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
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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

Backlog in invitations

Backlog of invitations compared to average '18 and '19

Number of Invitations

Month

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov
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

De Jonge et al. Lancet Gastro 2021
Minimizing long-term impact

Additional CRC cases, 2020-2050

Additional CRC-related deaths, 2020-2050
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 µg HB/g faeces
     - Canada & Australia: 20, 25, 30, 40, 50, 60 µg 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

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
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i.vogelaar@erasmusmc.nl