; LYG, life-years gained; mt-sDNA, multi-target stool DNA; RWE, real-world evidence.



# Audience Q&A







# WEO

World Endoscopy  
Organization

