



# Impact of COVID Pandemic on FIT-Based CRC Screening Programs in 3 Countries: What Does Modeling Tell Us?

Lucie de Jonge, Joachim Worthington, Francine van Wifferen, Nicolas Iragorri, Elleke Peterse, Jie-Bin Lew, Marjolein Greuter, Heather Smith, Eleonora Feletto, Jean Yong, Karen Canfell, Veerle Coupé,  
**Iris Lansdorp-Vogelaar**



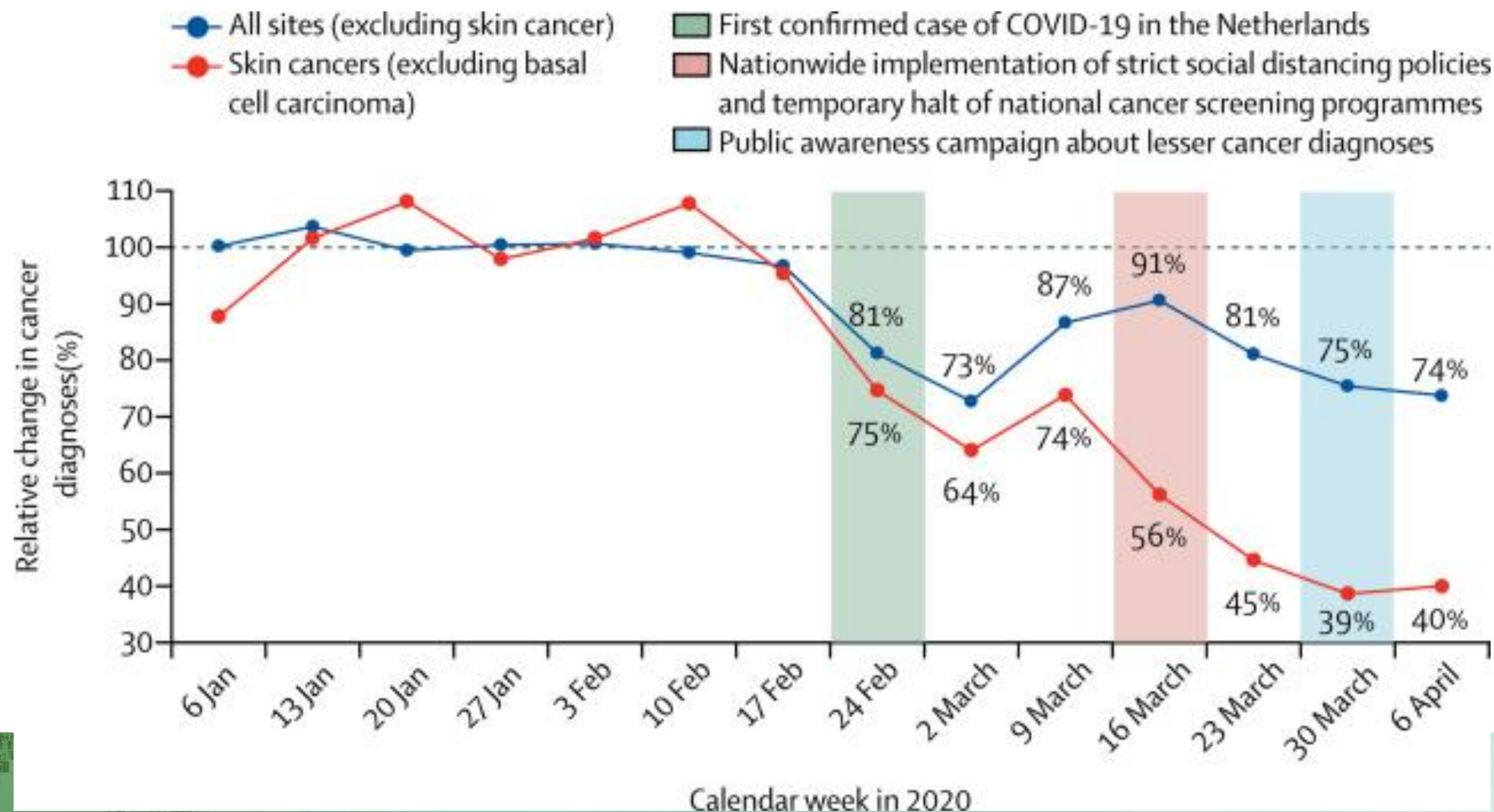
# Disclosures

No conflicts to disclose





# Impact of COVID on cancer



# Informal survey among programs across the globe

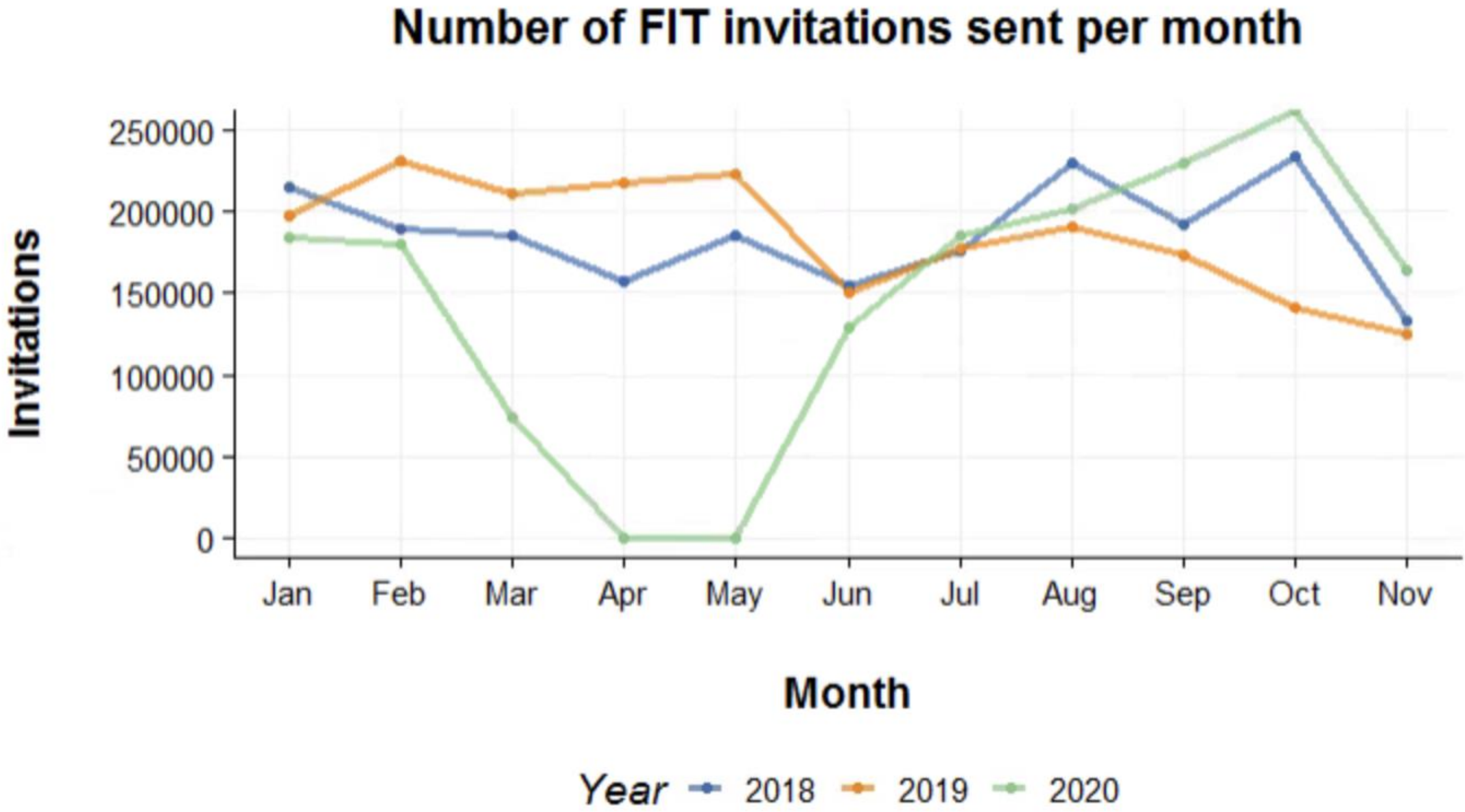
- 23 out of 28 surveyed programs suspended their screening
- Many programs also suffered from lower capacity and/or participation





