

# International Partnership for Resilience in Cancer Systems (I-PaRCS)

## Whole of Consortium Call 29<sup>th</sup>/30<sup>th</sup> November 2023

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

# Welcome and Introductions.

Session 1: Prof Karen Canfell (The Daffodil Centre)  
Session 2: Dr Julie Torode (King's College London)

# Aims of today's call

1. Review I-PaRCS key highlights
2. Provide exciting updates on commissioned projects (including CRUK, ICBP and WHO systematic reviews)
3. Provide snapshots on other working group activities
4. Discussion of new opportunities for the Consortium

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

# Consortium highlights and updates.

Session 1: Prof Karen Canfell (The Daffodil Centre)

Session 2: Dr Julie Torode (King's College London)



# Key highlights



Welcome Dr Natalie Fitzgerald (CPAC) to I-PaRCS Steering Group



Elimination Planning Tool Community of Practice meetings



Kick-off of multi-country working group for lung cancer

## WHO Covid and Cancer systematic reviews



**Paper accepted at IJC (in-press):**  
Risk of COVID-19 death for people with a pre-existing cancer diagnosis prior to COVID-19-vaccination: A systematic review and meta-analysis

## Ongoing development of Elimination Planning Tool



# Insights into current global cancer policy & health systems development .

Prof Richard Sullivan

# Current commissioned projects.

Session 1: Prof Karen Canfell (The Daffodil Centre)

Session 2: Prof Iris Lansdorp-Vogelaar (ERASMUS MC)



# Cervical Cancer Elimination Planning Tool Technical team update.

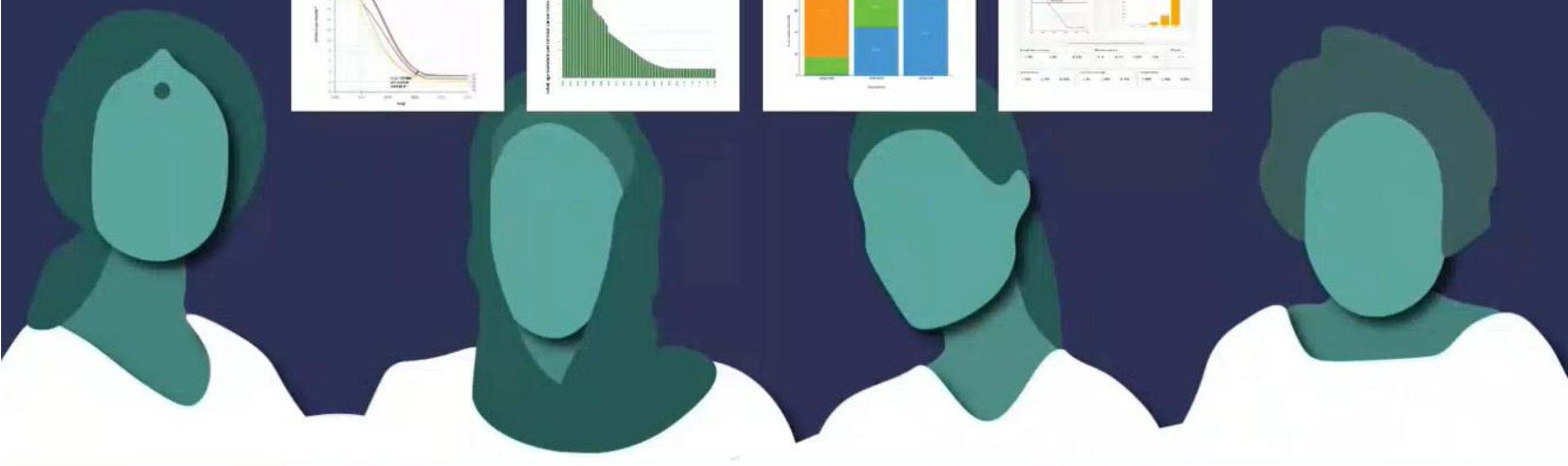
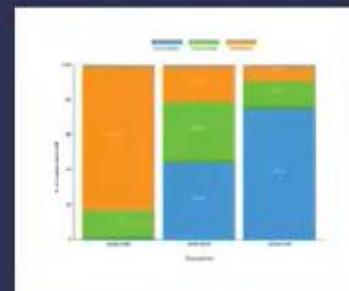
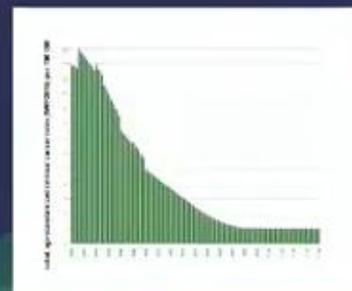
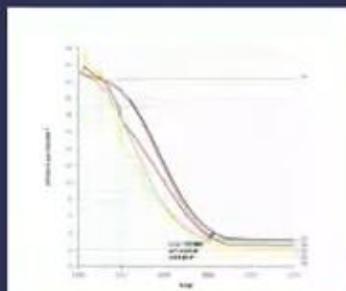
Session 1: Dr Daniela Rivas (The Daffodil Centre)

Session 2: A/Prof Michael Caruana (The Daffodil Centre)



## CERVICAL CANCER ELIMINATION PLANNING TOOL

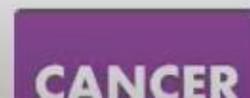
An interactive tool to plan and explore strategies to reinforce national trajectories towards cervical cancer elimination in low- and middle-income countries



Connect with us



THE GLOBAL CANCER OBSERVATORY



CONTACT

25 avenue Tony Garnier  
CS 90627  
69366 LYON CEDEX 07 France

Contact us

# Expert team



## *The Daffodil Centre/IARC:*

**Prof. Karen Canfell**, Director, The Daffodil Centre

**Dr Isabelle Soerjomataram**, Deputy Head, Cancer Surveillance Branch, International Agency of Research on Cancer

**Dr Michael Caruana**, Senior Research Fellow, The Daffodil Centre

**Dr Kate Simms**, Senior Research Fellow, The Daffodil Centre

**Dr Adam Keane**, Research Fellow, The Daffodil Centre

**Dr Daniela Rivas**, Postdoctoral Research Fellow, The Daffodil Centre

**Ms Amy Pagotto**, Project Coordinator, The Daffodil Centre

**Mr Tim Balshaw**, Project Coordinator, The Daffodil Centre

**Ms Harriet Hui**, Senior Research Assistant, The Daffodil Centre

**Mr Morten Ervik**, IT Development Manager, Cancer Surveillance Branch, International Agency of Research on Cancer

## *King's College London:*

**Dr Julie Torode**, Director of Strategic Partnerships, Community and Patient Engagement. Institute of Cancer Policy Board Member.

## *Cancer Research UK:*

**Mr Alexander Wright**, Global Lead

**Mr George Hayes**, Global Partnerships & Advocacy Manager

**Ms Natalie Varney-Hopkins**, International Cancer Prevention Programme Manager

**Ms Elle Pearson**, HPV Policy & Advocacy Advisor



International Agency for Research on Cancer



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The Daffodil Centre



# The EPT: Overview



- The EPT is an interactive tool to help policymakers and stakeholders developing their cervical cancer elimination strategies for their country or region.
- It makes *Policy1-Cervix* predictions available to countries
- To do this the tool consists of:
  - A user interface developed by IARC for them to select scenarios and regions of interest and receive salient projected outcomes.
  - This interface is plugged into data modelled by the Daffodil Centre's *Policy1-Cervix* platform on the backend.
- **Inputs** currently included: coverage choices for the three pillars at different times; and various accelerators, such as extended multi-age vaccination and vaccination of boys as well.
- **Outputs** currently included:
  - cases and deaths averted;
  - projected year for cervical cancer elimination;
  - resource use;
  - return on investment and budget impact.



# The Elimination Planning Tool – hosted on IARC Global Cancer Observatory

International Agency for Research on Cancer  
World Health Organization
CERVICAL CANCER ELIMINATION
About Database Visualization Factsheets References

Display Scale Look
Home / Dashboard
Graphic Scenarios keys

**Population(s) (1)**

Scenario: D0

Starting year: 2019

HPV vaccination: Single dose

Status in starting year: 0% (HPV), 0% (Screening), 33% (Treatment)

Short-term targets: 90% by 2020 (HPV), 45% by 2030 (Screening), 50% by 2030 (Treatment)

Intermediate term targets: 90% by 2020 (HPV), 70% by 2030 (Screening), 90% by 2030 (Treatment)

Long-term targets: 90% by 2020 (HPV), 90% by 2045 (Screening), 90% by 2030 (Treatment)

Elimination accelerators: 14 (HPV), 1Y (Screening), 90 (Treatment), No (HPV dose)

**Dashboard + proof of concept**  
The project timeframe for cervical cancer elimination

Elimination year		Return on Investment *		Budget Impact	
<b>2056</b>		<b>\$3.5</b>	<b>\$14.2</b>	<b>\$1.9M</b>	<b>\$3.9M</b>
		Direct return	Return including societal benefits	5-year	10-year

\* Per dollar spent over 50 years

**Cervical cancer ASR(World) and elimination threshold**

**Lives saved**

Status of 3 pillars in starting year

Elimination accelerators

HPV dose(s)

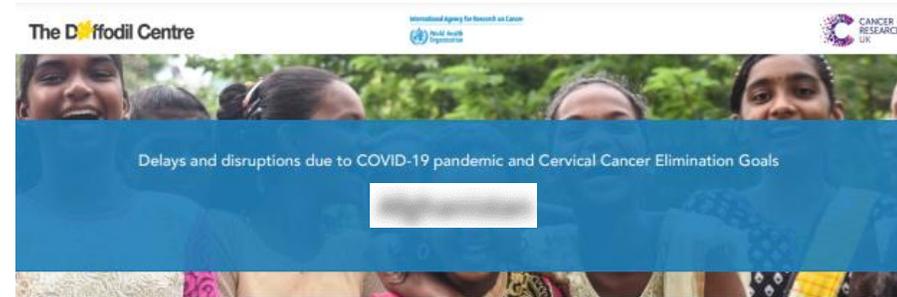
**\*\*NOTE\*\* output values are demonstrative only and either based on preliminary modelling or representative 'placeholder' numbers**

Centre

THE UNIVERSITY OF SYDNEY

# Country-level briefs

- As well as the above interface, each country will have a top-level report which summarizes and synthesises some of the key scenarios and outputs for that country, as well as data on coverage and burden-of-disease.
- Positions these predictions in relation to the WHO elimination strategy
- This report can follow a template with 'fill-in-the-blanks' sections based on data specific to that country.



In 2020, the World Health Assembly adopted the "triple intervention" strategy to achieve elimination of cervical cancer. Research showed that with this strategy could save tens of millions of lives and make global elimination achievable within the next century.

Since then COVID-19 has impacted health systems worldwide, and further work has now been performed to see how countries can best mitigate this and stay on the road to elimination.

## CERVICAL CANCER INCIDENCE AND MORTALITY IN [Country]

Cervical cancer is almost entirely preventable. However, in 2020, an estimated 342 000 women died from cervical cancer globally,<sup>1</sup> including 75 266 who died from the disease in [Country].

