

## COVID-19 and Cancer Taskforce

# COVID-19 and Cancer Global Modelling Consortium (CCGMC)

## Whole Consortium Call 3<sup>rd</sup>/4<sup>th</sup> November 2020

The call will start at 14:00 US ET / 19:00 GMT / 20:00 CET / 22:00 EAT / 06:00 AET

While waiting, please introduce yourself via the comments - including your name, institution, country, and professional background.

Secretariat email: [covidandcancer@nswcc.org.au](mailto:covidandcancer@nswcc.org.au)



# Aims of today's call

1. Updates from each working group on activities and emerging findings
2. Flag new opportunities to participate in projects
3. Initiate development of dissemination plan for our results

Please use the chat function to log questions and comments through the session for later consideration

# Agenda

## 1. Welcome and Introductions

Dr Ophira Ginsburg (NYU) & Prof Karen Canfell (Coordinating Centre, CCNSW)

## 2. Update on Covid-19 & Cancer Taskforce

Prof Richard Sullivan (KCL)

## 3. Overview of current consortium status

Prof Karen Canfell (Coordinating Centre, CCNSW)

## 4. Update on Working Group activities

- a. Working Group 1 – Treatment
- b. Working Group 2 – Screening
- c. Working Group 3 – Prevention

## 1. Call for EOI: CCGMC Knowledge Dissemination Planning Group

## 6. Plans for next call and open discussion

# 2. Update on Covid-19 & Cancer Taskforce.

Prof Richard Sullivan



# 3. Overview of current Consortium status.



International Agency for Research on Cancer



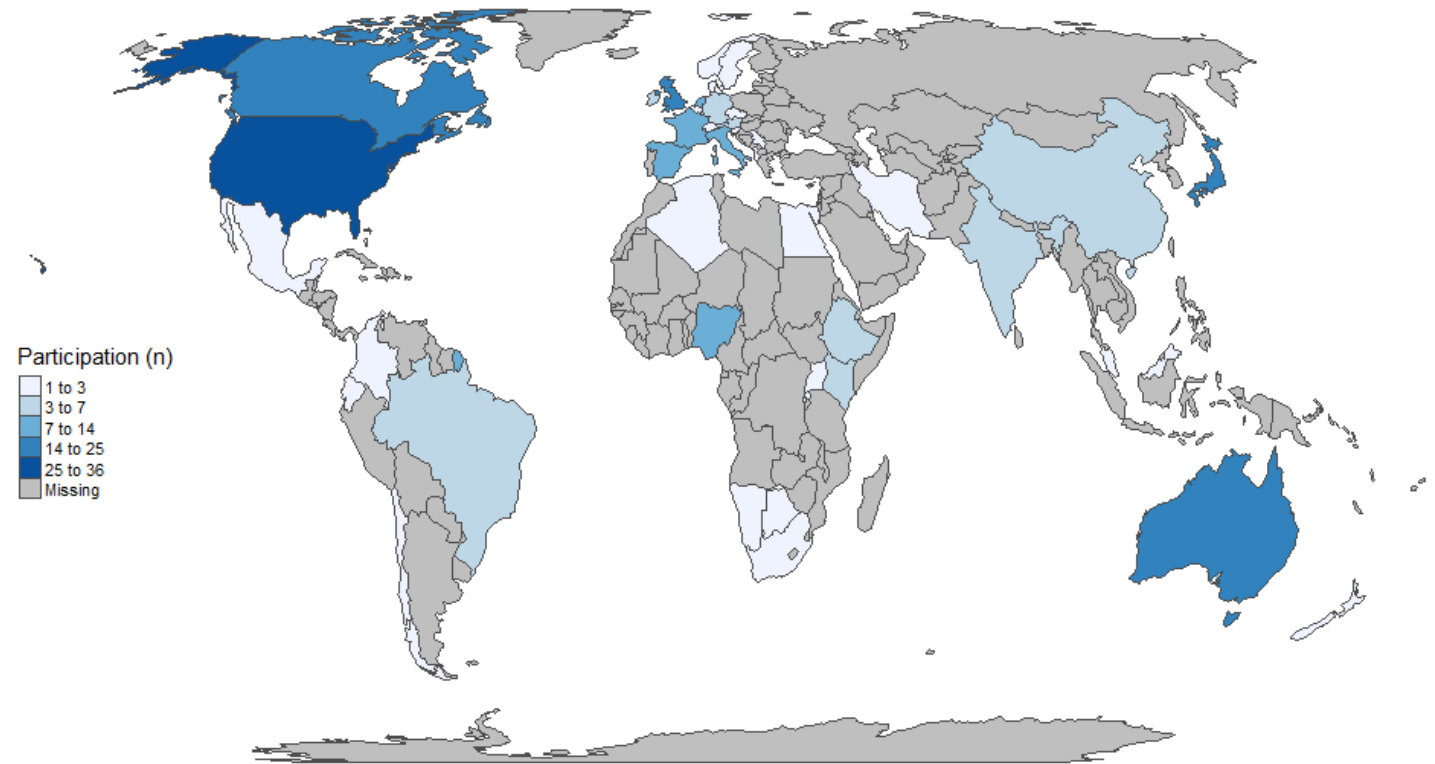
CANADIAN PARTNERSHIP  
AGAINST CANCER



PARTENARIAT CANADIEN  
CONTRE LE CANCER



**260+ registrants**  
**38 countries**  
**165 institutions**



# CCGMC Working Groups



**WG 1**

**Direct impact of  
infection on cancer  
outcomes &  
treatment services**



**WG 2**

**Impact on cancer  
screening & recovery  
strategies**



**WG3**

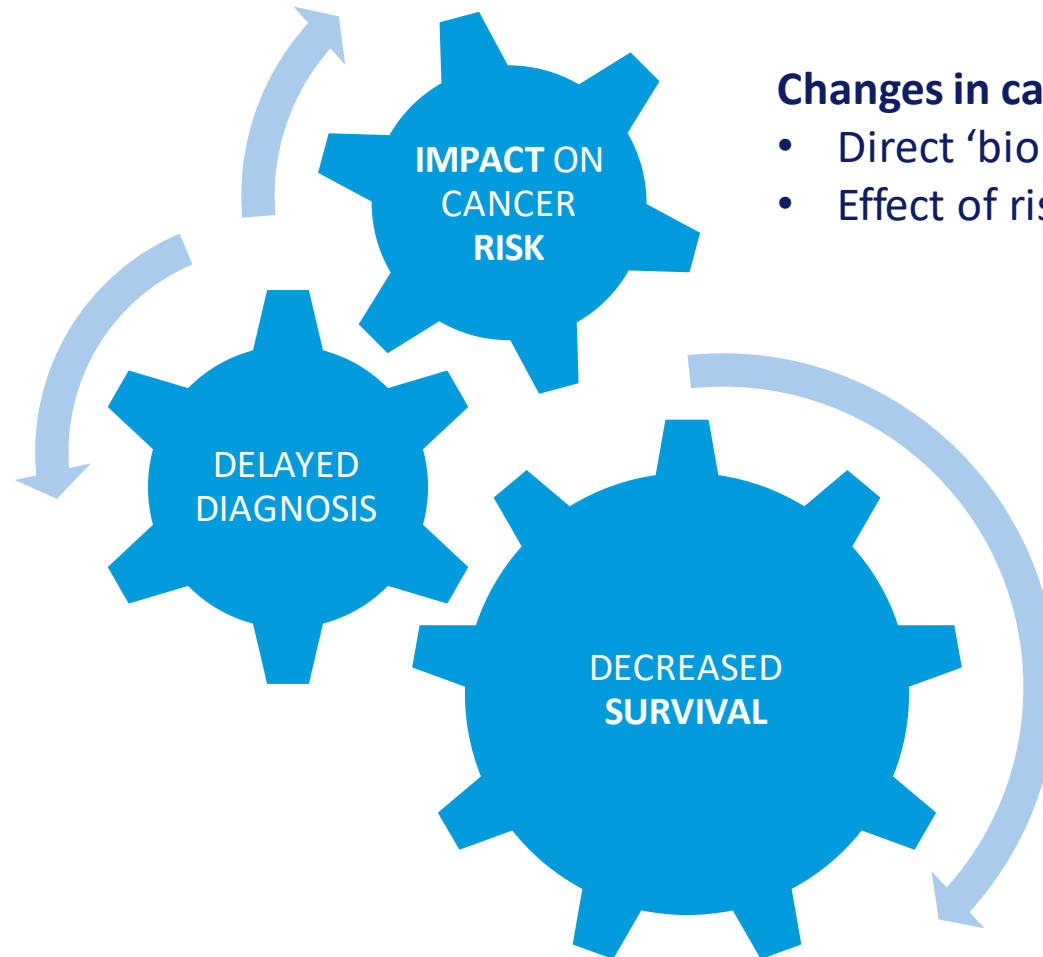
**Impact on cancer risk  
& recovery  
prevention strategies**