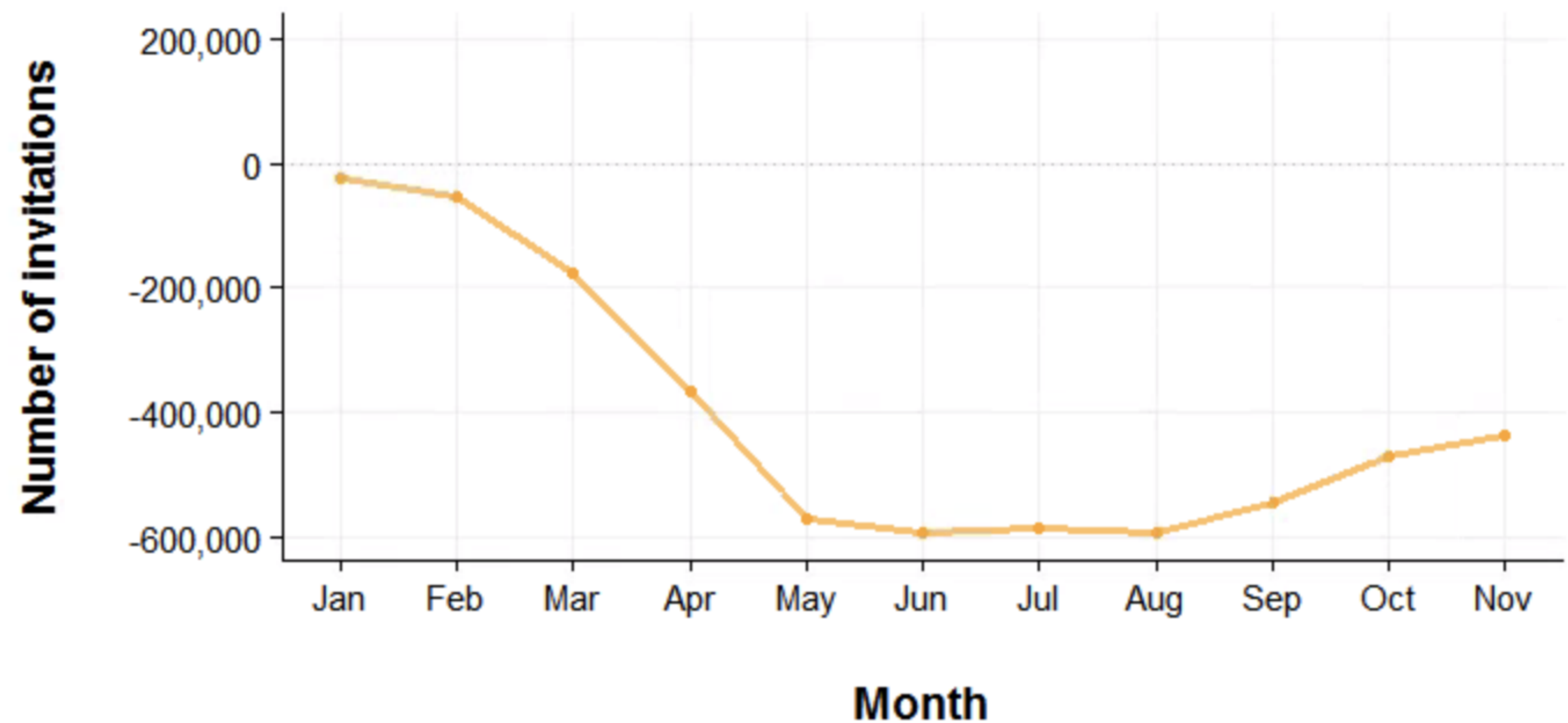
# FIT invitations

Kortlever et al.  
Prev. Med. 2021



# Backlog in invitations

Backlog of invitations  
compared to average '18 and '19





# Mitigating the impact of disruptions

- COVID and Cancer Global Modelling consortium:
  - to provide informed advice to governments, as they rise to this health systems challenge



# Colorectal Cancer screening – project 1

- Aim: to evaluate the impact disruptions to CRC screening during the COVID-19 pandemic, including:
  - a) Complete suspension of screening for three, six, or twelve months;
  - b) Possible reductions to screening participation after the disruption;
  - c) Possible catch-up screening for people who missed screening due to COVID-19