In [Country] cervical cancer is the 1st most common cancer in women, with 121 903 new cases (22.75 per 100,000 women) and 75 266 deaths (14.15 per 100,000 women) in 2020.<sup>1</sup>

It was predicted that without any intervention, a total of 3 566 228 women in India will die from cervical cancer by 2070 and 10 489 734 by 2120.<sup>2</sup>

## GLOBAL CERVICAL CANCER ELIMINATION STRATEGIES

In November 2020, the World Health Organisation (WHO) launched a Global Strategy to accelerate the elimination of cervical cancer as a public health problem, achieved by implementing the triple intervention targets (pillars) by 2030:

90%

of girls fully vaccinated with the HPV vaccine by age 15.

70%

of women screened with a high-performance test (such as the HPV test) by 35, and again by 45 years.

90%

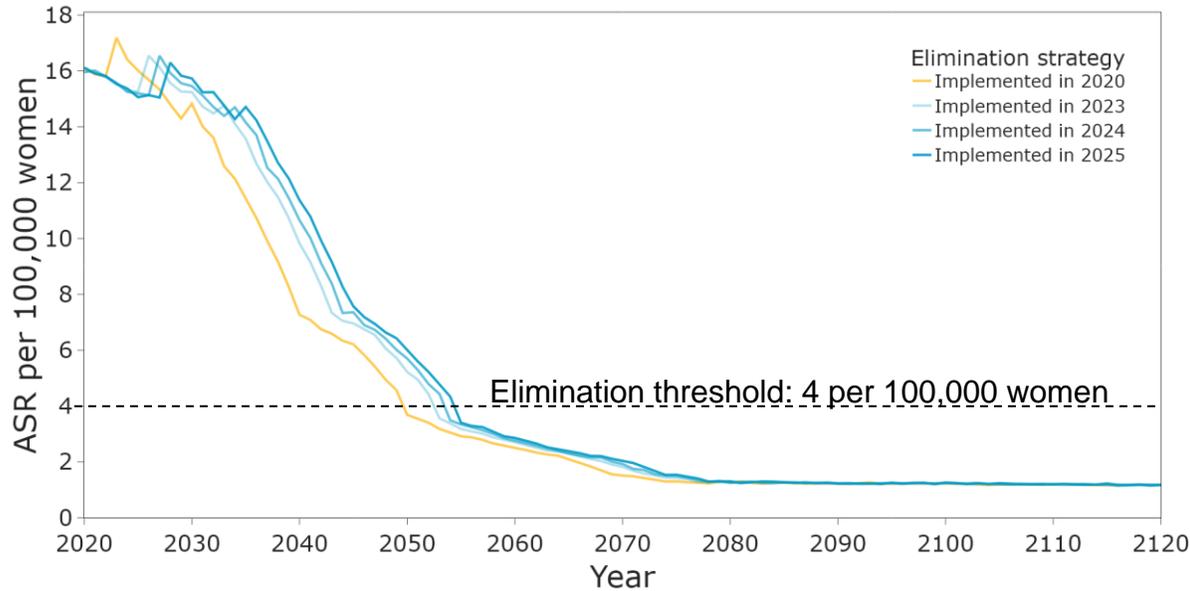
of women identified with cervical precancer or cervical cancer receive adequate treatment and care.<sup>2</sup>

If these interventions are implemented, [Country] could eliminate cervical cancer by 2 046 (Figure 1). If the three pillars of elimination are established, [Country] could avert over 98 812 deaths due to cervical cancer over the next century.

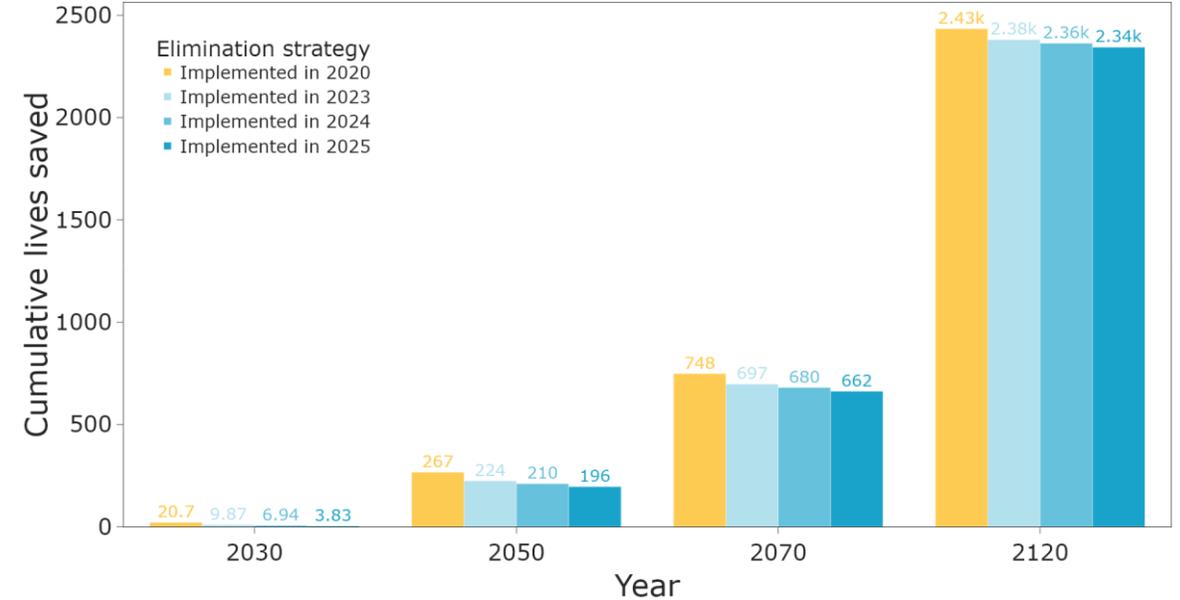
**\*\*NOTE\*\***  
**output values are demonstrative only and either based on preliminary modelling or representative 'placeholder' numbers**

# Preliminary Results for Vanuatu: Elimination strategy implemented in different years

Cervical cancer incidence



Cumulative lives saved

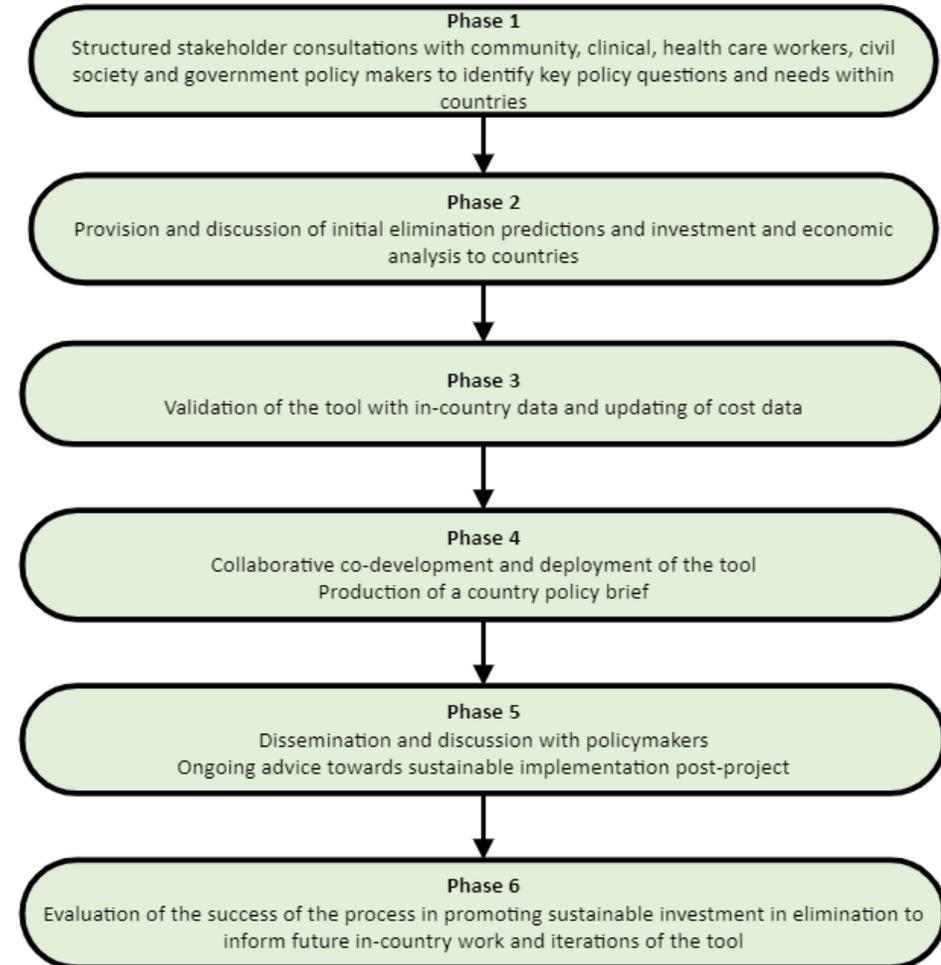


We present outputs under different years that elimination scale-up can occur

A 5-year delay in scale-up of the elimination targets can result in a difference of 90 women's lives saved by 2120.

# EPT Community of Practice

- Aims to foster collaboration and knowledge transfer between the technical team and users of the EPT
- Held quarterly – two meetings to accommodate different timezones.
- If you are interested in joining the Community of Practice meetings please contact Amy Pagotto ([amy.pagotto@nswcc.org.au](mailto:amy.pagotto@nswcc.org.au))



# BMGF Request for Proposals:

## Strengthening Health and Disease Modeling for Public Health Decision Making in Africa.

**Proposal submitted:** Using EPT to inform CaCx elimination decision-making in Africa  
Funding for modeling projects up to \$1m USD.

**Aim of our proposal:** To improve HPV vaccination programs and primary health service delivery to support the scale-up of HPV testing. Working with country stakeholders, we will validate, update, and deploy the EPT to enable policy makers to assess the health impact, health economic estimates including budget estimates and resourcing estimates of scaling-up targets on the path towards cervical cancer elimination.

This is a collaboration between institutions responsible for the implementation of cervical cancer prevention and control services in 5 African countries: Ghana, Ethiopia, Tanzania, Kenya, and Nigeria. In addition, broader outcomes of the project will be relevant to other high burden LMIC, especially African peers.

**Lead: Dr Muluken Gizaw, Ethiopia**



# Elimination of Cervical Cancer in the Western Pacific (ECCWP)

**TES LONG NEK BLONG BASKET BLONG BEBE HEMI SAVE SAFEM LAEP.**  
 1. Sapsu yu kat 30-54 yia, kam visitim Cervical Cancer Screening Clinic.  
 2. Tes hemi FRI mo yu karem resal mo tritmen long sem dei.  
 3. Sapsu tes hemi papiti, modarit blong wemwan i sapsu karem wemwan long sem dei i hemi mo referens yu i tes long wemwan blong tritmen yu.