*Shared learnings and cross-collaborations*

# Impacts of COVID-19 pandemic on cancer outcomes.

## Changes in cancer detection and staging (WG1&2):

- Disruptions to screening programs (WG2)
- Delays in symptomatic presentation (WG1)



## Changes in cancer risk (WG3):

- Direct 'biological' impact on risk
- Effect of risky behaviours during the crisis

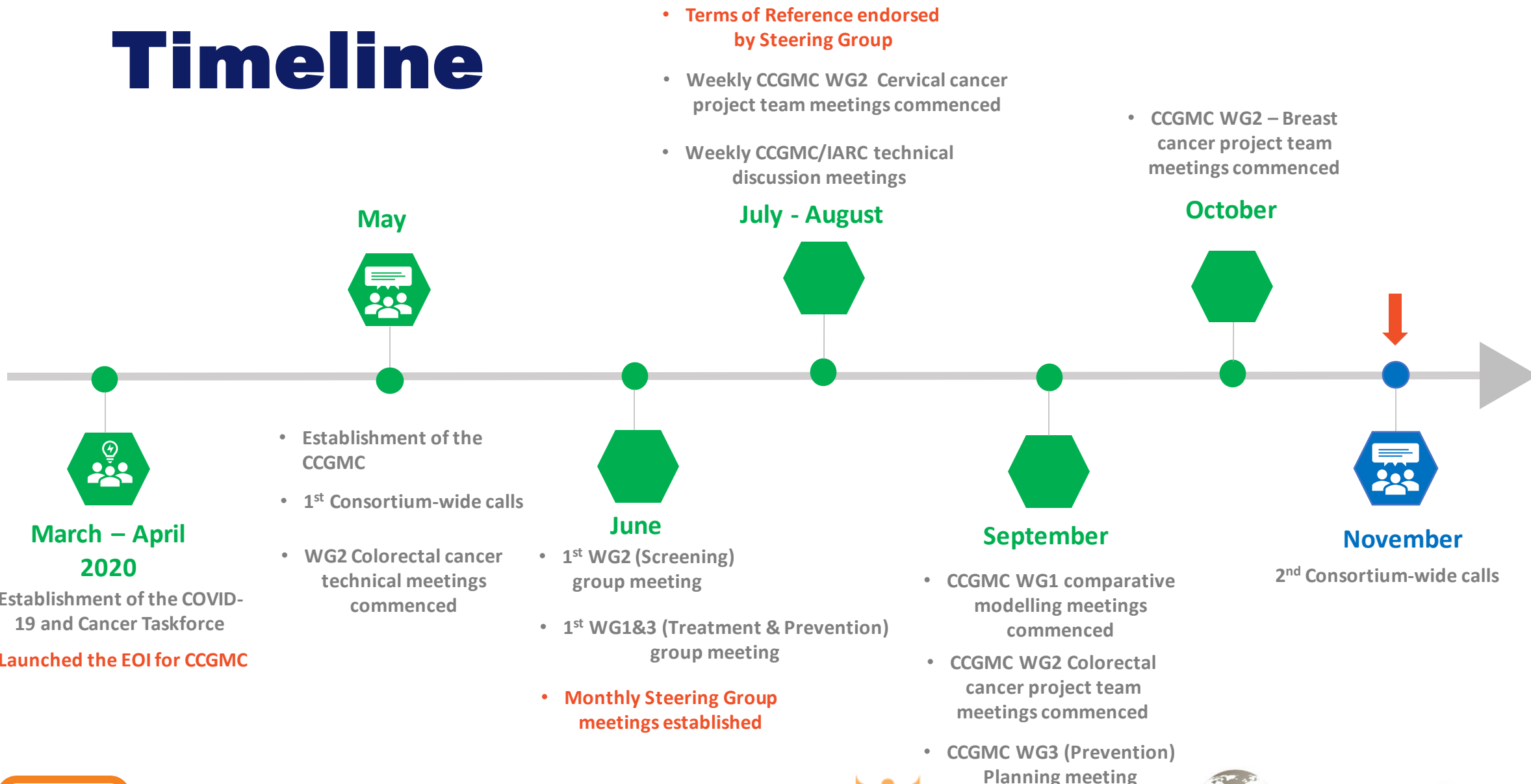
## Changes in cancer outcomes (WG1):

