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## **IARC'S COVID-19 AND CANCER INITIATIVE (IARC-C19): A GLOBAL CANCER COMMUNITY APPROACH**

### **INTRODUCTION**

1. As of early-December 2021, almost 5.3 million deaths have been attributed to the global pandemic of coronavirus disease 2019 (COVID-19). Rather than a transient outbreak, the coronavirus pandemic has over the last 18 months played out as a series of waves, with surges in new cases of COVID-19 followed by declines. The pandemic has significantly transformed our daily lives and has forced countries around the world to implement nationwide lockdowns and containment measures lasting for several weeks to months to control the spread of the virus. Control measures have directly and indirectly impacted patients with cancer. Early studies were, by definition, not informed by the evolution of the pandemic that continues to impact countries. Thus, there is an urgent need for studies that evaluate the indirect impact of delays on cancer diagnostic and treatment due to COVID-19 pandemic. Further, implementation of non-pharmaceutical intervention strategies to control the spread of the virus may have prompted lifestyle changes, including transitions in dietary patterns and sedentary lifestyles, alongside changes in tobacco and alcohol consumption.

2. With the pandemic ongoing, with multiple variants of the virus continuing to emerge, and with disparities in the implementation of vaccination strategies in different settings, it is evident that the cancer burden and outcomes are likely to be affected in the short- and the long-term. As the WHO Cancer Agency, IARC's principles of engagement in the COVID-19 space have been to build actions together via a coordinated approach among networks of cancer experts and institutions worldwide. This document describes recent collaborations and introduces the COVID-19 and Cancer Initiative (IARC-C19) that recognizes national recovery strategies are critical both today, and as countries move beyond the acute phase of the crisis.

### **WHAT IARC IS DOING: THE COVID-19 AND CANCER GLOBAL MODELLING CONSORTIUM (CCGMC)**

3. Early on during the first wave of the pandemic, IARC sought to develop partnerships centred around the quantification of the impact of COVID-19 on cancer programmes and cancer outcomes. IARC became a founding member of the *Covid-19 and Cancer Taskforce* in May 2020, a group of cancer leaders spanning different disciplines, with one of the key aims an evaluation of the impact of the pandemic on the delivery of preventative, screening and cancer treatment services and subsequent cancer outcomes. In response, IARC partnered with the *Union for International Cancer Control (UICC)*, the *Canadian Partnership*

*Against Cancer* (CPAC), the *International Cancer Screening Network* (ICSN) and the *Daffodil Centre* (a joint venture between *Cancer Council NSW* and the *University of Sydney*) to launch the *COVID-19 and Cancer Global Modelling Consortium* (CCGMC) to bring together the global modelling community to support decision-making in cancer control during and after the crisis. The CCGMC has developed three interrelated workstreams quantifying the impact of COVID-19 on cancer survival, cancer diagnosis and changes in cancer risk due to changing risk factors. Over 250 participants have joined the consortium and many are involved in one of three working groups that are: 1) quantifying the impact on outcomes, including systematic reviews of COVID risk and mortality for people with a pre-existing cancer diagnosis; 2) looking at screening impact across programmes for cervical, breast and colorectal cancer; and 3) assessing whether the implementation of non-pharmaceutical intervention strategies in different countries to control the spread of the virus has prompted lifestyle changes that potentially impact the long-term future burden of cancer. As well as an overview paper, systematic reviews on the risk of contracting SARS-CoV-2 or developing COVID-19 for people with a pre-existing cancer diagnosis, the risk of COVID-19-related death among people with cancer, and smoking behaviour changes during non-pharmaceutical interventions (lockdowns) are under submission [1-4].

#### **NEXT STEPS: THE COVID-19 AND CANCER INITIATIVE (IARC-C19)**

4. Understanding the impact of the pandemic on cancer outcomes is a key concern of IARC's Participating States and the community at large. There is an urgent need for studies that evaluate the indirect and longer-term impact of delays on cancer diagnosis and treatment; to inform governments and national agencies on mitigation and recovery strategies.

5. IARC's COVID-19 and Cancer Initiative (IARC-C19) aims to provide over a four-year timeframe: i) a global platform to monitor national policies in the wake of the pandemic and their impact on cancer services and cancer outcomes, and ii) the evidence needed to support decision-making in cancer control, both during and after the pandemic.