**'Eliminate Cervical Cancer in Vanuatu'**  





**CERVICAL CANCER SCREENING CLINIC**

**Monday To Friday**  
**Time: 8am To 3pm**  
**Phone: 7789381/5007886**

- Sapsu yu kat 30-54 yia, kam visitim Clinic
- Tes hemi FRI mo yu karem resal mo tritmen long sem dei





# Elimination Partnership in the Indo-Pacific for Cervical Cancer (EPICC)





International Agency for Research on Cancer



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The Daffodil Centre

A partnership between



# WHO-commissioned systematic reviews on COVID-19 and cancer

Session 1: A/Prof Julia Steinberg (The Daffodil Centre), Dr Richa Shah (IARC)

Session 2: Ms Harriet Hui (The Daffodil Centre), Dr Richa Shah (IARC)



# Three systematic reviews were performed on behalf of WHO (building on prior work)

## 1. Risk of COVID-19-related death for people with cancer

- Aim: to determine whether people with cancer are at higher risk of COVID-19-related death than people without cancer

## 2. Magnitude of cancer care delays and disruptions during the COVID-19 pandemic

- Aim: to determine the impact of the COVID-19 pandemic on delays and disruptions in cancer care

## 3. Impact of strategies for mitigating delays and disruptions in cancer care due to the COVID-19 pandemic

- Aim: to determine the impact of strategies for mitigating delays and disruptions in cancer care due to COVID-19

# SR Working Group

**Central study team:** A/Prof Julia Steinberg, Dr Richa Shah, Ms Suzanne Hughes, Ms Harriet Hui, Dr Matthew Allsop, Mr Sam Egger, Ms Chelsea Carle, Dr Denise Campbell, Dr Peter Coxeter, Prof Michael David, A/Prof Michael Caruana, Dr Isabelle Soerjomataram, Prof Karen Canfell

**With contributions to title/abstract screening and/or full-text review from International Partnership for Resilience in Cancer Systems (I-PaRCS) members including:**

*COVID-19 death and cancer review*

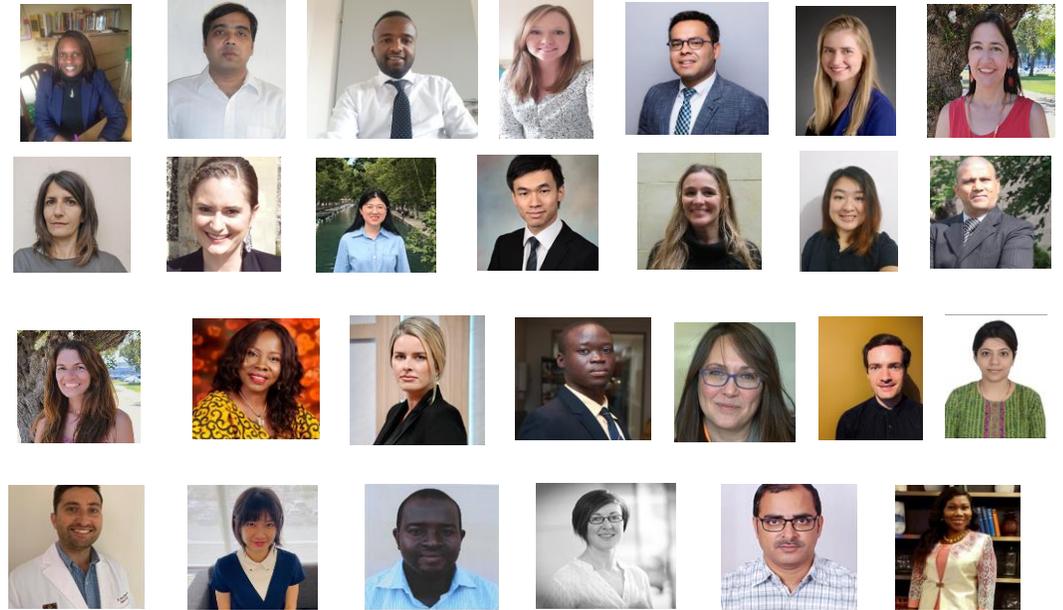
Dr Michael Shing Fung Lee, Dr Núria Vives, Dr Feixue Wei, A/Prof Tonia Onyeka, Dr Emma O'Dowd, Ms Maria Monroy Iglesias, Mr Derrick Bary Abila, Dr Musliu Adetola Tolani, Dr Giulia Carreras, Ms Marilina Santero Sosa, Dr Annet Nakaganda, Dr Poongulali Selvamuthu, Dr Charlene McShane, Mr Narhari Timilshina, Dr Maeve Mullooly, Dr Gemma Binefa, A/Prof Erich Kliewer, Prof Fabio Ynoe de Moraes, Dr Rebecca Landy, Dr Lisa Force, Dr Houda Bouhkeris, A/Prof Shruti Kakkar, A/Prof Ashutosh Kumar, A/Prof Sharon Hanley, A/Prof Isil Ergin, Prof Diama Vale, A/Prof Muluken Gizaw, Dr Ana Molina- Barcelo, Ms Gigi Lui, Ms Anna-Lisa Baker, Mr Ramnik Singh, Ms Fang Wan, Ms Yuqing Wang, Dr Rehana Abdus Salam, Ms Isabel Rewais

*Delays and Disruptions review and Mitigations review*

Dr Nader Hanna, Dr Allini Mafra, Dr Jean Niyigaba, Dr Robabeh Ghodssighassemabadi, Dr Loo Ching Ee, Dr Garcia Martinez Montserrat, Dr Ethna McFerran, Dr Suryakanta Acharya, Dr Nwamaka Lasebikan, A/Prof Katie Goldie, Dr Colleen McLoughlin, Dr Hanna Fink, Dr Oliver Lanselius, Dr Clara Julia Frick

**With other contributions from:**

Dr André Ilbawi, Dr Felipe Roitberg, Prof Raúl Murillo, Prof Richard Sullivan, Prof Mieke Van Hemelrijck, Dr Ophira Ginsburg, A/Prof. Tim Hanna, Prof. Stuart Peacock, Prof. Kelvin Chan, A/Prof Iris Lansdorp-Vogelaar, Dr Muhammed Aasim Yusuf, Dr Julie Torode, Mr Rami Rahal, Dr Ajay Aggarwal, Dr Freddie Bray



# COVID-19 death and cancer SR

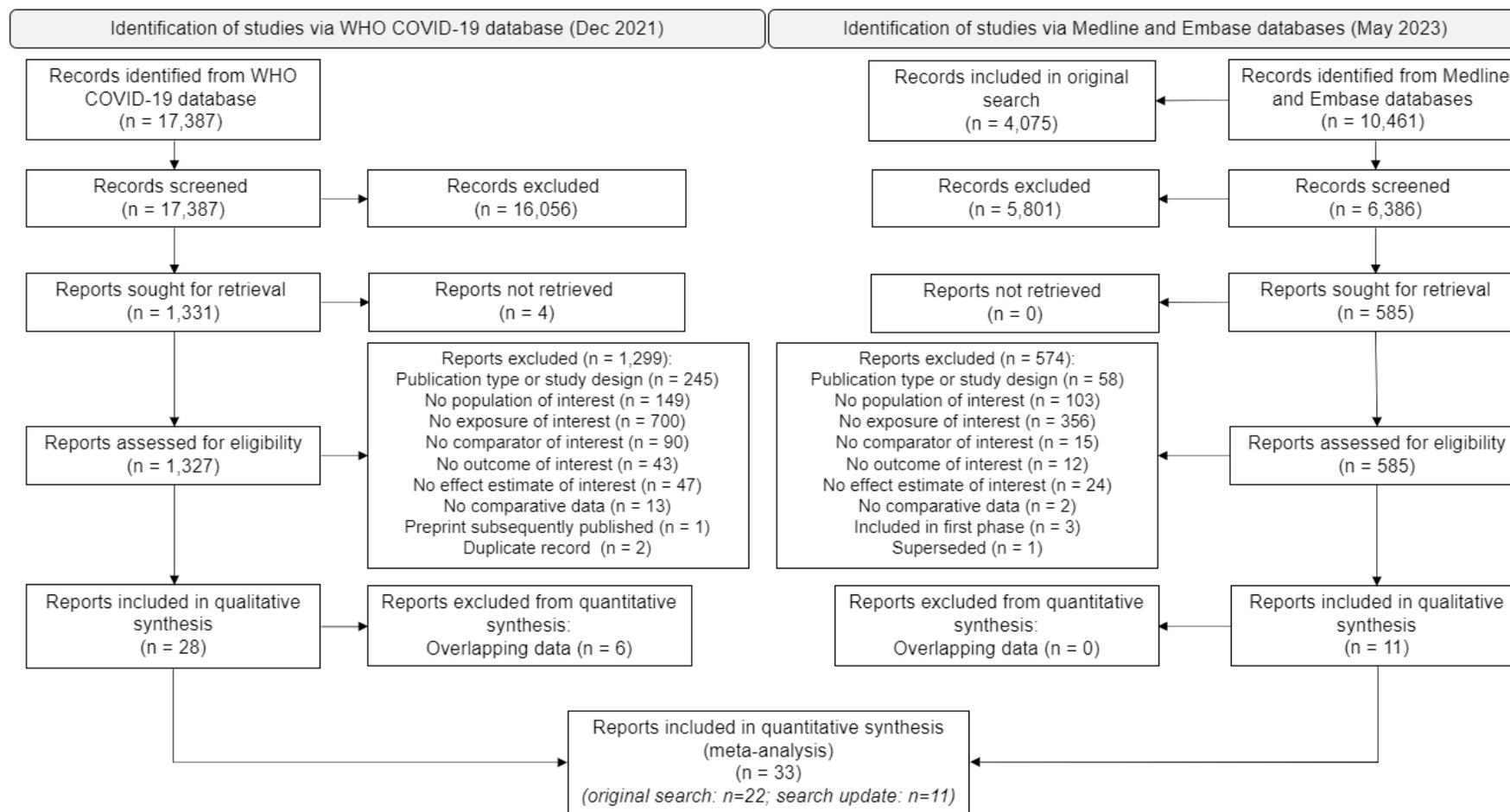
**Research question:** Are people with a pre-existing cancer diagnosis at higher risk of COVID-19-related death than people without a pre-existing cancer diagnosis?

- Work built on our review of early literature (Freeman *et al* 2022)
- Synthesized higher-quality studies for pre-COVID-19 vaccination period:
  - Focus on estimates by time since cancer diagnosis/treatment
  - Estimates adjusted for at least age and sex
- Separate analyses by study population (general population, all people with COVID-19, hospital inpatients with COVID-19) and effect estimate (OR/RR, HR)
- Consolidated available estimates for specific cancer types, metastatic cancers, non-metastatic cancers

V. Freeman<sup>^</sup>, S. Hughes<sup>^</sup>, C. Carle<sup>^</sup>, D. Campbell<sup>^</sup>, S. Egger, ... , D. O'Connell<sup>\*</sup>, J. Steinberg<sup>\*</sup>, K. Canfell<sup>\*</sup> (2022). Do COVID-19 patients with cancer have a higher risk of COVID-19-related death than those without cancer? A systematic review and critical appraisal of the early evidence. **Journal of Cancer Policy** , 33, 100340.