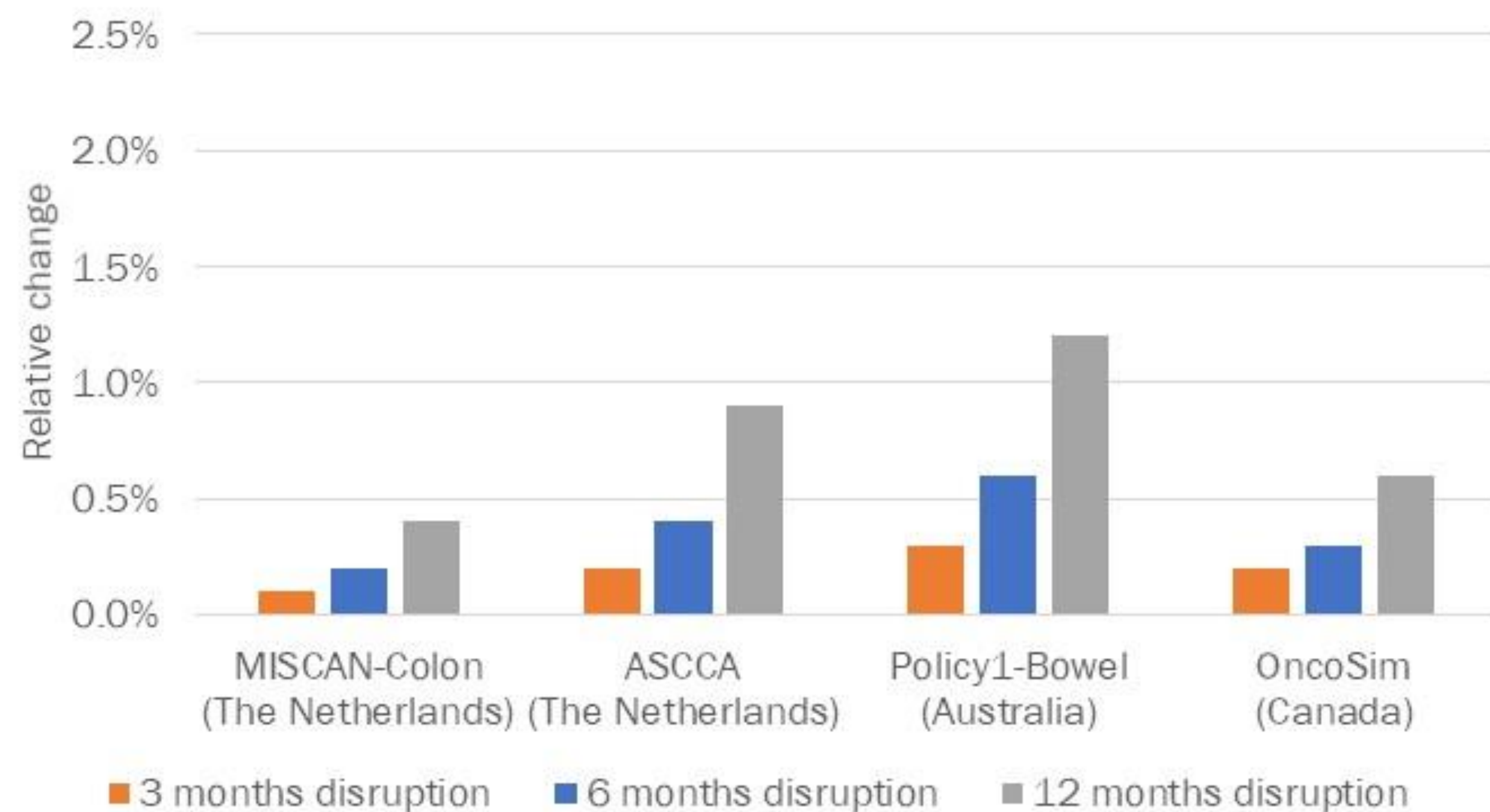
Using 4 microsimulation models (ASCCA, MISCAN-Colon, OncoSim, Policy1-Bowel) to evaluate the programs in the Netherlands, Canada and Australia.



