

## COVID-19 and Cancer Taskforce

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

## Working Group 2 - Screening Second Call: Monday/Tuesday 29th/30th June 2020

The call will start at 03:00 EDT/ 08:00 BST/ 09:00 CEST/ 10:00 EAT/ 17:00 AEST

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

[www.ccgmc.org](http://www.ccgmc.org)

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



# Agenda

## 1. Welcome and Introductions

Prof Karen Canfell and A/Prof Iris Lansdorp -  
Vogelaar

## 2. Update on Development of Terms of Reference

Prof Karen Canfell, CCNSW

## 3. Update on Disclosures

Prof Karen Canfell, CCNSW

## 4. Teams page for Project Group collaborations

Prof Karen Canfell, CCNSW

## 5. Rapid Update on Model Platforms

Dr Jie-Bin Lew, CCNSW

## 6. CRC Modelling Update

A/Prof Iris Lansdorp – Vogelaar, Erasmus

## 7. Recap of WG2 Projects and Teams

Prof Karen Canfell, CCNSW

## 8. New potential data sources

Prof Karen Canfell, CCNSW

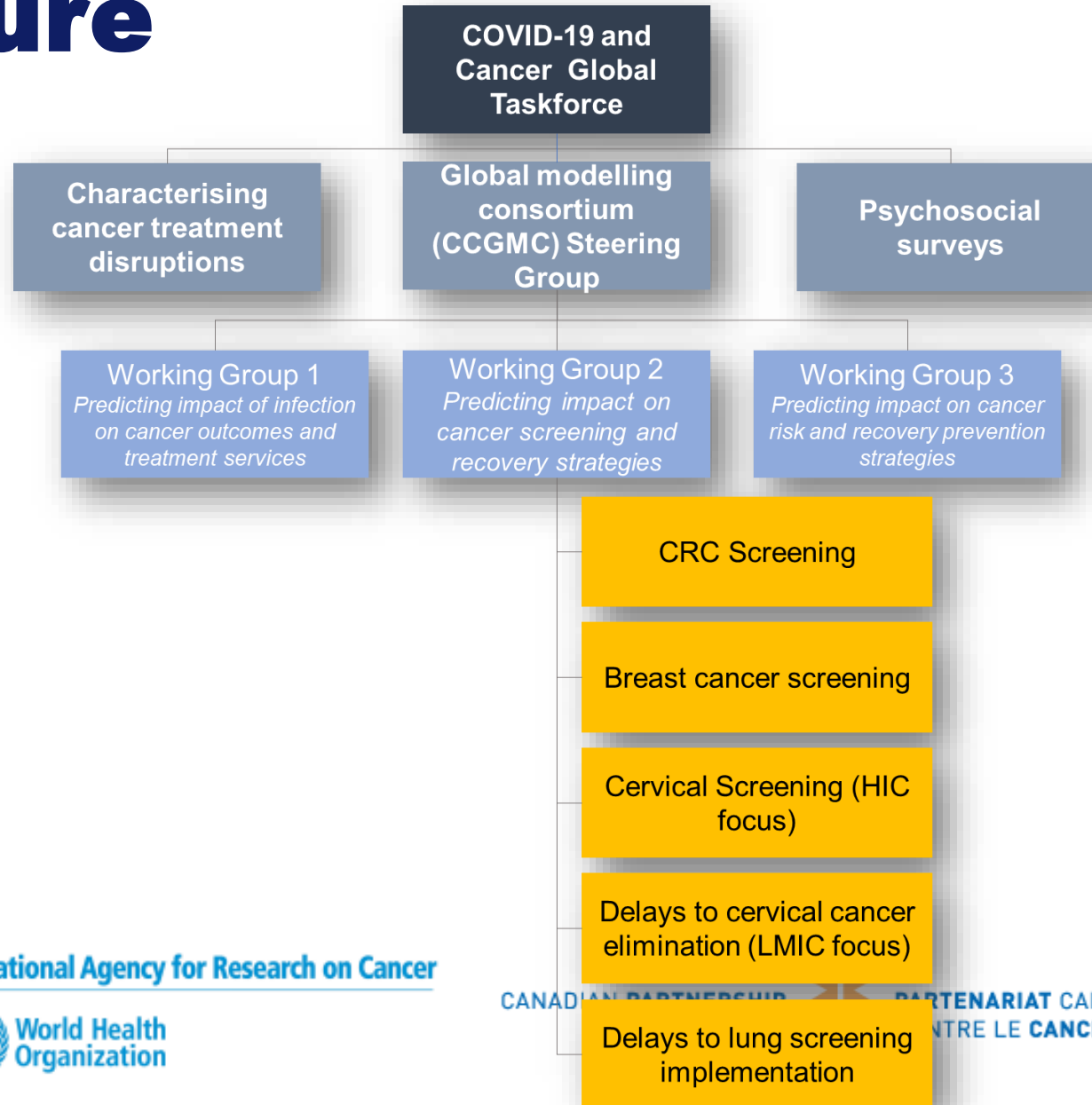
## 9. Discussion of research questions for other projects – Breast, Cervix, Lung

## 10. Future call schedule

## 11. Any other business?



# COVID-19 and Cancer Taskforce structure



# Item 2. Update on development of ToR

An open and collaborative approach is envisaged, with key principles involving:

- Sharing our learnings, co-publication of joint work (whilst recognising that many groups will bring in their own models and IP), capacity building, taking the longer-term perspective (we are not just here for the acute response but to inform longer term planning & recovery), and development of tools that will be widely useful for policy-makers in understanding the impact of the crisis and the optimum recovery strategies.