# COVID-19 death and cancer SR 2023 update: PRISMA Diagram

- Original search was done via WHO COVID-19 database in Dec 2021, with 17,387 unique title/abstract records
  - Updated search via Medline & Embase in May 2023, with another 6,386 unique title/abstract records
- In total:**
- **23,773** unique titles/abstract records
  - **33** studies included in quantitative synthesis



# COVID-19 death and cancer SR: overview of main results (in press)

Analysis	Population	Cancer type <sup>1</sup>	Measure of effect	Number of studies	People with cancer <sup>2</sup> : dead	People with cancer: total	Comparator: dead	Comparator: total	Total	Pooled/reported effect estimate (95%CI)	I <sup>2</sup> (p-het)	Risk of bias summary*
1	General population	Any	HR	1	220	79,964	9,132	16,421,922	17,278,392	1.72 (1.50-1.97)	n/a	1 M
2	All people with COVID-19	Any	HR	1	54	569	171	7021	7590	1.62 (1.19-2.20)	n/a	1 H
3	Hospital inpatients with COVID-19	Any	HR	5	259	10150	1743	71500	81650	1.34 (1.19-1.50)	37% (0.17)	1 M, 4 H
11	General population	Any	OR	3	1,240	158,311	29301	25,422,651	25,580,962	1.48 (1.36-1.61)	0% (0.59)	2M, 1 H
12	All people with COVID-19	Any	OR	5	1,199	8,271 <sup>^^</sup>	1,3778	556,524 <sup>^^</sup>	564,795 <sup>^^</sup>	1.58 (1.41-1.77)	58% (0.05)	4M, 1 H
13	Hospital inpatients with COVID-19	Any	OR	8	17,837 <sup>^^</sup>	77,654	29,5094 <sup>^^</sup>	2,022,283	2,099,937	1.66 (1.34-2.06)	98% (<0.001)	4M, 4 H
34	All people with COVID-19	Non-metastatic	OR	2	245	2,523	1,278	36,528	3,9051	1.12 (0.65-1.93)	84% (0.01)	1 M, 1 H
35	Hospital inpatients with COVID-19	Non-metastatic	OR	4	3,956	13,982	45,466	240,169	254,151	1.39 (1.19-1.63)	88% (<0.001)	2 M, 2 H
36	All people with COVID-19	Metastatic	OR	2	51 <sup>^</sup>	1,891	1,245 <sup>^</sup>	284,212	286,103	2.02 (1.74-2.35)	11% (0.29)	1 M, 1 H
37	Hospital inpatients with COVID-19	Metastatic	OR	4	2,113 <sup>^^</sup>	7,520	43,924 <sup>^^</sup>	266,625	274,145	2.50 (1.81-3.45)	94% (<0.001)	3 M, 1 H

- across all cancers together, higher risk of COVID-19-related death for **people with recent cancer** compared to those without (**aHR/aOR 1.5-1.7**)
  - *more on time since diagnosis/treatment in the following*
- risks more elevated for **metastatic** (**aOR ~1.7-2.6**) than non-metastatic cancers (aOR ~1.1-1.4)

# COVID-19 death and cancer SR: overview of main results (in press)

Analysis	Population	Cancer type <sup>1</sup>	Measure of effect	Number of studies	People with cancer <sup>2</sup> : dead	People with cancer: total	Comparator: dead	Comparator: total	Total	Pooled/reported effect estimate (95%CI)	I <sup>2</sup> (p-het)	Risk of bias summary*
4	General population	Haematological	HR	1	43	8,704	10,590	17,178,486	17,187,190	2.80 (2.08-3.77)	n/a	1 M
5	All people with COVID-19	Haematological	HR	1	22	170	3073	115,750	115,920	2.26 (1.48-3.45)	n/a	1 H
14	General population	Haematological	OR	2	140	32,497	21,130	25,257,249	25,406,851	2.13 (1.68-2.68)	43% (0.18)	1M, 1 H
15	All people with COVID-19	Haematological	OR	1	NR	2,224	NR	253,179	255,403	1.48 (1.30-1.68)	n/a	1 M
16	Hospital inpatients with COVID-19	Haematological	OR	1	470	1,389	13,057	83,329	84,718	2.20 (1.97-2.46)	n/a	1 H
6	All people with COVID-19	Lung	HR	1	30	395	3014	114,598	114,628	1.42 (0.99-2.04)	n/a	1 H
9	Hospital inpatients with COVID-19	Lung	HR	1	233	621	13,328	86,887	87,508	4.00 (3.50-4.57)	n/a	1 L
19	General population	Lung	OR	1	34	6,537	4,566	7,901,764	7,908,301	3.4 (2.4-4.7)	n/a	1 H
28	All people with COVID-19	Lung	OR	1	NR	887	NR	253,179	254,066	1.85 (1.58-2.17)	n/a	1 M

- risks elevated for **haematological** (aHR/aOR ~2.1-2.8) and **lung** (aHR/aOR ~3.4-4.0) cancers
- some evidence that risks elevated for liver and pancreatic cancers (1 study each only)
- mixed evidence breast, colorectal, prostate cancers

# Covid-19 death and cancer: Review conclusions

- Prior to COVID-19 vaccination, risk of COVID-19 related death was higher for people with recent cancer, with risk depending on cancer type and time since diagnosis/treatment.
- More research is needed on how the risk depends on age, sex, cancer type, stage, time since diagnosis, cancer treatment administered and time since treatment, and COVID-19 virus variant, vaccination and treatment (e.g. through in-depth analyses of population-wide studies linking cancer and immunisation registries).
- We hope our work can provide a benchmark to inform future comparisons and evidence-based decision-making in the era of new COVID-19 variants and vaccines.



# The global impact of the COVID-19 pandemic on delays and disruptions in cancer care services & COVID-19 mitigation strategies and their impact on cancer service disruptions

R Shah, NM Hanna, CE Loo, M David, AM da Costa, H Fink, E McFerran, M Garcia, R Ghodssighassemabadi, S Acharya, J Niyibaga, O Langselius, CJ Frick, N Lasebikan, J Vignat, J Steinberg, S Hughes, CE Kircher, CL Goldie, S Egger, R Sullivan, O Ginsburg, F Bray, M Caruana, H Hui, K Chiam, J Cylus, AM Ilbawi, K Canfell, I Soerjomataram

# COVID-19 pandemic, cancer services, and mitigation strategies

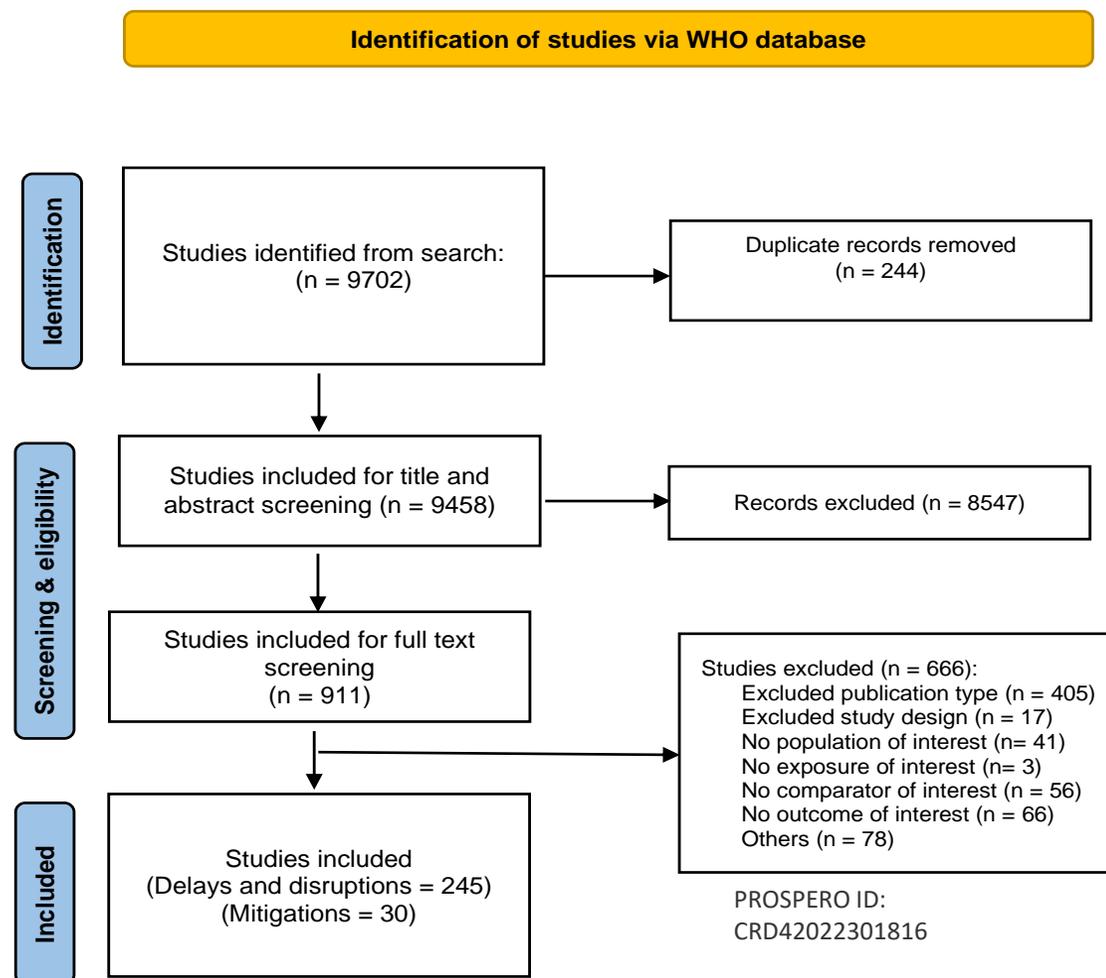
## Aims:

- To determine the impact of the COVID-19 pandemic on delays and disruptions (screening, cancer diagnostic tests, diagnosis, and treatment) in cancer care
- To summarise and determine the impact of strategies for mitigating delays and disruptions in cancer care due to COVID-19