- Impact of treatment disruptions
- Direct 'biological' impact on survival
- Effects on co-morbid conditions
- Competing mortality risk from infection





# Timeline



# Publications in prep

- Editorial/perspective piece – rationale and aims of the CCGMC
- CCGMC protocol paper (targeted at BMJ Open)
- Invited overview of screening impact across programs (Prev Med)
- New WG outputs:
  - WG1 - International treatment/survival analysis
  - WG1 – International SRs of COVID risk and mortality for people with pre-existing cancer diagnosis
  - WG2 – CRC analysis under review, initial Cervical HIC analysis in prep, another invited paper for Cervical HIC (Prev Med)
  - WG3 – International SR of smoking behavior change.



# Upcoming meeting with our affiliate



The HPV Prevention and Control Board[1] and the Covid-19 and Cancer Global Modelling Consortium (CCGMC)[2] invite you to the upcoming real-time online technical meeting:

## “Impact of COVID-19 on Cervical Cancer Screening, Treatment and Vaccination”

12 - 13 November 2020

(Start at 11 am CET)

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The meeting will be a unique gathering of international and local experts. Further particulars and a meeting programme will be provided in due course. You will be proposed to take up an active role as speaker, moderator or session chair. Kindly note that the meeting is on invitation only.



# 4. Update on Working Group activities.



# WG1 – Treatment

## Overview

1. International survival analysis and results (SURVMARK registry resource)
2. Systematic reviews of COVID-19 risk and mortality for people with cancer
3. Planned modelling to quantify the impact of cancer treatment disruptions



# International survival analysis and results.



*Pre-published data and results have been removed from this presentation.*



# Systematic reviews of COVID-19 and cancer

Research question 1 – **COVID-19 risk:**

Are people with a pre-existing cancer diagnosis at higher risk of being diagnosed with COVID-19 than the general population or other comparison groups without a pre-existing diagnosis of cancer?

Population	Exposure	Comparator	Outcome	Study design
General or hospitalised population or General population and population with cancer	Pre-existing cancer diagnosis	No pre-existing cancer diagnosis or General population	COVID-19 diagnosis	Cohort studies Cross-sectional studies

Working group: Karen Canfell, Denise Campbell, Chelsea Carle, Sam Egger, Victoria Freeman, Suzanne Hughes, Dianne O'Connell, Julia Steinberg.