## Key additions to note:

- Industry and commercial representatives are asked to take the role of an observer in CCGMC activities.
- Authorship guidelines section:
  - It is planned that all WG members will be acknowledged for publications of the consortium as follows - authors will be listed, alongside the statement “on behalf of the <applicable> Working Group of the Covid and Cancer Global Modelling Consortium”.
- The Working Group Chairs will determine whether minutes and presentations will be posted on the website in full, whether confidential results will be removed prior to posting, or whether to post on the shared workspace on Teams instead.

*See draft ToR (circulated with meeting agenda). Please contact the Secretariat with questions, concerns or suggestions to be considered by the Steering Group on [covidandcancer@nswcc.org.au](mailto:covidandcancer@nswcc.org.au) by Friday July 3rd.*

*Following feedback, ToR to be ratified by July 10th by CCGMC Steering Committee.*



# Item 3. Review of Disclosures

Name	Category for Disclosure	Disclosure of Interests
Professor Oguzhan Alagoz	<b>Research Support</b>	Receives grant support from National Cancer Institute
Dr Gnana K Bharathy	<b>Research support</b>	Involved in collating COVID related data from multiple organizations and have been developing epidemiological and post-recovery models. These were done as part of building up research, and provide information in public interest to NSW Government. No remuneration was received.
	<b>Other relationships</b>	University of Technology Sydney – Research interest and agenda might align with CCGMC
Dr Adam Brentnall	<b>Employment, consulting and advisory</b>	Receives royalty payments from Cancer Research UK for commercial use of the Tyrer-Cuzick (IBIS) breast cancer risk evaluator.
	<b>Research support</b>	Funded by two project grants for work on breast cancer risk assessment through UK charities: Cancer Research UK and Breast Cancer Now. 3y, supports two post-docs.
Dr Emily Burger	<b>Other relationships</b>	CISNET (Aligns with work of CCGMC)
Prof Dama Bhadra Vale	<b>Research support</b>	Research grant for audit screening by Public Research Foundation: FAPESP – Research Support Agency of Sao Paulo State
Dr Alejandra Castanon	<b>Research support</b>	Receives salary support from Cancer Research UK through a programme grant to P Sasieni. Also currently modelling the impact of ceasing cervical screening in England on cervical cancer.

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Name	Category for Disclosure	Disclosure of Interests
Dr Christina Chapman	Research support	Supplement to existing Breast CISNET U01, United States National Cancer Institute, 3/2018-9/2019, direct costs for salary support and travel
Prof Karen Canfell	Other activities	KC is co-principal investigator of an unrelated investigator-initiated trial of cervical screening in Australia (Compass; ACTRN12613001207707 and NCT02328872), which is conducted and funded by the VSC Foundation (VSC), a government-funded health promotion charity. The VSC Foundation received equipment and a funding contribution from Roche Molecular Systems USA. However, neither KC nor her institution on her behalf (Cancer Council NSW) receives direct funding from industry for this trial or any other project.
A/Prof Mark Clements	Employment, consulting and advisory	<ul style="list-style-type: none"> <li>Prostate Cancer Foundation of Australia</li> </ul>
	Research support	<ul style="list-style-type: none"> <li>Swedish Research Council, Swedish Cancer Society (Cancerfonden), Prostate Cancer Fund (Prostatacancerförbundet), Karolinska Institutet</li> </ul>
	Partner/Spouse/Immediate family members	<ul style="list-style-type: none"> <li>Prostate Cancer Foundation of Australia (methods consultancy)</li> </ul>
Prof Anne Cust	Partner/Spouse /Immediate family members	Receives support from Australian National Health and Medical Research Council Project grant and Fellowship
Prof Patricia Fitzpatrick	Employment, consulting and advisory	Part-time employee of National Screening Service, Ireland