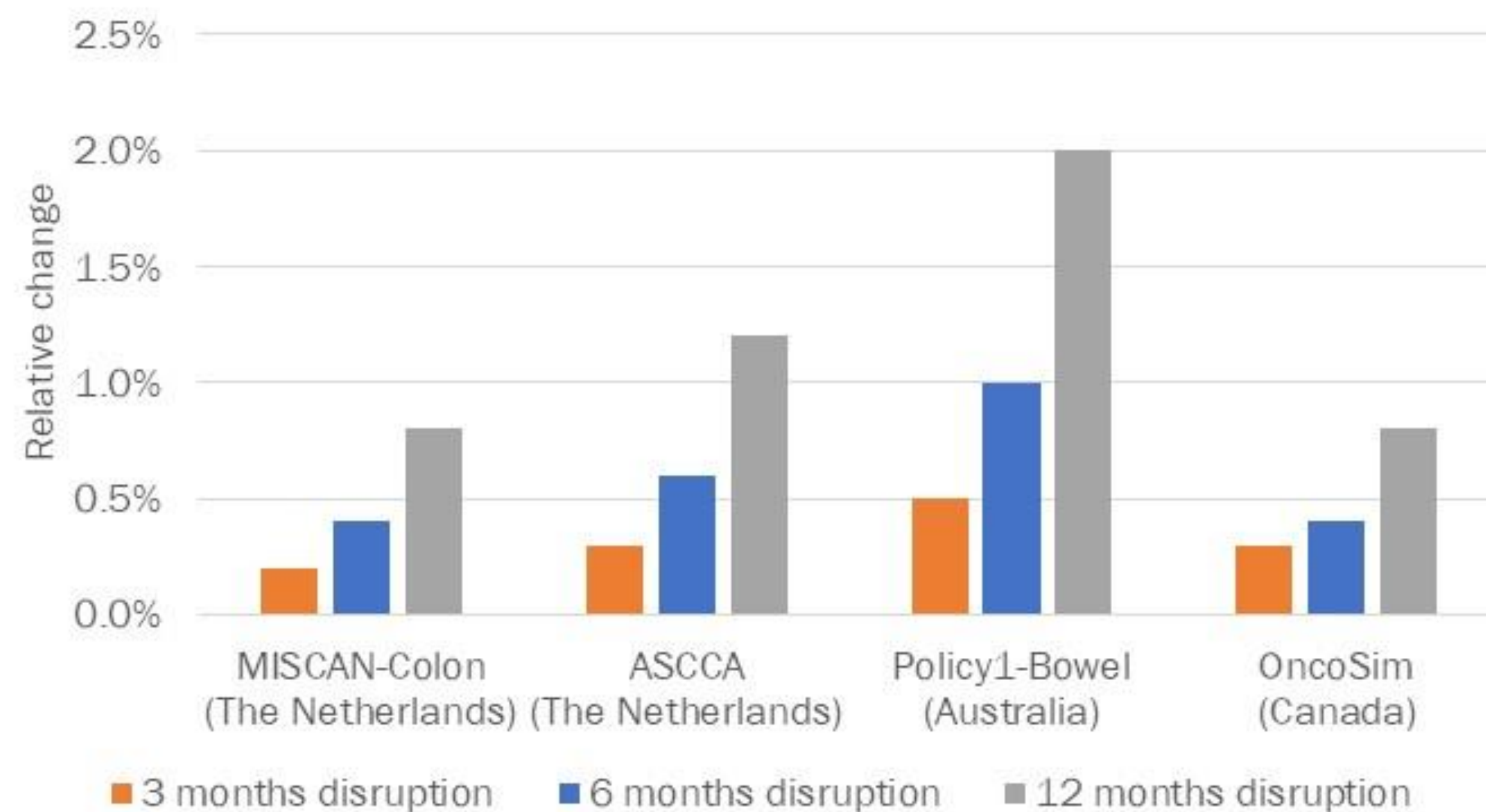


# Long-term impact various disruption lengths

Additional CRC cases, 2020-2050