PROSPERO 2020 CRD42020191913. Available from: [https://www.crd.york.ac.uk/prospero/display\\_record.php?ID=CRD42020191913](https://www.crd.york.ac.uk/prospero/display_record.php?ID=CRD42020191913)





# Systematic reviews of COVID-19 and cancer

Research question 2 – **Mortality:**

Are COVID-19 patients with a pre-existing cancer diagnosis at higher risk of death than COVID-19 patients without a pre-existing diagnosis of cancer?

Population	Exposure	Comparator	Outcome	Study design
COVID-19 patients	Pre-existing cancer diagnosis	No pre-existing cancer diagnosis or All COVID-19 patients	Overall mortality COVID-19 mortality	Cohort studies Case-control studies

Working group: Karen Canfell, Denise Campbell, Chelsea Carle, Sam Egger, Victoria Freeman, Suzanne Hughes, Dianne O'Connell, Julia Steinberg.

PROSPERO protocol 2020 CRD42020191922. Available from: [https://www.crd.york.ac.uk/prospéro/display\\_record.php?ID=CRD42020191922](https://www.crd.york.ac.uk/prospéro/display_record.php?ID=CRD42020191922)



# Planned modelling to quantify the impact of cancer treatment disruptions

## □ Global modelling platform

- Under development using international data on survival conditioned by treatment (SURVMARK)

## □ Microsimulation approach

- The aim is to further develop well-established microsimulation models of cancer natural history and screening to incorporate more detailed cancer treatment pathway
- Models can be used for a more in-depth analysis for specific countries and cancer types
- This will capture in detail the joint effects of screening and treatment disruptions
- Initial work is involving colorectal cancer, and the aim going forward is to establish connections between WG1 and WG2 in this space

# WG2 – Screening

## Overview

1. CRC project team update
2. Cervix (HIC) project team update
3. Breast project team update



# WG2 – Screening

Working Group 2  
*Predicting impact on  
cancer screening and  
recovery strategies*

**CRC screening  
(39 collaborators)**

**Breast cancer  
screening  
(19 collaborators)**

**Cervical screening  
(HIC focus)  
(22 collaborators)**

**Delays to cervical  
cancer elimination  
(LMIC focus)  
(13 collaborators)**

**Delays to lung  
screening  
implementation  
(10 collaborators)**

# CCGMC WG2

## Colorectal cancer screening project team update.



# CRC Screening

- **Project 1:** Impact of COVID-19 related disruptions to Colorectal Cancer Screening Programs in three countries: A comparative modelling study
- **Project 2:** Optimal restart of CRC screening programmes post COVID lockdown, and to provide guidance on prioritisation of individuals for colonoscopy
- **Project 3:** Using observed data to model the real-world impact of COVID-19 on CRC screening and subsequent long-term cancer outcomes
- ...

# CRC Project 1

Aim: to evaluate a range of hypothetical 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.



*Pre-published data and results have been removed from this presentation.*





# Conclusions

- Clear policy message – CRC screening should be continued to whatever extent it is safe
- Where suspensions are necessary, catch-up screening can mitigate (though not entirely remove) the risk of increased long-term CRC incidence
- Hypothetical scenarios only – real-world data typically not yet available
  
- Manuscript submitted

*de Jonge L\*, Worthington J\*, van Wifferen F, Iragorri N, Peterse EFP, Lew J-B, Greuter MJE, Smith HA, Feletto E, Yong JHE, Canfell K, Coupe VMH, Lansdorp-Vogelaar I. Impact of a Disruption to Colorectal Cancer Screening Programs due to the COVID-19 Pandemic: A comparative modelling study. Lancet Gastroenterology & Hepatology. 2020. Under review (\*joint first authors)*

# CRC Project 2

Aim: to provide recommendations for optimal restart of CRC screening programmes in order to:

- a) Minimise impact of COVID-19 lockdown on CRC burden;
- b) Adapt to available colonoscopy resources.

Scenarios differ based on:

- i. FIT threshold in the recovery period
- ii. Length recovery period (6 and 12 months)

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



*Pre-published data and results have been removed from this presentation.*



# CCGMC WG2

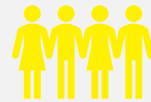
## Cervical Screening in high income countries.