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Name	Category for Disclosure	Disclosure of Interests
Dr Kota Katanoda	Research support	Received a JMWH Bayer Grant from Sep 1 2017 to Aug 31 2019 (unrelated to this project)
	Other	Received the third Kiyoko and Paul Bourdarie-Goto Scientific Prize in 2015 (unrelated to this project)
	Partner/Spouse /Immediate family members	Partner is an employee of The Japan Research Institute, Ltd (unrelated to this project)
Prof Jane Kim	Research support	<p><i>Receives grant support from:</i></p> <ul style="list-style-type: none"> <li>• NIH/NCI grant (#U01CA199334) on comparative cervical cancer modeling</li> <li>• The World Health Organization on cervical cancer elimination</li> <li>• The Bill and Melinda Gates Foundation on 1-dose HPV vaccination and HPV therapeutic vaccination.</li> </ul>
A/Prof Erich Kliewer	Employment, consulting and advisory	Merck Frosst Canada GlaxoSmithKlein
	Research support	Merck Frosst Canada
	Other relationships	Associate, Vaccine and Drug Evaluation Centre, University of Manitoba
Mr Tom Lee	Employment, consulting and advisory	<p>Received consultancy fees from University College London, University of London, to conduct research into national cancer policy</p> <p>Investment interest: Mr Lee has holdings (but no direct involvement in Volpara Health Technologies, a breast and lung screening firm based in New Zealand</p>
Dr Ethna McFerran	Employment, consulting and advisory	Receives salary support via grant funds from Health Data Research UK and Cancer Focus Northern Ireland (NI)
	Research support	Receives salary support via grant funds from Health Data Research UK and Cancer Focus Northern Ireland (NI)
A/Prof Rafael Meza	Research support	Grants on cancer modeling from NIH

# Item 3. Review of Disclosures

Name	Category for Disclosure	Disclosure of Interests
Dr Ana Molina-Barcelo	Other relationships	<p>Member of:</p> <ul style="list-style-type: none"> <li>Spanish Cancer Screening Network (<a href="http://www.cribadocancer.es/">http://www.cribadocancer.es/</a>): national network formed by those responsible of regional cancer screening programmes in Spain with the main objective to share experiences on cancer screening.</li> <li>Spanish Society of Epidemiology (<a href="https://www.seepidemiologia.es/">https://www.seepidemiologia.es/</a>): multidisciplinary scientific society with different working groups. A current member of the Working Group on Screening, with the main objective to provide scientific advice on cancer screening.</li> </ul>
Prof Raul Murillo	Other relationships and activities	<ul style="list-style-type: none"> <li>Senior visiting scientist at IARC</li> <li>Member of the Latin American board of the American Association for Cancer Research</li> <li>Member of the Scientific and Technical Advisory Group (STAG) for the WHO research Program on Sexual and Reproductive Health</li> </ul>
Dr Valerian Mwenda	Research support	Principal Investigator in a research project funded by American Society of Clinical Oncologists (ASCO).
A/Prof Sisse Helle Njor	Employment, consulting and advisory	Received a speaking fee from Norgine Denmark
Ms Kathleen O'Connor	Other relationships and activities	<ul style="list-style-type: none"> <li>Manages the implementation of the National Bowel Cancer Screening Program (NBCSP) in Western Australia and am a member of the NBCSP Program Delivery Advisory Group advising the Australian Government on the development of the NBCSP.</li> <li>WA Cancer &amp; Palliative Care Network supports the implementation of the current statewide Cancer Plan (2020-25).</li> <li>Currently a member of the COVID-19 and Oncology working group for WA Health, monitoring the impact on oncology services, including cancer screening, in this State.</li> </ul>



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Name	Category for Disclosure	Disclosure of Interests
Dr James O'Mahony	Other relationships and activities	Have been a research collaborator with the MISCAN Cancer Screening Group at Erasmus MC over a number of years. No formal affiliation with the group. As the MISCAN group is a participant in the CCGMC perceived to be in no conflict, Still involved with one research project using the MISCAN model that has yet to be submitted for publication.
Mr Scott Pohlman	Employment, consulting and advisory	Employee of Hologic, Inc.
Prof David Preen	Research Support	NHMRC project grant funding
	Other relationships and activities	<ul style="list-style-type: none"> <li>• Cancer Council Western Australia</li> <li>• Chair of Research Committee for the Cancer Council Western Australia</li> </ul>