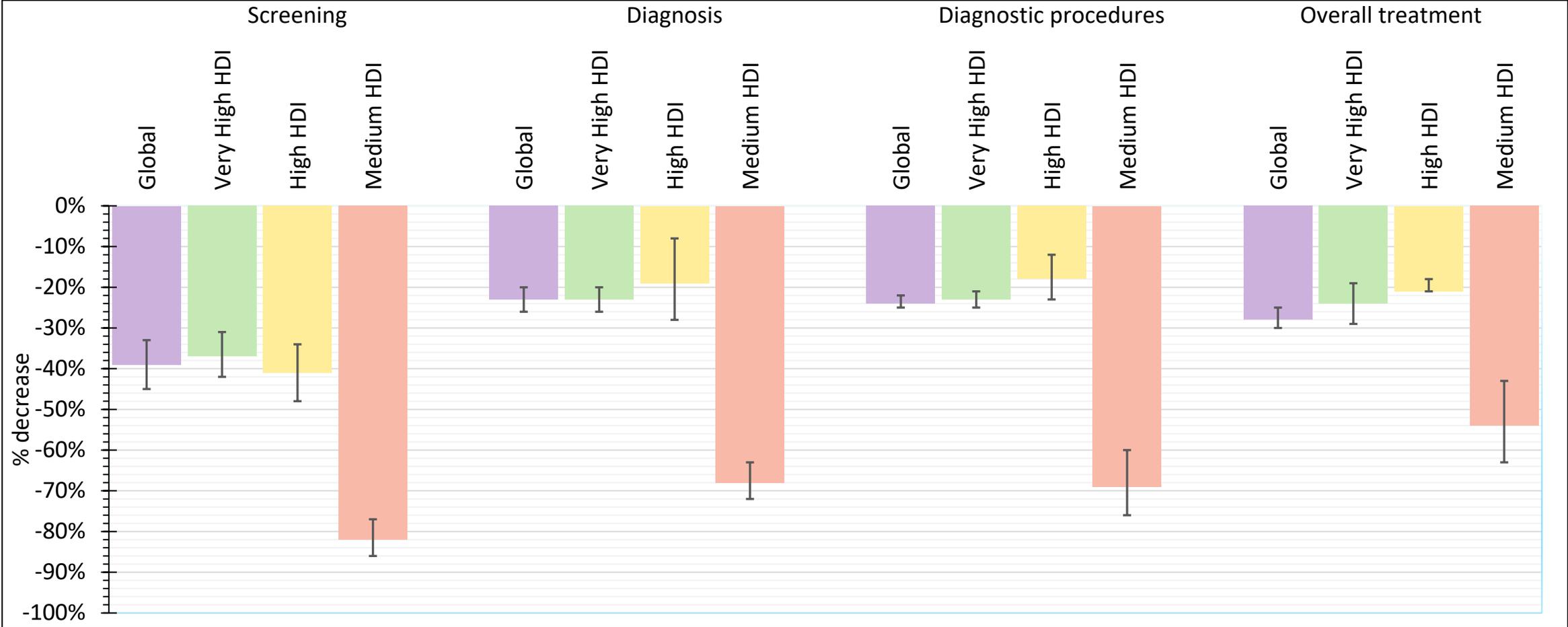
## Results:

- Search of WHO COVID-19 database until 17 April 2022
- 9702 unique title/abstract records
- 245 studies from 46 countries included in quantitative synthesis of service disruptions
- 30 studies from 16 countries included in qualitative assessment of mitigation strategies

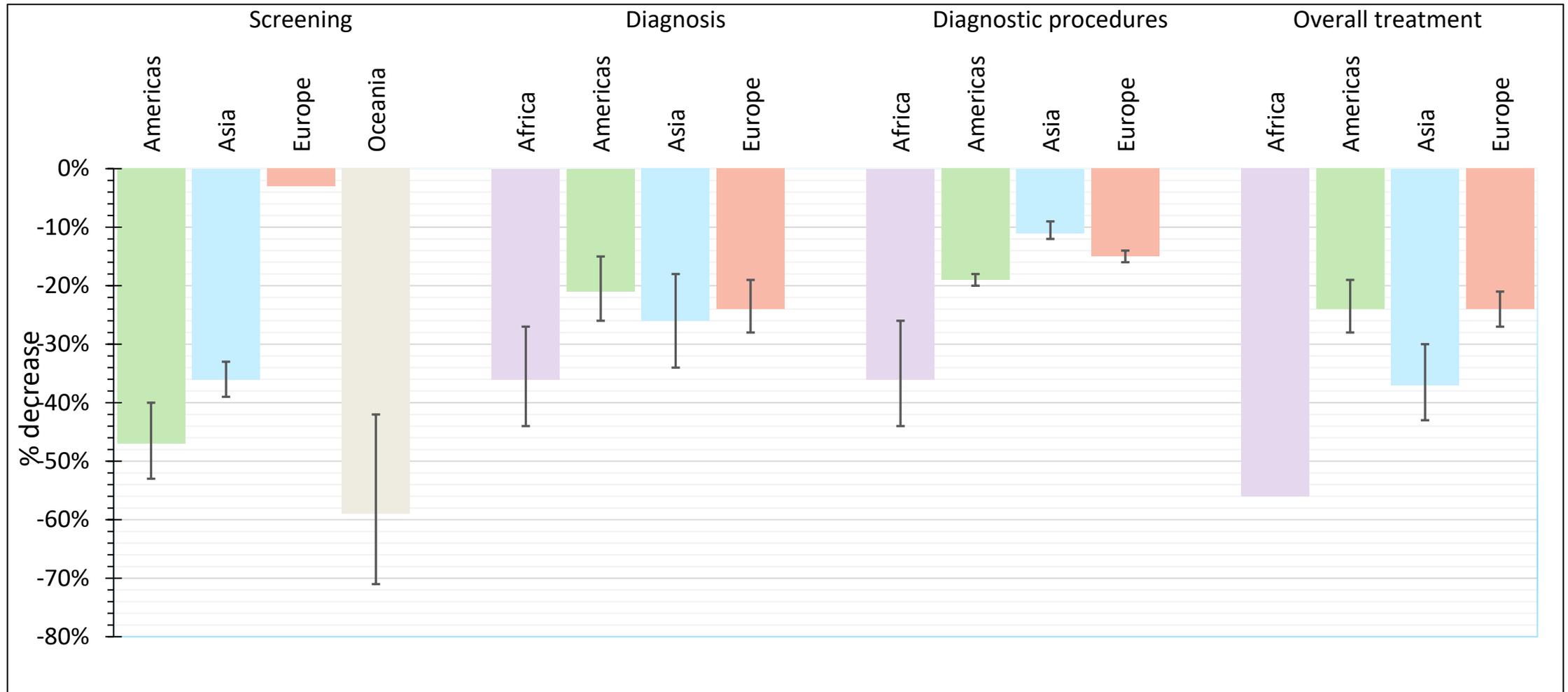
## PRISMA flow diagram for selection of included studies



# Reductions in cancer care services by HDI

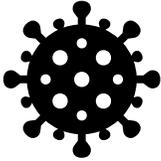


# Reductions in cancer care services by regions



# Mitigation strategies

Service delivery, Governance, Resource generation, and Financing



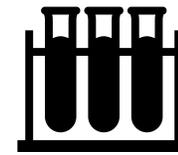
## *Infection control*

- Compulsory use of masks
- Social distancing in wards and waiting areas
- Regular disinfection
- PPE worn by healthcare providers
- Patients tested for COVID-19 pre-admission



## *Human resources management*

- Creation of COVID units
- Dedicated staff for COVID care
- Clinical and non-clinical staff separated
- Surgical and oncology staff not involved in COVID care
- Modified duty hours to avoid cross-contamination



## *Screening and diagnostic tests*

- Use of SMS and phone for screening invitations
- Teleconsultations
- Sending photos of skin lesions
- SMS reminders



## *Treatment*

- Modified cancer treatment regimens
- Oral drugs preferred over intravenous chemotherapy
- Radiotherapy postponed, if possible
- Radiotherapy performed in high-risk cancers
- Hypofractionated radiotherapy preferred
- Larger intervals between two treatments

# International Cancer Benchmarking Partnership

Ms Harriet Hall

29th November 2023



# Overview of the ICBP



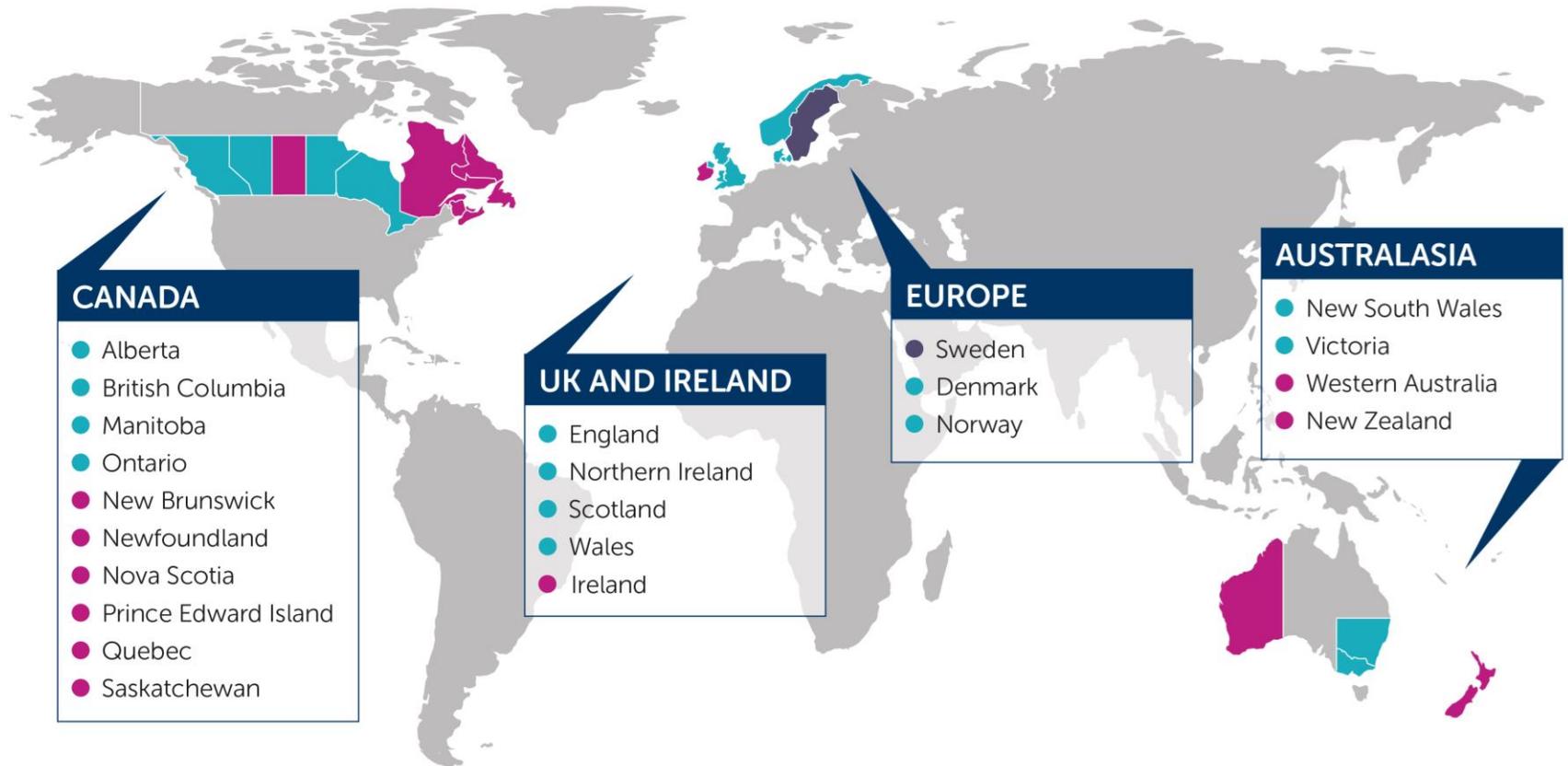
Partnership of clinicians, researchers, policy makers and data experts.



Explores differences in cancer survival and outcomes and factors that may be contributing.