# Team Members



Co-chaired by Dr Megan Smith, Dr Emily Burger and Dr Alejandra Castanon



About 20 people showed interest in being involved with this groups



Half join on a regular basis

**1. Impact of delays.** 100% disruption to screening (+/- surveillance, colposcopy & precancer treatment) for 6 or 12 months with a quick recovery thereafter.

Comparisons between Australia, USA, Netherlands and Norway

Focus

- Impact of program characteristics on resilience
- Ages most affected by disruption

**2. Capacity constraints.** Harms/benefits of recovery strategies based on prioritizing certain age groups

## Key Evaluations

# Models

Well-established simulation models that have informed cervical screening and HPV vaccination policy in a range of countries



*Pre-published data and results have been removed from this presentation.*





# Future direction

- Real-world scenarios
- New approaches (eg screening on self-collected samples)
- Upcoming meeting with HPV Prevention Board will help in informing future modelling
  - anticipated impact of COVID on HPV testing reagents, vaccine supply & other potential supply-side challenges that could impact CaCx elimination planning
  - information/ data needs to inform modelling

# CCGMC WG2 Breast cancer screening project team update .



# WG2 – Screening: breast cancer

- 18 members, from 15 countries
- Joint chairs: Jonine Figueroa (U Edinburgh), Carolyn Nickson (CCNSW)

## Group-specific aims

For various settings, in a comparative framework:

1. Document/estimate the disruption to breast screening due to COVID
2. Use existing well calibrated and validated model platforms to estimate the impact of this disruption on breast cancer incidence, delayed diagnosis (esp. staging via tumour size, nodal involvement) and mortality (additional deaths)
3. Characterise impact on referrals to treatment services, e.g. rates and case-mix
4. Estimate the impact and cost-effectiveness of catch-up/adaptation strategies

# WG2 – Screening: breast cancer

## First meeting 23 October 2020

- Six modelling platforms
- Common themes around disruption, adaptation, flow-on impacts

## Next steps:

- Consolidate existing models and outputs of interest in line CCGMC aims
- Collect and assemble key data sources from various country settings
- Plan joint publications

**Next meeting planned for Wed 25<sup>th</sup> November (AET) – Secretariat will send through further details**

# WG3 – Prevention

## Overview

1. Systematic review of smoking behavior changes during the pandemic – PECO and progress
2. Call for surveys on COVID-related behavior changes

# Systematic review of the association of COVID-19 with changes in smoking behaviour

Research question:

Is the COVID-19 pandemic associated with changes in tobacco smoking behaviour?

Population	Exposure	Comparator	Outcome	Study design
General population/anyone or Smokers or Former-smokers or Never-smokers	COVID-19 pandemic/ lockdown	Pre COVID-19 pandemic/ lockdown	<b>Change in tobacco smoking,</b> e.g., Intensity or Prevalence or Frequency or Uptake/initiation or Cessation/quitting or Increase/decrease or Patterns	Cohort studies Controlled and uncontrolled before and after studies Cross-sectional studies

Working group: Citadel Cabasag, Karen Canfell, Chelsea Carle, Michael Caruana, Sam Egger, Ophira Ginsburg, Suzanne Hughes, Erica Liebermann, Dianne O'Connell, Peter Sarich, Isabelle Soerjomataram, Julia Steinberg, Pavla Vaneckova, Marianne Weber.

PROSPERO 2020 CRD42020206383 Available from: [https://www.crd.york.ac.uk/prospero/display\\_record.php?ID=CRD42020206383](https://www.crd.york.ac.uk/prospero/display_record.php?ID=CRD42020206383)



# Systematic review of the association of COVID-19 with changes in smoking behaviour

## Academic literature progress

	Aug 2020	Sept	Oct	Nov	Dec
Protocol development and PROSPERO registration	✓				
Literature search (Medline, Embase, PsychInfo, medRxiv and SSRN to Sept 23)		✓			
Title/abstract screening of 1000 records		✓	✓		
Full text screening of 85 articles			✓		
Data extraction 30 articles			•		
Risk of bias assessment					
Meta-analyses and synthesis					
Manuscript drafting and journal submission					

Data extraction: Citadel Cabasag, Erica Liebermann, Peter Sarich, Pavla Vaneckova.