# Item 3. Review of Disclosures

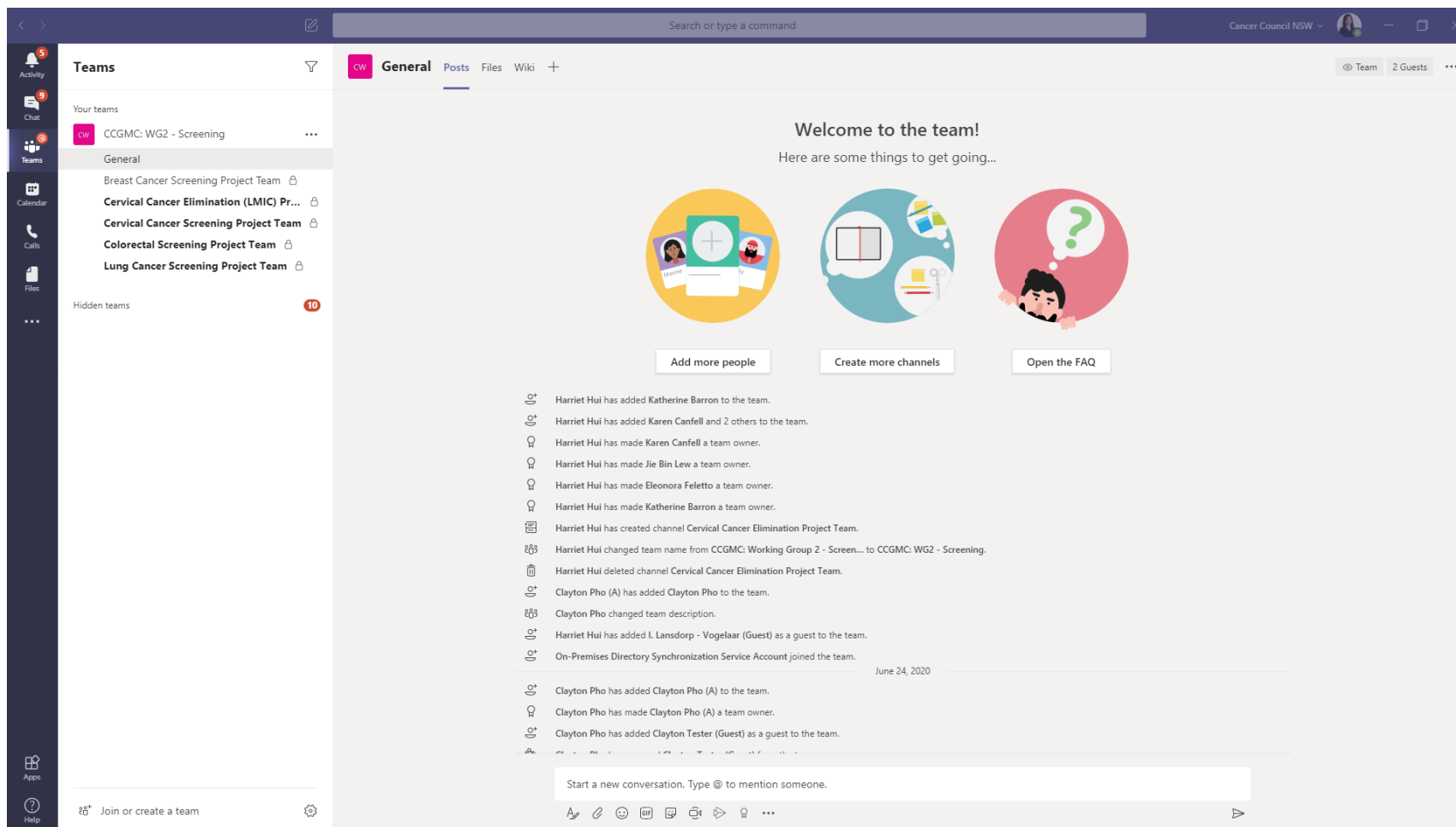
Name	Category for Disclosure	Disclosure of Interests
Prof Youlin Qiao	Employment, consulting and advisory	MSD: Global advisory board meeting related support
Dr Nicolien van Ravesteyn	Research support	NHI/NCI CISNET grant RIVM (NL) evaluation Dutch breast cancer screening programme Other relationships includes being involved in CISNET- breast and the evaluation Dutch breast cancer screening programme
	Employment, consulting and advisory	Kings College London – Employer
Dr Carolyn Rutter	Partner/Spouse /Immediate family members	National Cancer Institute Grant U01CA199335
Dr Matejka Rebolji	Other relationships and activities	Employer received a speaker fee on Dr Rebolji’s behalf from Hologic
Prof Peter Sasieni	Research support	Cancer Research UK; National Institute for Health
Dr Farah Seedat	Other relationships	Employed by the UK NSC and hosted by Public Health England.
Ms Priyanka Singh	Research support	Institution: University of Technology Sydney(UTS), Australia Have not received any grants yet on working for projects related to impact of COVID-19 on breast cancer screening programs in Australia.
A/Prof Erin Strumpf	Employment, consulting and advisory	On a secondment leave with the Quebec National Institute for Excellence in Health and Social Services (INESSS), a provincial government agency. Continues to receive salary from McGill and INESSS reimburses McGill for Prof Strumpf time. Currently collaborating with them on analysis of secondary data to help inform cancer care.
	Research support	Consulting for Exactis, a non-profit organization that works to increase access to clinical trials for cancer patients, and also conducts some analyses for pharmaceutical companies. Payments will be made to a research fund at McGill. No payments have been made to date, but will in the future.