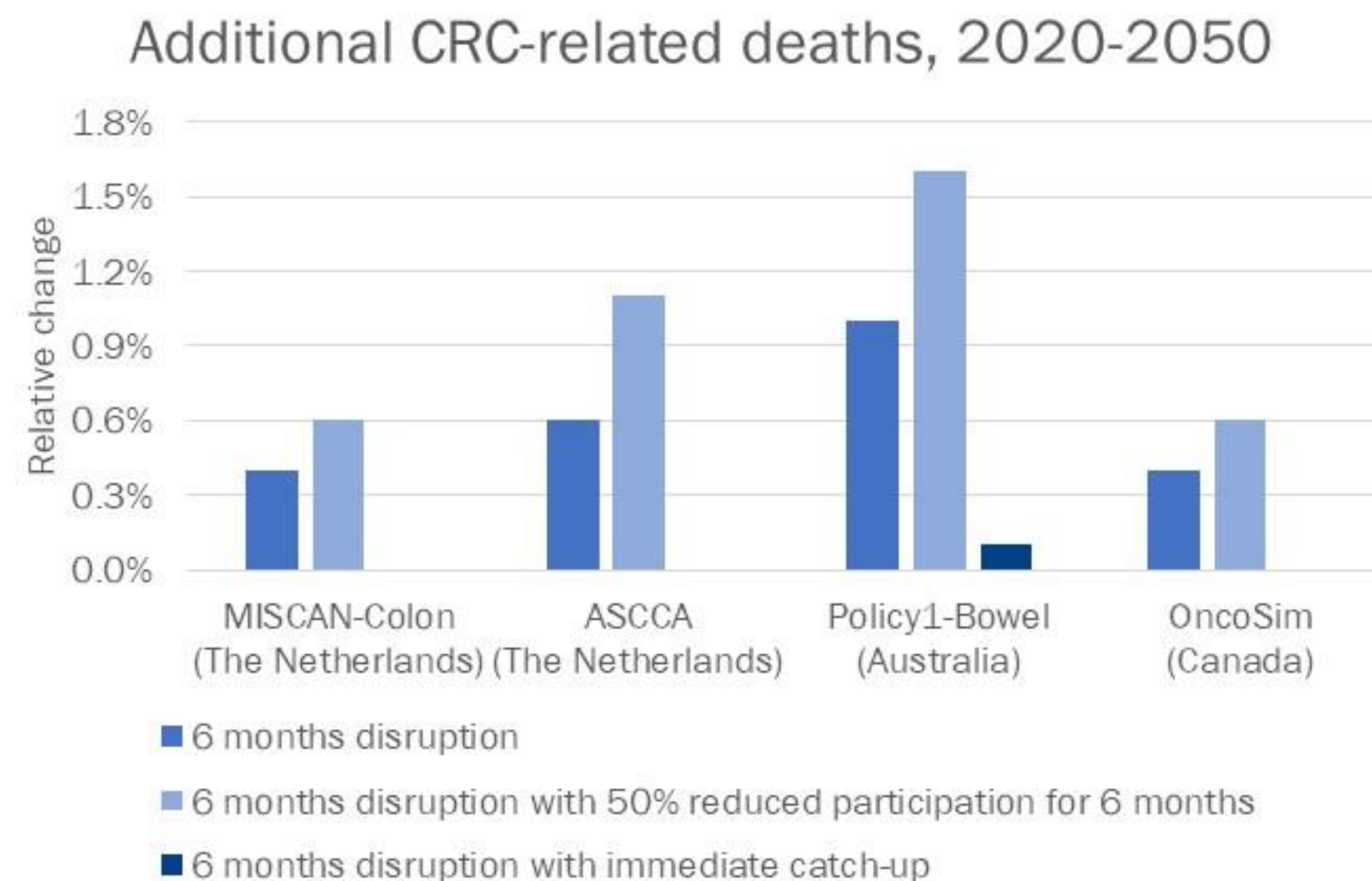
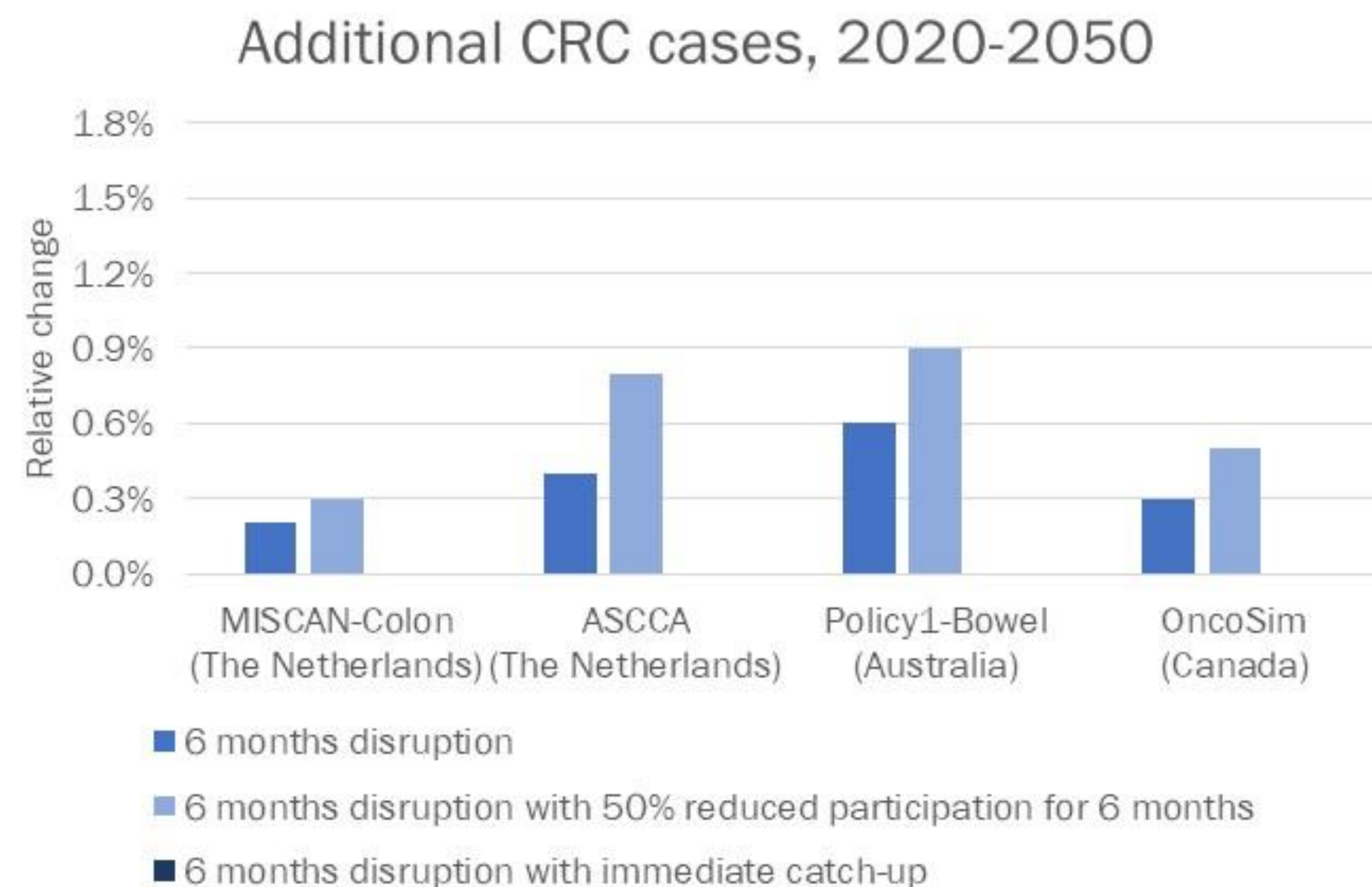
Additional CRC-related deaths, 2020-2050