Provides evidence for policy and practice change – to improve patient outcomes.



Phase 1 only



Breast

Phase 1 and 2



Colon



Lung



Ovarian



Rectal

Phase 2 only



Liver



Oesophageal



Pancreas



Stomach

## Members of the ICBP have:

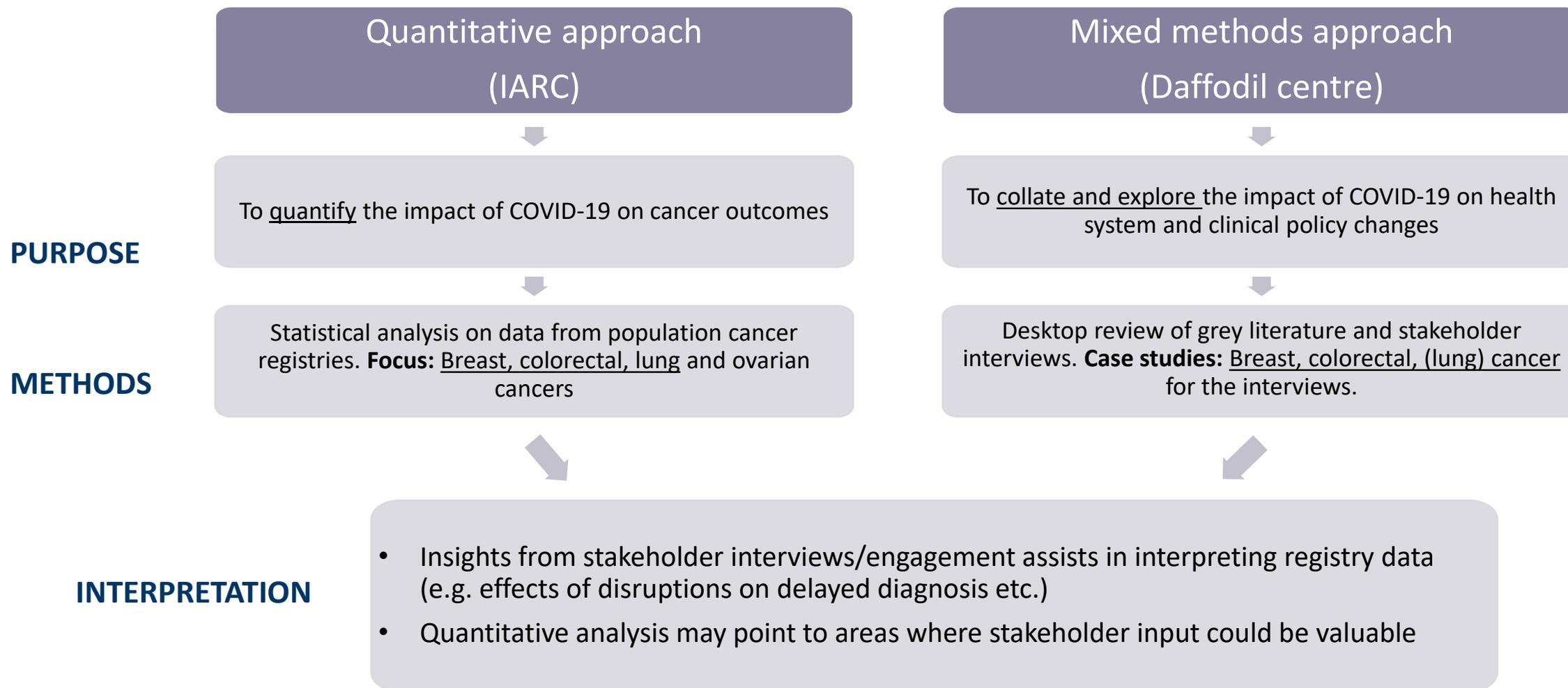
- Population based cancer registries
- Similar spend on healthcare
- Universal access to healthcare

## The Cancer sites chosen:

- Include relatively common cancers and cancers that are hard to treat in high income countries
- Experience significant variation in cancer survival
- Contribute to overall burden of disease in high income countries

# COVID-19 Commissioned Research

## Evaluating the impact of COVID-19 pandemic on different aspects of cancer control and mitigation strategies in the ICBP jurisdictions



# ICBP Commissioned projects:

## 1) ICBP-COVID19: Assessing the COVID-19 impact on cancer in the International Cancer Benchmarking Partnership

Dr Isabelle Soerjomataram and

Dr Eileen Morgan



Centre international de Recherche sur le Cancer



The ffodil Centre



# Teams

## ICBP Programme Management Team

Ms Harriet Hall, Ms Samantha Harrison, Ms Maya Vithyananthan

## Daffodil Centre

Prof. Karen Canfell, Dr Karen Chiam, A/Prof. David Smith, Dr Visalini Nair-Shalliker, Ms Harriet Hui, Dr David Mizrahi, Prof Alexandra Martiniuk, Ms Rani Radhika Chand, Mr Albert Bang, Ms Elizabeth Kennedy, Prof Kate White

## University of Sydney (USYD) and collaborators

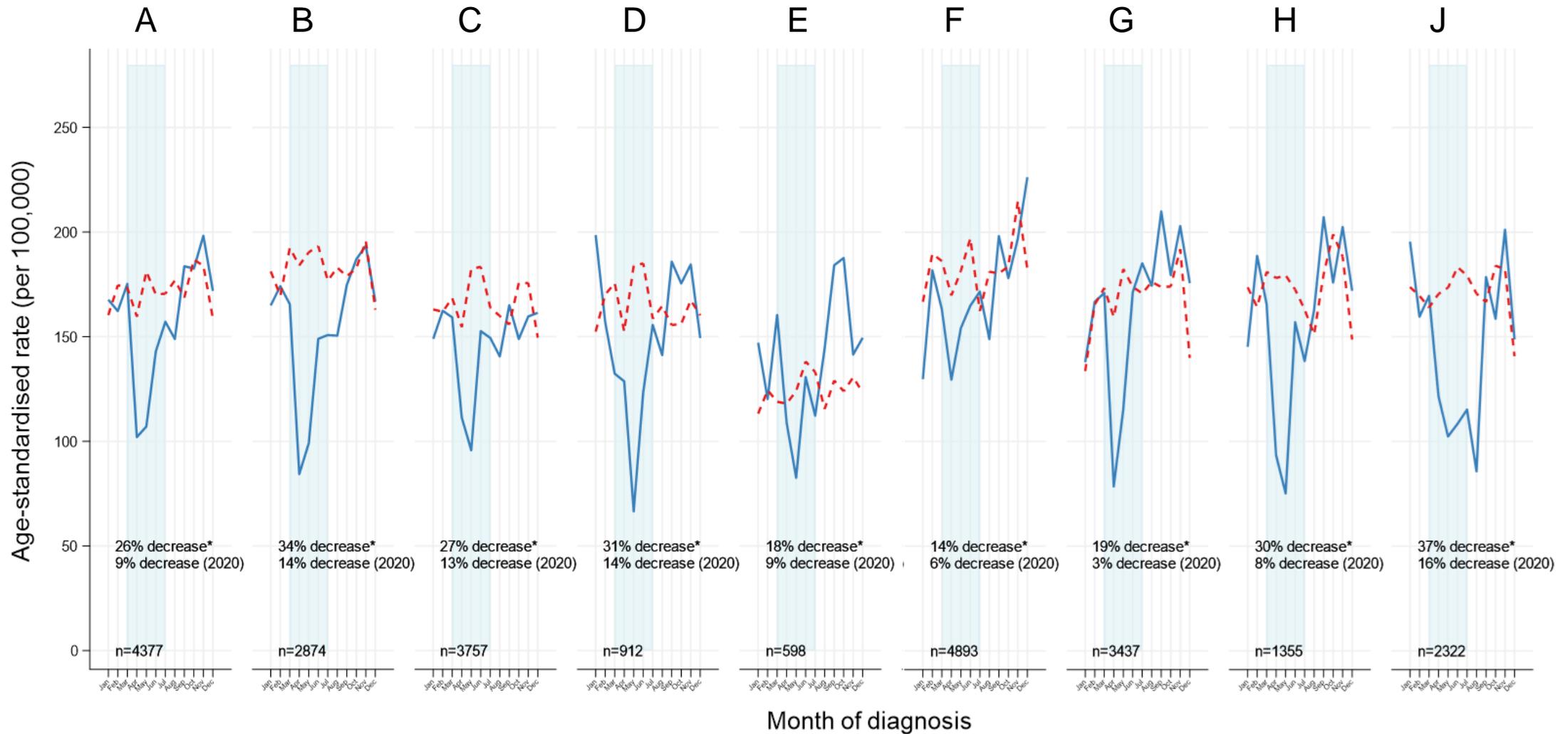
Dr Carolyn Mazariego (UNSW), Dr Meredith Tavener (University of Newcastle), Ms Methmi Perera (USYD) , Dr Kelvin Chan (Canadian Centre for Applied Research in Cancer Control; ARCC), Dr Stuart Peacock (ARCC)

## IARC

Dr Isabelle Soerjomataram, Ms Aude Bardot, Dr Eileen Morgan, Dr Mark Rutherford, Oliver Langselius, Ms Katuska Veselinovic