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Name	Category for Disclosure	Disclosure of Interests
Assistant Prof Glen Taksler	Research support	National Institute of Aging (NIA) of the National Institutes of Health (NIH)
Prof Martin Tammemagi	Employment, consulting and advisory	<p>Dr Tammemagi has served as consultant for the following companies: Johnson &amp; Johnson/Janssen, Medial EarlySign, NUCLEIX, bioAffinity Technologies, Inc., AstraZeneca. providing advice on the design and analysis of biomarker or lung cancer screening studies or on cancer risk prediction modelling.</p> <p>IP: The PLCOm2012 and related models are open access and are available free of charge to non-commercial users. For commercial users licensing has been assigned to Brock University. To date, MCT has not received any money for use of the PLCOm2012 or related models, nor does he anticipate any payments in the future.</p>
Dr Kevin Ten-Haaf	Research support	<ul style="list-style-type: none"> <li>Member of the Cancer Intervention and Surveillance Modeling Network (CISNET) Lung working group (grant 1U01CA199284-01 from the National Cancer Institute).</li> <li>Researcher affiliated with the Dutch-Belgian Lung Cancer Screening Trial (Nederlands-Leuvens Longkanker Screenings onderzoek; the NELSON trial) and the 4-IN THE LUNG RUN trial (towards <b>IN</b>dividually tailored <b>IN</b>vitations, screening <b>IN</b>tervals, and <b>IN</b>tegrated co-morbidity reducing strategies in lung cancer screening).</li> <li>Received a grant from the University of Zurich to assess the cost-effectiveness of CT lung cancer screening in Switzerland.</li> <li>Was involved in the Cancer Care Ontario Health Technology Assessment Study for CT Lung Cancer Screening in Canada.</li> <li>Involved in the Selection of Eligible People for Lung Cancer Screening using Electronic Primary Care DaTa (SELECT) study sponsored by Cancer Research UK.</li> </ul>
	Other (e.g. gifts, reimbursements)	<ul style="list-style-type: none"> <li>Was an invited speaker at the 17th, 19th, and 20th World Conferences on Lung Cancer, as well as the 5th Russian Society of Clinical Oncology conference, for which travel expenses were paid (in part).</li> <li>Was an invited speaker at Tagung Thorakale Tumore. Travel expenses paid by Biomedical Research in Endstage and Obstructive Lung Disease Hannover (BREATH). Erasmus University Medical Center received speaking fees.</li> </ul>