De Jonge et al. Lancet Gastro 2021



# Minimizing long-term impact





# CRC screening Project 2

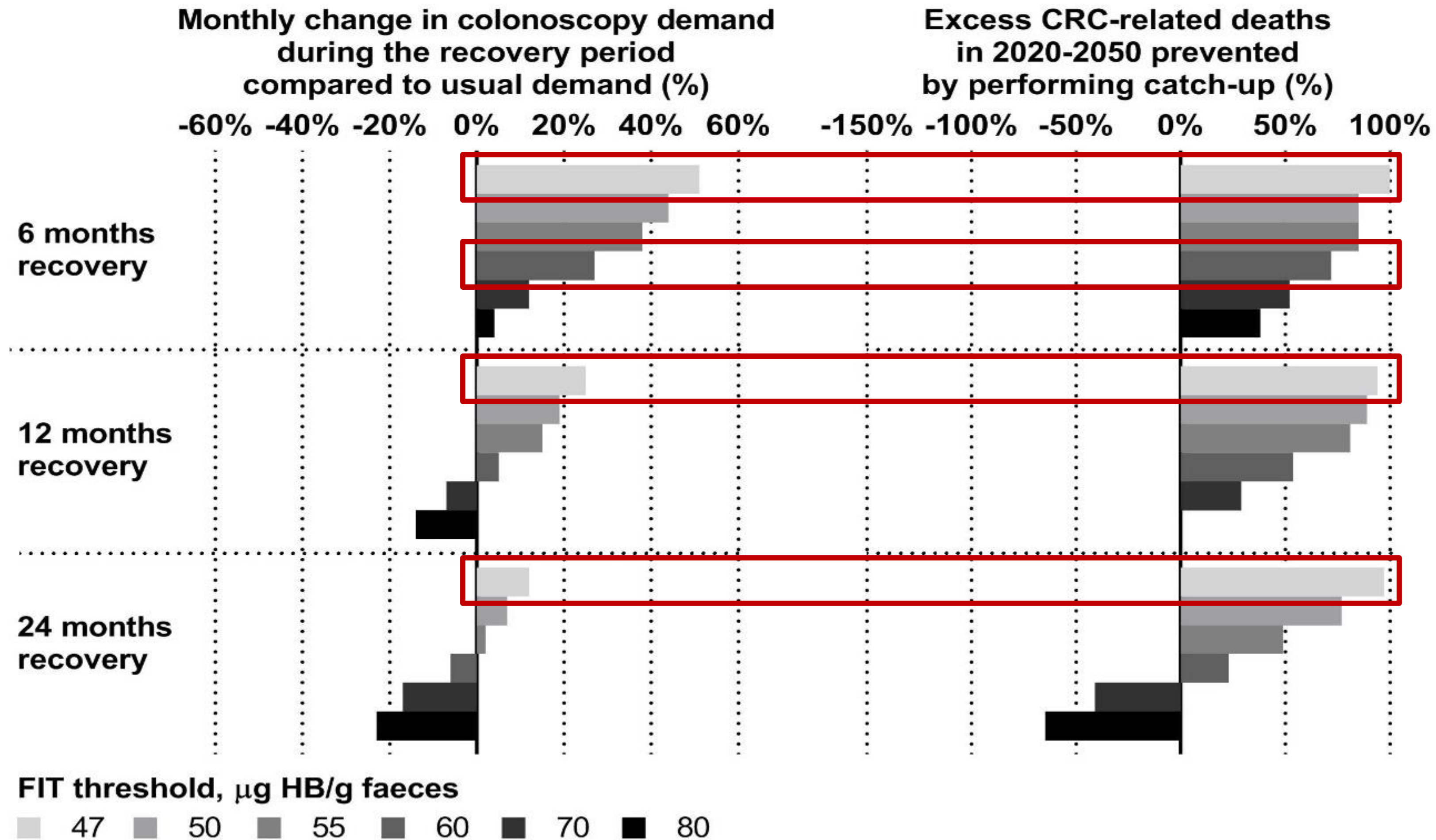
- Aim: to evaluate strategies that clear the CRC screening backlog due to the COVID-19 pandemic using limited colonoscopy resources, including:
  1. Performing catch-up screening at regular FIT threshold in 6, 12 & 24 months
  2. Performing catch-up screening at increased FIT threshold in 6, 12 & 24 months
    - Netherlands: 47, 50, 55, 60, 70, 80  $\mu\text{g}$  HB/g faeces
    - Canada & Australia: 20, 25, 30, 40, 50, 60  $\mu\text{g}$  HB/g faeces
- Using 4 microsimulation models (ASCCA, MISCAN-Colon, OncoSim, Policy1-Bowel) to evaluate the programs in the Netherlands, Canada and Australia