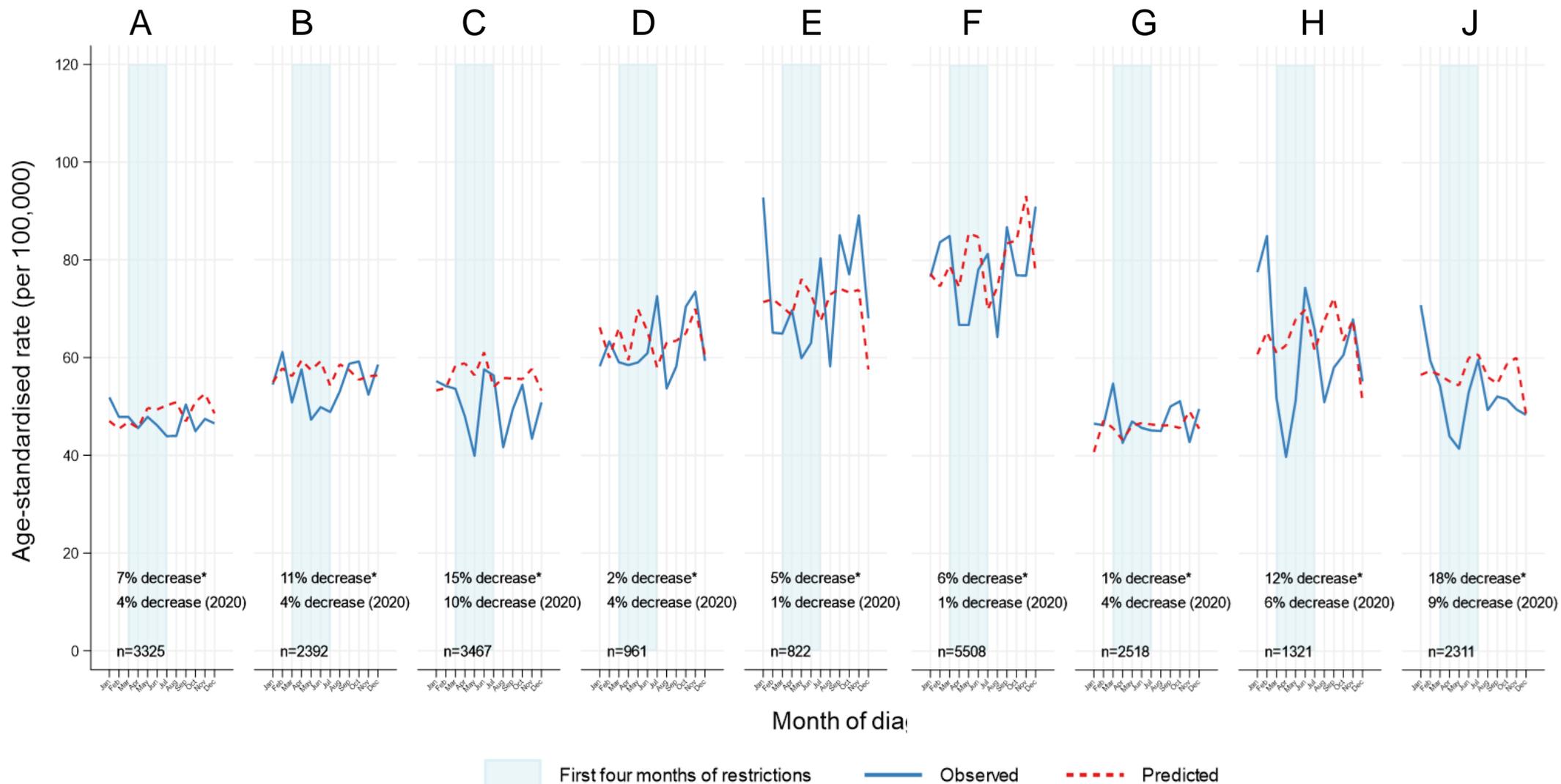
*Acknowledgement: Vale Emeritus Professor Jane Young*

# Findings: Impact of COVID-19 Pandemic on cancer diagnosis – Breast cancer



First four months of restrictions
  Observed
  Predicted

# Findings: Impact of COVID-19 Pandemic on cancer diagnosis – Lung cancer



# Conclusion: Impact of COVID-19 Pandemic on cancer in ICBP jurisdictions

- Reduced cancer diagnosis across and within countries, variation by
  - Cancer sites, age groups
- Stage shift
  - Maybe, for lung cancer
- Strong impact during the first wave (2020)
  - Rebound with difference in magnitude and length of impact
  - 2021?
- Impact on mortality, on survival
  - Resilient health system
  - Low and middle income settings?

## ICBP Commissioned projects:

2) A review of health system and clinical policy responses to the COVID-19 pandemic and their impact on cancer control across jurisdictions in the International Cancer Benchmarking Partnership

Dr Karen Chiam



Centre international de Recherche sur le Cancer



The ffodil Centre



# Project Summary (Mixed-methods)

## Aim

Collate and explore the impact of COVID-19 on health system and clinical policy changes in the ICBP jurisdictions.

## Mixed-methods: For high level review

1. COVID-19 lockdown mapping
  2. Desktop review of grey literature
  3. Surveys and stakeholders' interviews
- Across all jurisdictions, cancer types and services

## Case study selection framework

1. Learnings to all jurisdictions
2. Insights to multiple cancers
3. Complements IARC quantitative work
4. Considers NPI severity
5. Feasible within project resource & time capacity



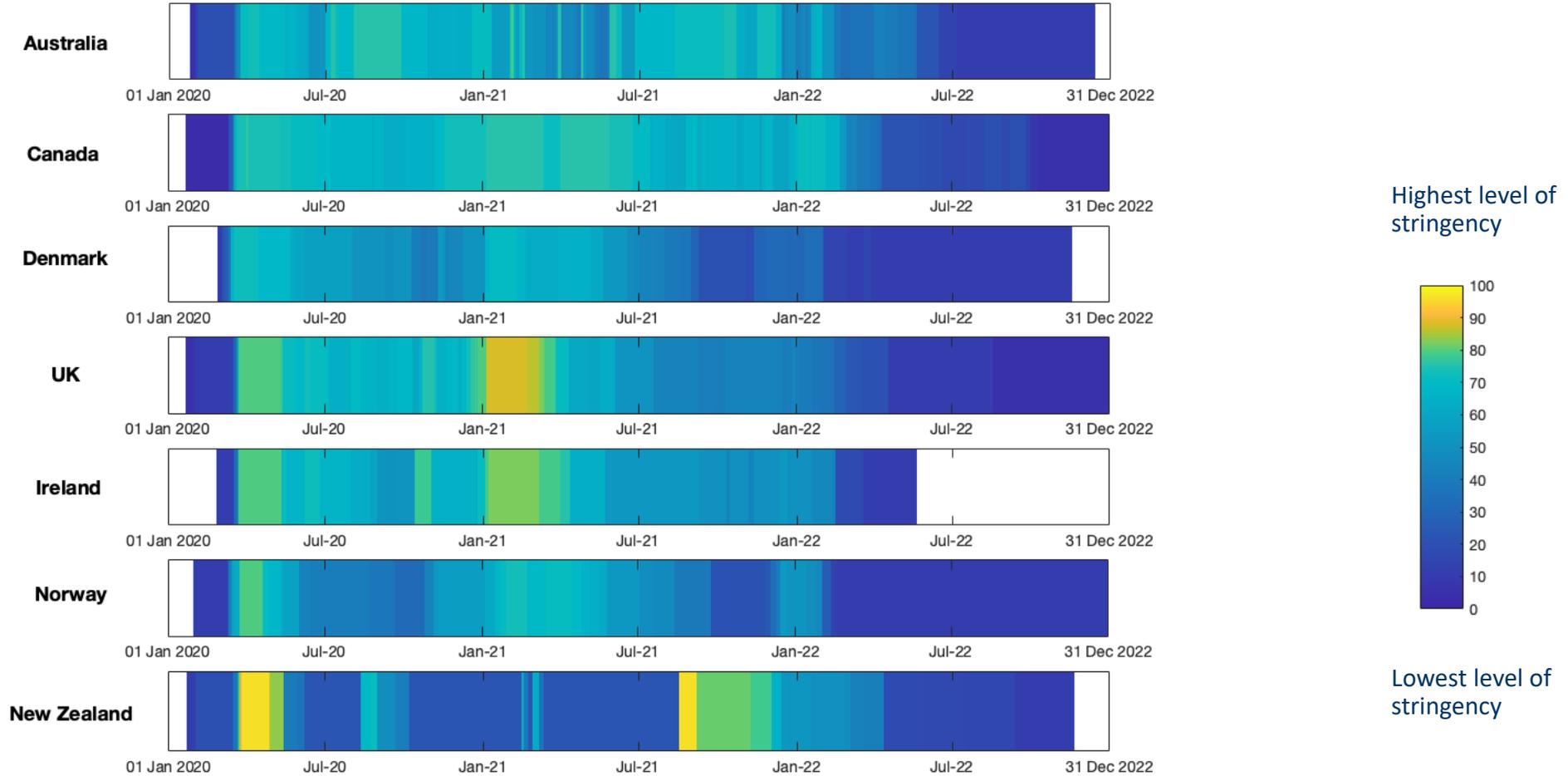
## Targeted information collection: 3 case studies using exemplar jurisdictions

Stakeholders' interviews to compare and contrast experiences of:

1. Breast cancer screening services in Australia (NSW, WA, VIC) and New Zealand
2. Lung cancer diagnostic pathway in Ireland and UK (and potentially Ontario)
3. Changes to radiotherapy treatment for colorectal cancer in Wales and Denmark

# Context for health service disruptions:

Latest update on stringency of social restrictions in Jan 2020- Dec 2022



# Updates at last consortium meeting

## *Overview on selected grey literature outputs*

- Cancer screening services disruptions and mitigations (all ICBP jurisdictions)
- Cancer treatment services disruptions and mitigations (UK)

# Covid-19 Disruptions to Cancer Services

## United Kingdom

### Service disruptions in 2020



Breast and bowel screening programmes more severely impacted than the cervical cancer screening programme

In March 2020, all four UK jurisdictions temporarily suspend specific cancer services. This included:

- Breast, cervical and bowel cancer screening programmes.
- Elective surgery was suspended from March 2020 for at least 3 months in England, Wales and Scotland.

### Common ongoing challenges

#### Elective Surgery



Elective surgery experienced ongoing and recurring episodes of disruption in specific hospitals and regions across all four UK jurisdictions

#### Workforce shortage



Ongoing challenge in the shortages of healthcare workers and resources, including outdated medical equipment and critical care capacity

### Common mitigation strategies

- Prioritizing of 'high-risk' individuals and/or urgent cancer cases
- New models of service delivery: Telehealth, expedited roll-out of electronic prescriptions, and establishment of new and specialized facilities (e.g. Covid-19 free sites and surgical hubs), change in radiotherapy and chemotherapy regimens
- Investments to upgrade healthcare resources e.g. IT infrastructure and medical equipment

### Gaps and uncertainties



- Extent of the disruptions in primary care and diagnostic services
- Effectiveness of recovery and mitigation strategies implemented

# Selected Interim Findings

## General interview component:

- Selected comparative outputs across the 10 jurisdictions, focusing on common experiences and changes across the different time periods

# Highlights of Phase 1 (2020)- Common experiences

TOPICS	A	B	C	D	E	F	G	H	I	J
PRIORITISING SERVICES	✓	✓	✓	✓	✓		✓	✓	✓	✓
DISRUPTIONS TO SCREENING	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
STAFF REDEPLOYMENT	✓	✓	✓	✓	✓		✓		✓	✓
CENTRALISED DECISION MAKING	✓	✓	✓	✓	✓	✓			✓	
PPE SHORTAGES	✓	✓	✓		✓	✓	✓	✓		✓

*\*Individual jurisdictions de-identified and represented as A to J.*

# Highlights of Phase 2 (2021)- Common experiences

TOPICS	A	B	C	D	E	F	G	H	I	J
STAFF SHORTAGES	✓	✓	✓		✓			✓	✓	✓
VACCINE AVAILABILITY	✓	✓		✓	✓	✓	✓	✓	✓	✓
WAIT TIMES AND BACKLOG				✓	✓			✓	✓	✓
BURNOUT		✓					✓	✓	✓	✓

*\*Individual jurisdictions de-identified and represented as A to J.*

# Highlights of Phase 3 (2022)- Common experiences

TOPICS	A	B	C	D	E	F	G	H	I	J
BURNOUT	✓	✓	✓		✓	✓	✓	✓	✓	✓
CHANGING MODELS OF CARE	✓	✓			✓				✓	✓
RATIONALISATION	✓			✓	✓			✓	✓	✓
(REFLECTIONS ON) LESSONS LEARNED	✓	✓	✓		✓	✓	✓	✓	✓	✓