# Item 4. Shared Workspace Created on Microsoft Teams

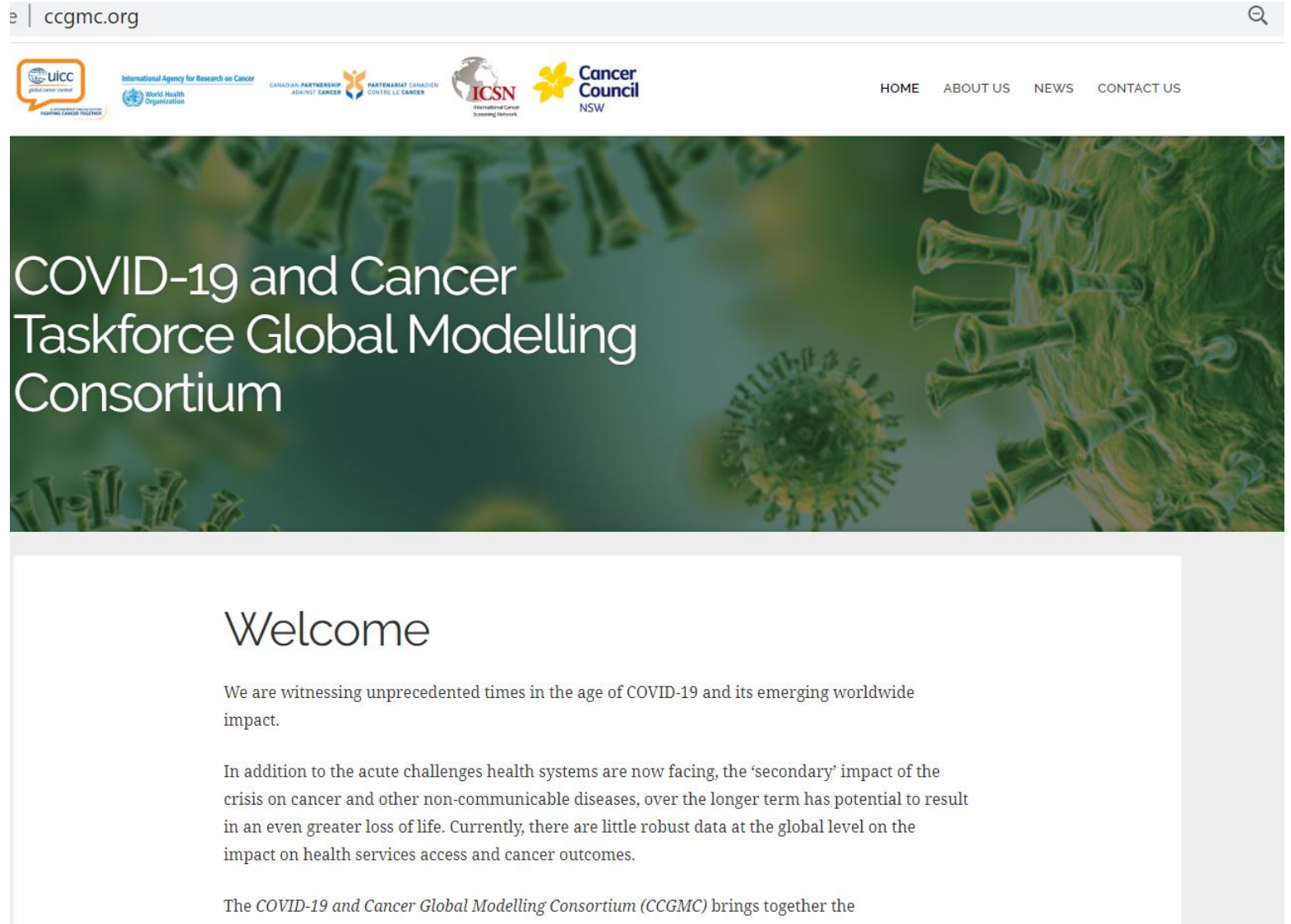


Please ensure you have a Microsoft account, and follow the instructions on the invitation email sent by the CCNSW IT Team.

If you require further assistance, please contact the Secretariat on: [covidandcancer@nswcc.org.au](mailto:covidandcancer@nswcc.org.au)

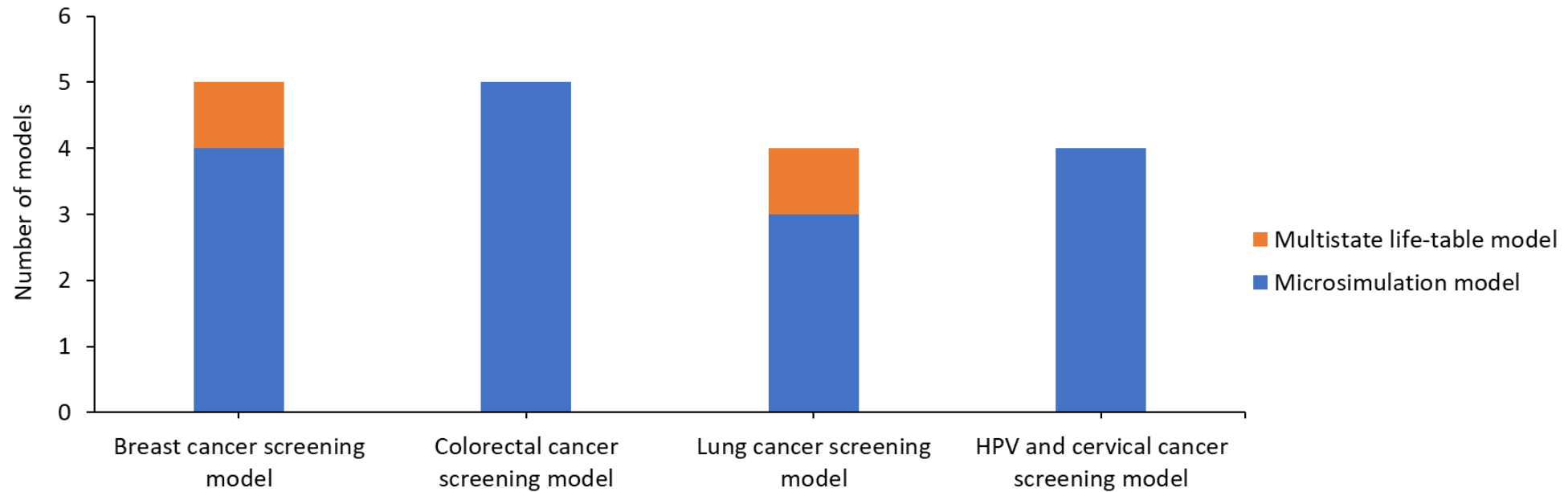


# The CCGMC website is now live ccgmc.org



# Item 5. Review of initial information on model platforms

A total of 15 forms received, includes 18 screening models (developed and under-development) for breast, colorectal, cervical, or lung cancer screening.



# Item 5. Review of initial information on model platforms

World region	Breast cancer	Colorectal cancer	Cervical cancer	Lung cancer
Europe	Netherlands (1), United Kingdom (1)	Netherlands (2)	Norway (1), Netherlands (1), Slovenia (1), Italy (1), Finland (1)	Switzerland (1)
America and the Caribbean	Canada (1)	USA (1), Canada (1)	USA (2), El Salvador (1), Canada (1)	USA (1), Canada (2)
Oceania	Australia (1)	Australia (1)	Australia (1), New Zealand (1)	Australia (2)
Asia		Japan (1)	India (2), China (1), Malaysia (1), Japan (1), Vietnam (1), Papua New Guinea (1)	
Africa			Uganda (1), Tanzania (1), South-Africa (1)	
Global			Globally, at the individual country level (1)	