# Project 2 – MISCAN results

## B. MISCAN-Colon - the Netherlands



Van Wifferen  
et al. PLOS  
One 2022

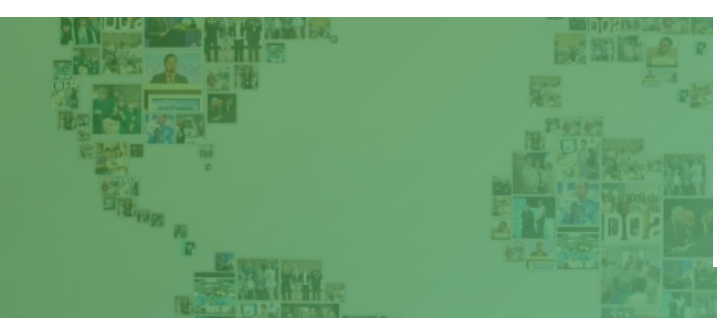
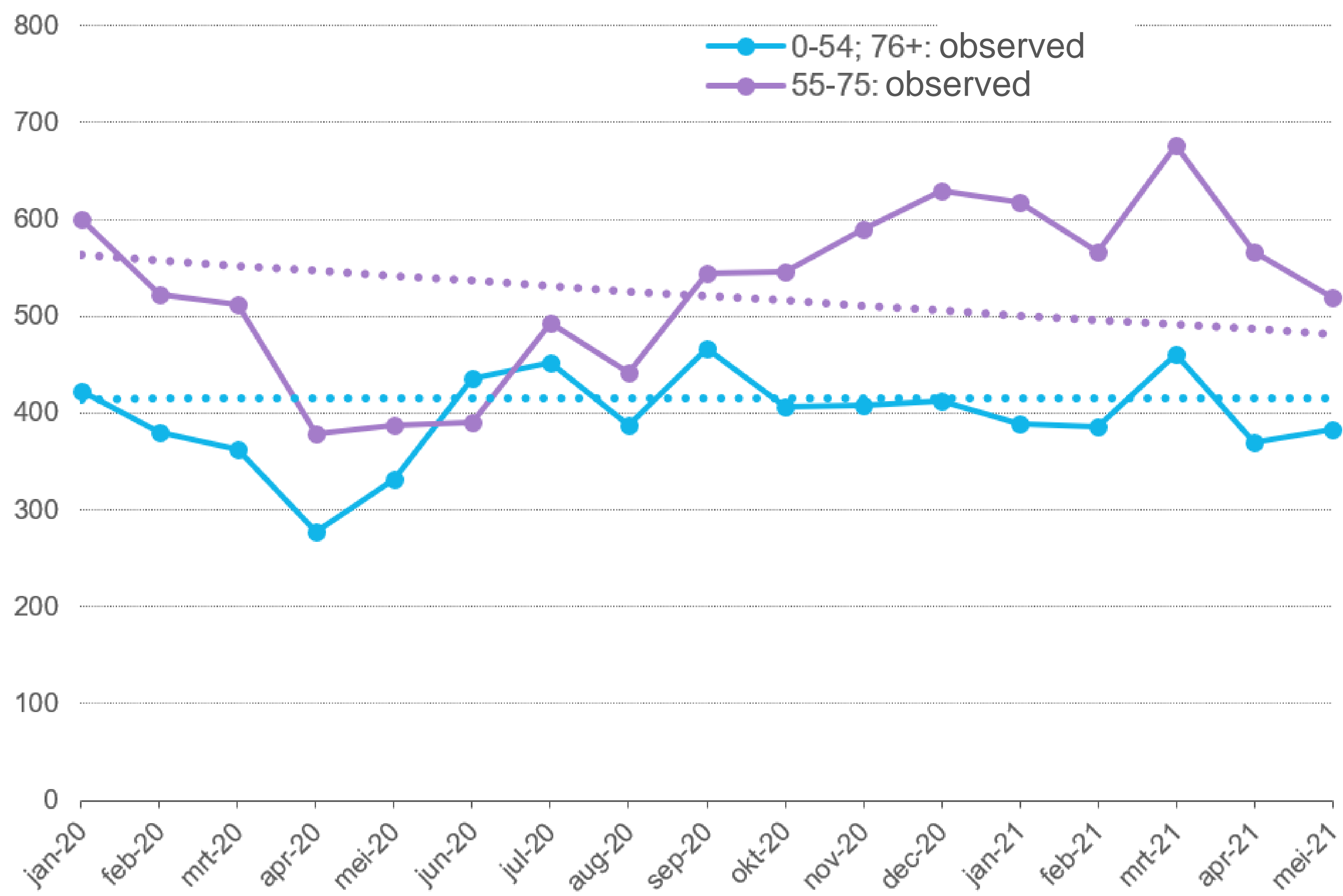


# Take home messages

- To mitigate the impact of disruption of screening programmes, it is important to:
  - Keep disruption as short as possible
  - Catch-up screening
  - Facilitate and promote participation to screening after disruption → especially important in light of disparities
- In case of insufficient capacity to immediately catch-up, catch-up over an extended period of time is best alternative



# CRC incidence in the Netherlands





# Acknowledgements

- Cancer Council New South Wales: Karen Canfell, Eleanora Feletto, Jie Bin Lew, Joachim Worthington
- Canadian Partnership Against Cancer: Jean Yong, Andy Coldman, Nicolas Irragori
- University of Ottawa: Heather Smit
- Amsterdam UMC: Veerle Coupe, Marjolein Greuter, Francine van Wifferen
- Erasmus MC: Lucie de Jonge

# Thank you

i.vogelaar@erasmusmc.nl





# WEO

World Endoscopy  
Organization