6. Based on IARC's experience as a leader within the Global COVID-19 and Cancer Taskforce, and the CCGMC, the key objectives of IARC-C19 are to:

- strengthen data collection systems to improve the understanding of the linkages between policies and outcomes in the COVID-19 era, especially those related to cancer
- improve the health system resilience of countries to provide guidance in building back better
- ensure knowledge dissemination and transfer for greater buy-in from various national stakeholders

#### **IARC-C19: KEY DELIVERABLES**

7. In partnership with the Daffodil Centre, a COVID-19 and Cancer Observatory will be hosted in 2022 at IARC with a core aim to improve the understanding of the impact of the pandemic on cancer related services and outcomes. The dashboard will provide a detailed and systematic mapping of policy responses including COVID-19 vaccination, with a primary

focus on responses that impact cancer-related services and outcomes. The development of an information collection protocol is key to the capture of granular and comparable indicators within the surveillance system that enables the linking of policies to outcome. Multiple data sources such as literature reviews, grey literatures, e.g. national websites, and key informant interviews will be used to feed into the observatory incorporating technological advances in data mining.

8. A COVID-19 and Cancer Assessment Tool is being built to provide practical strategies for national health system strengthening, now and in the future. The array of data sources will be brought together in an analytic framework that facilitates coherence, harmonization, and governance of a distributed data infrastructure to support the monitoring of this and possible future pandemics. The COVID-19 and Cancer Assessment Tool will include health system analysis to provide relevant and practicable strategies for governments and national agencies, with real-time results demonstrating potential cancer impact. Cancer-specific and health system modelling, and advanced statistical methods will be used to fully deliver the tool.

9. A critical feature of IARC–C19 is the transfer, exchange and dissemination of knowledge to various stakeholders in collaboration with IARC Participating States. Given the policy and societal relevance of this initiative, IARC will disseminate information to key stakeholders from policy makers to civil society organizations in collaboration with national stakeholders and academic partners. All work streams will be done in collaboration with WHO and will complement their ongoing normative guidance to Member States in support of the COVID-19 response and policy-dialogue for cancer. This includes a direct collaboration with the WHO Hub for Pandemic and Epidemic intelligence. IARC will use a plurality of targeted dissemination formats including online resources via the platform, policy briefs, infographics, and podcasts, as well as face-to-face dissemination through policy dialogues and workshops.

10. IARC–C19 will bring added value to IARC Participating States and to the international cancer community: seeking to build back better through technology transfer and best practice. The initiative seeks to support nations to build back their health systems and cancer control programmes better in the wake of this and future pandemics. A small investment in this initiative will enable governments and national agencies to have access to results-based decision-making strategies in cancer control that serve to optimize cancer patient outcomes. Further, the IARC–C19 builds in technology transfer as a key component, enabling best practice; countries may second staff to IARC specifically to be directly involved in this initiative via dedicated fellowships, thereby ensuring experience and expertise in cancer policy, modelling and tool development is fostered and delivered at the national level.

## **RESOURCES REQUIRED – COMBINED TECHNOLOGY TRANSFER FROM CONTRIBUTING COUNTRIES**

11. To implement IARC–C19, a budget of €6 million is needed over a four-year period; two-thirds of this funding (€4 million – see [Table A](#)) will be sought from IARC Participating States and other countries seeking to invest in IARC–C19, as summarized below. The remaining funding (€2 million) will be based on in-kind support, via the secondment of one

or more staff (depending on national structures and capacity) via dedicated national technology fellowships. To ensure representation of experts from different disciplines and geographic areas, an International Advisory Panel will be established that will comprise one or more individuals from countries to the Initiative. The Panel will serve as a liaison to the Initiative, providing expert advice to IARC at each phase of the activities of IARC-C19. Regular meetings will be held to report on progress and exchange information and ideas.

**TABLE A**

Area	Budget (000s euros)					
	Activity	2022	2023	2024	2025	Total
<b>COVID-19 and Cancer: Global Observatory</b>						
	Development of Protocol and Database	100				100
	IT Development: A living data platform	50	100	100	50	300
	Strengthen national surveillance system	150	150	150	150	600
	Development of the Global Monitoring Platform			200	200	400
<b>COVID-19 and Cancer Assessment Tool</b>						
	Analytical Framework	200	100	100	100	500
	Development of Cancer Models		300	300	75	675
	Incorporation of Health System Information		300	300	75	675
	Strategies to Build Back Better			100	100	200
<b>Technology Transfer &amp; Dissemination Tool</b>						
	Development of Knowledge Transfer Tool	50	50	50		150
	Regional workshop: Technology Transfer and Best Practice		50	75	75	200
	Implementation with countries			100	100	200
	<b>Total:</b>	<b>550</b>	<b>1,050</b>	<b>1,475</b>	<b>925</b>	<b>4,000</b>

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