International Agency for Research on Cancer



CANADIAN PARTNERSHIP  
AGAINST CANCER



PARTENARIAT CANADIEN  
CONTRE LE CANCER



# Item 6. CRC Modelling Update

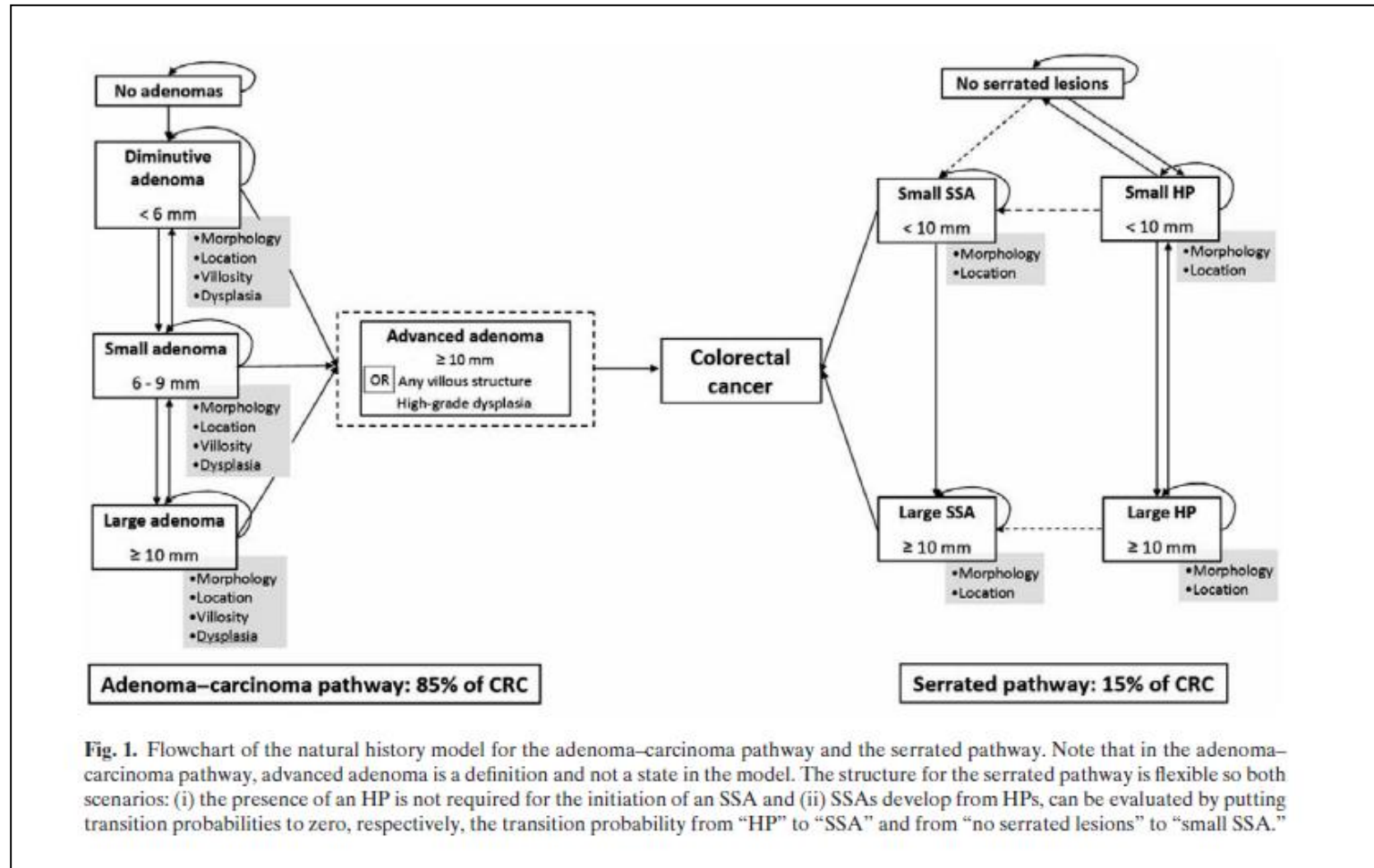


# Item 6. CRC Models Involved

Country	Model	Organization
Australia	Policy1-Bowel	Cancer Council NSW
Canada	OncoSim	Canadian Partnership Against Cancer & Statistics Canada
The Netherlands	ASCCA	Decision Modeling Center, Amsterdam UMC, Amsterdam (VUmc)
	MISCAN	Erasmus Medical Center, Rotterdam (EMC)



# Microsimulation model: example



Greuter MJ, et al. *Risk Analysis* 2014

# Australia – Screening Program

- Colorectal cancer screening in Australia via the National Bowel Cancer Screening Program, or **NBCSP**.
- iFOBT screening provided biennially at ages 50, 52, 54... to age 74.
- Phased rollout from 2006 (screening at age 55+65), full coverage from 2019.
- Approximately 41% iFOBT participation as of 2017 (no participation data available for 2020), 71% compliance to follow-up colonoscopy.

# Australia – Model

- Microsimulation model for Australian setting – Policy1-Bowel.
- Conventional adenoma and serrated lesion pathway simulated in individuals.
- Models NBCSP including phased rollout and colonoscopy surveillance.