*\*Individual jurisdictions de-identified and represented as A to J.*

# Conclusions to date

## Phase 1 (2020)

PPE shortages

Disruptions to screening

Staff redeployment

Centralised decision  
making

Prioritising services

## Phase 2 (2021)

Staff shortages

Wait times and backlogs

Burnout

Vaccine availability

## Phase 3 (2022)

Burnout

Changing models of care

Rationalism

Lessons learnt

# Multi-Country Collaborative Lung Cancer Working Group.

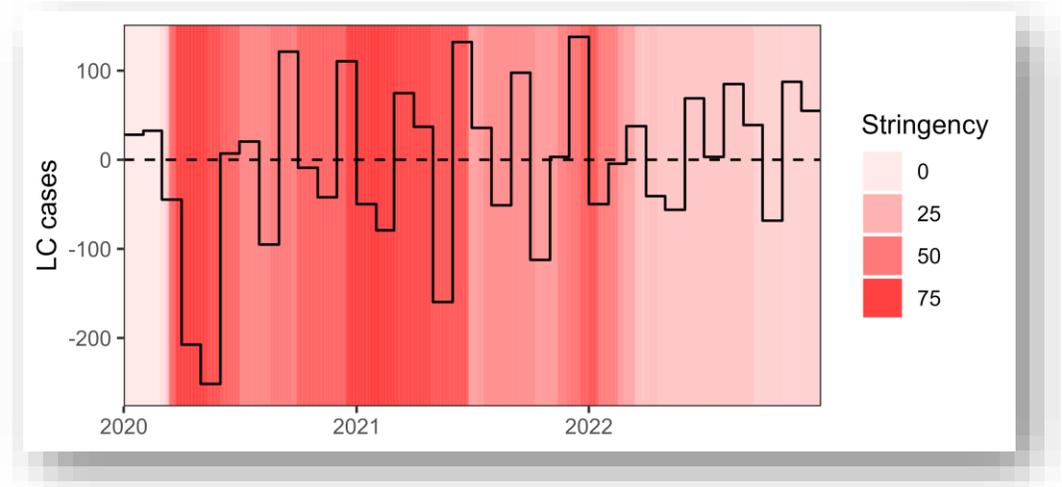
Dr Preston Ngo (The Daffodil Centre)

# Why lung cancer?

- COVID-related disruptions to cancer screening served as a “natural experiment.”
- Disruptions with no subsequent changes to mortality might support less aggressive screening.
- Lung cancer as a useful comparison:
  - Noticeable disruptions in some countries
  - Few population-level screening programs
  - *Very low chance of overdiagnosis*

# What do the data say?

- Impact of pandemic varied internationally
  - Netherlands: Increase in stage IV diagnoses in 2021
  - Canada: Drop in lung cancer incidence and surgery
  - Australia: Minimal impact in diagnoses / services
  - Brunei: No evident impact
  
- Mortality data limited in affected jurisdictions:
  - Netherlands: No evident impact
  - Canada: No public lung cancer-specific data
  - Australia: No evident impact
  - Brunei: No evident impact



Monthly diagnoses of lung cancer in the Netherlands.  
<https://iknl.nl/monitor/covid-19-en-longkanker>

# We need more data!

- Data casts doubt on “natural experiment” concept, but evidence is still thin.
- Expressions of interest for any countries with relevant data:
  - Lung cancer incidence.
  - Disruptions to lung cancer care.
  - Lung cancer mortality.
- Acknowledgements to:
  - Ethna McFerran
  - Kevin ten Haaf
  - Sok King Ong
  - Stuart Peacock
  - Talía Malagón
  - Tonia Onyeka

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# Cancer Screening project team updates

Prof Iris Lansdorp- Vogelaar

## Overview

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

# Breast cancer screening, project team update.

Session 1: Dr Jonine Figueroa (NCI/NIH)

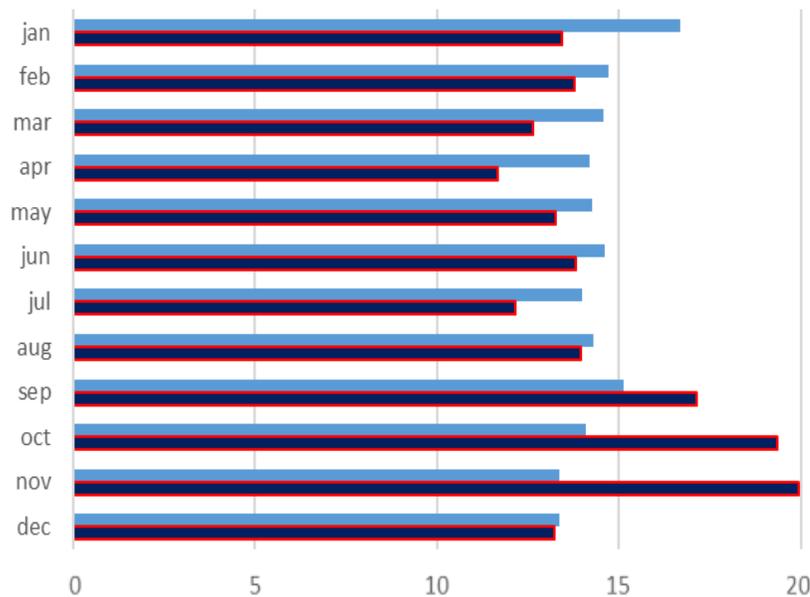
Session 2: A/Prof Carolyn Nickson (The Daffodil Centre)



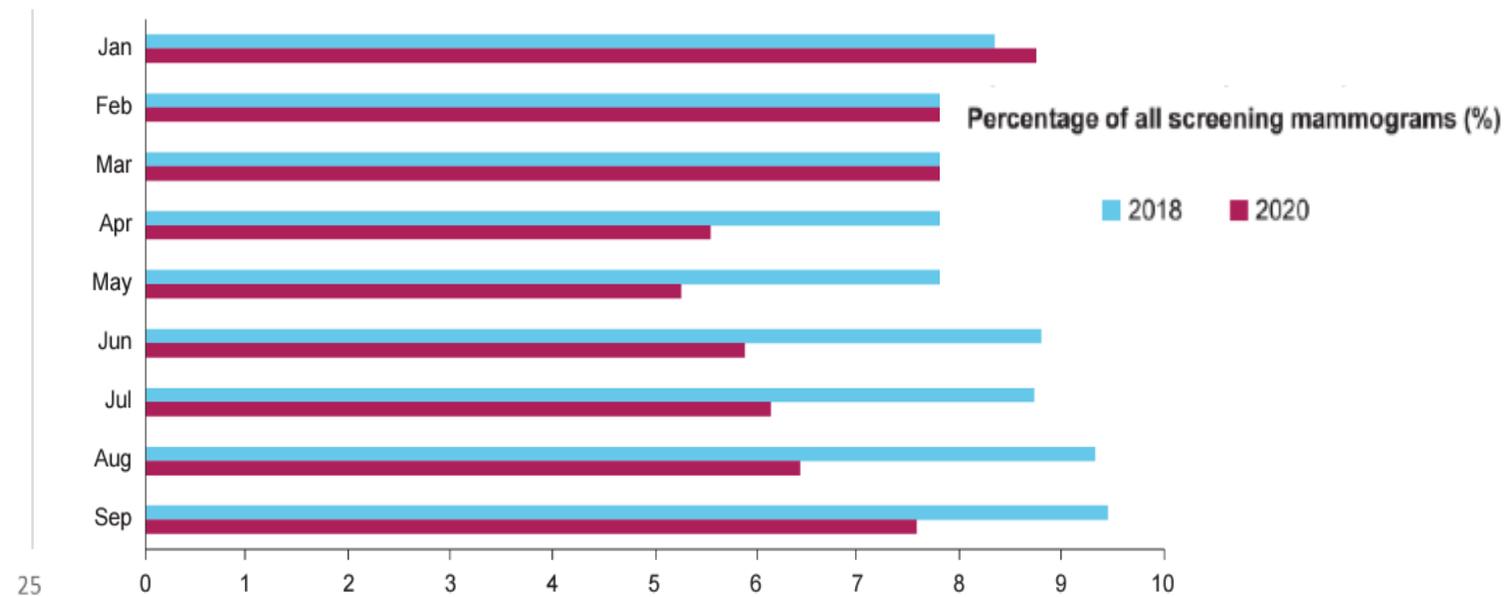
# COVID-19 AND MAMMOGRAPHY SCREENING

## A COMPARISON BETWEEN AUSTRALIA AND DENMARK

- Periodic marked reductions in screening throughout the pandemic, with notable variation between countries in terms of first versus subsequent round screening during recovery
- A 'natural experiment' expected to correlate with screening and cancer outcomes
- High-quality data from both settings currently under analysis
- Within-country comparisons also being explored



DK



AU

# Covid-19 effects on mammography screening a comparison between Australia and Denmark

- How did the profile of screening participants change?
  - first versus subsequent
  - age differences
  - socio-economic factors
- How did the profile of screen-detected cases change?
  - proportion of invasive/DCIS
  - proportion of small tumors
  - proportion without nodal involvement

# WG2 Breast

- Reagan Lee, Wei Xu, Marshall Dozier, Ruth McQuillan, Evropi Theodoratou, Jonine Figueroa (2023) **A rapid review of COVID-19's global impact on breast cancer screening participation rates and volumes from January to December 2020** eLife 12:e85680
- Nickson C, Smith MA, Feletto E, Velentzis LS, Broun K, Deij S, Grogan P, Hall M, He E, St John DJ, Lew JB, Procopio P, Simms KT, Worthington J, Mann GB, Canfell K. **A modelled evaluation of the impact of COVID-19 on breast, bowel, and cervical cancer screening programmes in Australia.** Elife. 2023 Apr 6;12:e82818. doi: 10.7554/eLife.82818. PMID: 37022767; PMCID: PMC10079286.

# Cervical screening in high income countries, project team update.

Prof Karen Canfell (The Daffodil Centre)

# WG2 Cervix – Activities

## Research Activities

1. Smith *et al.* Impact of disruptions and recovery for established cervical screening programs across a range of program designs, using COVID-19 as an example: a modelled analysis. Preventive Medicine 2021
2. Castanon *et al.* Cervical screening during the COVID-19 pandemic: optimising recovery strategies. Lancet Public Health. 2021
3. Burger *et al.* Health impacts of COVID-19 disruptions to primary cervical screening by time since last screen: A model-based analysis for current and future disruptions. eLife. 2022

## Dissemination



<https://www.hpworld.com/>

## Key insights

Box 1: Groups who could potentially be prioritised in catch-up

### Additional cancer cases due to disruptions were more common in:

- People due to attend for surveillance, colposcopy or precancer treatment (Figure 1)
- People who were already overdue for screening
- People aged 30-49 years, especially those aged 30-39 years (including in settings where this age group had previously been offered HPV vaccination) (Figure 2)
- People whose last screening test was cytology (compared to HPV)

# I-PaRCS on the horizon

- Potential new and emerging ideas
- We greatly encourage all interested members to reach out and engage in the new work oriented around building resilience in cancer systems. If you would like to be involved in any current project teams, or have new project ideas you would like to propose, please contact Secretariat ([iparcs@nswcc.org.au](mailto:iparcs@nswcc.org.au))

# Thank you!

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