# Searches for survey results published online

Results of surveys of lifestyle risk factors undertaken by governments and institutions

- Often large-scale and representative
- Published online and not captured by systematic review methods
- Need to include in any assessment of impact of COVID-19 on lifestyle factors





# Searches for survey results published online

Planning a separate piece of work looking at evidence

- From large surveys not published in academic literature
- On impact of cancer on all lifestyle factors, not just smoking

Including:

- Surveys that ask about behaviour changes during the pandemic
- Regular surveys and cohort studies with data for before and during the pandemic

**Local knowledge** of ongoing and planned surveys is **key**


Seeking input from wider group especially WG3 members

**To gather this information**

Sending a link to a form seeking information about any relevant surveys



# Searches for survey results published online



## COVID-19 and Cancer Taskforce Global Modelling Consortium (CCGMC)

CCGMC WG3 (Cancer prevention and impacts of the crisis)

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### Lifestyle Change Surveys & Data Sources

To help assess impact of the pandemic on long-term cancer risks, WG3 of the CCGMC is considering the extent of cancer-relevant risk behaviour changes during the COVID-19 pandemic, e.g. changes in tobacco smoking, alcohol consumption, or physical activity.

Many of the large-scale, representative surveys of tobacco smoking and other cancer risk factors are undertaken by national or local government or health organisations and are not captured by the academic literature. To support planning of future collaborative evidence reviews and analyses, we are seeking information on surveys in different countries and jurisdictions.

Please complete this form to help create an initial high-level overview of existing, ongoing or planned surveys which could provide data on risk behaviour changes during the COVID-19 pandemic.

We are interested in surveys specifically soliciting information on behaviour changes during the pandemic as well as regularly on-going surveys with information on behaviour before and during the pandemic and relevant data from longitudinal studies.



1) What is the name of the survey/study?

2) In which country was the survey/study carried out?

3) Was the survey/study nation-wide, or did it cover a sub-national jurisdiction (e.g. a state, province, region)?

- Nation-wide
- Sub-national jurisdiction (please specify)

4) Please specify the survey/study aim:

- Assess lifestyle risk behaviour changes during the pandemic
- Repeatedly assess lifestyle risk behaviours or risk factors, including assessments before and during the pandemic

5) Which lifestyle risk behaviours or risk factors did the survey/study cover?

- Tobacco smoking behaviours (including smoking intensity, quitting, etc)
- Alcohol consumption
- Physical activity/Sedentary behaviour
- Diet
- Overweight/Obesity
- Other (please specify)

6) Please provide a link to the results of the survey/study:

7) Which organisation is in charge of or carrying out the survey/study?

8) Please specify the name and contact details of the survey/study PI, manager, or data custodian (if known):

9) Please specify your name and email (for follow-up questions or further work in this space)

10) Would you like to be a part of the review process?

- Yes
- No

11) Do you have any additional comments?

# 5. Call for EoI: CCGMC Knowledge Dissemination Planning Group.

Dr Rami Rahal



# Elements of dissemination strategy - under consideration

- Setting up a *Community of Practice*

**Purpose:** to work with clinicians and policy-makers to produce rapid, actionable information from the Consortium work that can be used for policy-making and inform best cancer control practices for different jurisdictions, in light of current and future waves of the pandemic.

- CCGMC scientific publications and presence at key meetings

- Potential development of policy briefs (e.g. a high level brief on key considerations for screening)



# 6. Plans for next call and open discussion.



# Thank you

Secretariat email: [covidandcancer@nswcc.org.au](mailto:covidandcancer@nswcc.org.au)