# Canada – Program and model

- Biennial FIT for ages 50-74 years
- ~42.3% FIT recruitment, 80% rescreen, 80% compliance to follow-up colonoscopy.
- Mathematical simulation model for Canadian setting – OncoSim
- Models natural history and progression of adenomas and colorectal cancer



# The Netherlands - Screening program

- National Colorectal Cancer Screening Program program in the Netherlands
- FIT screening provided biennially at age 55 to 75
- Phased rollout from 2014, full coverage from 2019
- Approximately 73% FIT participation, 82% compliance to follow-up colonoscopy.

# Two models for Dutch setting ASCCA and MISCAN

## ASCCA:

- Adenoma *and* serrated lesion pathway
- Age-specific adherence rates

## MISCAN:

- Adenoma pathway
- Age- and round-specific adherence rates
- Correlation in test results across rounds
- Different background risk between participants and non-participants

# CRC Modelling Priority Scenarios

0. Comparator: No screening disruption
1. 6-months screening disruption
2. 12-months screening disruption
3. 6-months screening disruption + 12-months recovery (50% usual screening volume)



# Future steps

1. Additional scenarios:
  - 3 months disruption
  - Lower participation in primary screening and diagnostic follow-up after disruption (no disruption)
  - Catch-up of missed screens
2. Write paper
3. Additional simulations for subsequent papers:
  - Real-world scenarios for disruption and after-effects
  - Prioritization strategies to manage the surge of screening volume after disruption

# Item 7. WG2 Projects

1. Disruption to **colorectal** cancer screening programs in different countries.
2. Disruption to **cervical** cancer screening programs in different countries.
3. Disruption to **breast** cancer screening programs in different countries.
4. Impact of delays to **lung** cancer screening programs/implementation
5. Impact of delays to **cervical cancer elimination** implementation

Doodle polls to be sent this week for setting up first project meetings for cervical, breast and lung. EOI emails were sent last week for project conveners - please contact the Secretariat.

For those who have not yet already, to register for one of the projects listed above, please head to: <https://form.jotform.com/201538323310038>



# Item 8. New potential data sources

Name	Country	Institution	Type of data offered
A/Prof Sisse Njor	Denmark	Randers Regional Hospital	Offered to calculate the participation rate during and before COVID pandemic, attain data on colonoscopies (from the national patient register of Denmark), information on the organization of screening programmes - number of invitations and participations
Dr Silvia Deandrea	Italy	Lombardy Region, Directorate-General Welfare	Lombardy region's data about cancer, screening programmes and Covid-19 cases may be useful for external validation and/or feeding of the models the Consortium is going to develop, e.g. they reflect a 'worst case scenario' at the beginning of the outbreak and lately a different situation impacted by the lockdown strategies.
Assistant Prof Glen Taksler	USA	Cleveland Clinic	Provide de-identified screening participation data for the major cancers. KC has requested specifically for data on screening participation during and before the COVID pandemic - GT has agreed to put in a data request once screening resumes.
Dr Karin Sundström	Sweden	Karolinska Institutet	Offered to obtain high-quality data from Swedish individually linkable databases over COVID and other conditions that may be relevant to the models

# Item 9. Discussion of research questions for cervical, breast, lung.



# For Discussion: example research questions

## Breast Screening:

- What is the increase in cancer incidence and mortality expected from disruptions?
- What is the impact on overdiagnosis?
- How does the disruption exacerbate or change existing inequities (by income level, ethnicity, or culture)?
- How does this impact the balance of benefits and harms?
- How could risk stratification play a role in optimising recovery (considering age, screening history, mammographic density, lifestyle factors, genetic factors, risk tools etc.)?

# For Discussion: example research questions

## Cervical Screening and Vaccination in HIC:

- What is the increase in cancer incidence and mortality expected from disruptions?
- How does the transition to primary HPV screening ongoing in many countries change the robustness of the screening and vaccination programs to disruption?
- How does the disruption exacerbate or change existing inequities (by income level, ethnicity, or culture)?
- How can HPV based screening play a role in optimising screening recovery (considering HPV vaccination status, age, the role of partial genotyping, and new triage technologies)?

# For Discussion: example research questions

## Lung Screening:

- What is the increase in cancer incidence and mortality expected from disruptions?
- What is the impact on health outcomes of potential delays to implementation for countries about to commence lung screening?
- How does the disruption exacerbate or change existing inequities (by income level, ethnicity, gender or culture)?
- How could risk stratification play a role in optimising recovery (considering age, smoking status, family history, PLCOm2012 or other risk tools)?

# Item 10. Future call schedule & next steps

- Next call whole of Working Group Two call anticipated end-August with several groups reporting initial results. Placeholder invites to be sent.
- Project meetings to get underway during this time.
- Member feedback on frequency and timing of calls welcome. Please contact the Secretariat on [covidandcancer@nswcc.org.au](mailto:covidandcancer@nswcc.org.au).





# Item 11. Any other business?

[www.ccgmc.org](http://www.ccgmc.org)

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



# Thank you.

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