



## Director's report

Dr Elisabethe Weiderpass, Director  
International Agency for Research on Cancer  
Lyon, France

# Impact of COVID-19 on IARC activities and operations

## Measures put in place

- Activation of a Business Continuity Plan
- Alignment with recommendations from the host authorities
- All IARC personnel worked remotely (16 March-11 May) - **IARC operations continue**
  - Phase 1 (11 May-2 June): 10% personnel
  - Phase 2 (3 June-26 June): 20% personnel
  - Phase 3 (29 June-11 September): 40% personnel
  - Phase 3+ (14 September-29 October): 50% personnel
  - Phase 3++ (30 October-further notice): 50% personnel
  - Phase 4 (?): 70% personnel
  - Phase 5 – Return to normal – 100% personnel
- Travel ban; videoconferencing put in place; Virtual Town Hall meetings put in place

## Impact

- IARC fundraising plans
- Conduct of research activities

# Major scientific highlights

# IARC – Fundamental priorities

## CANCER PREVENTION

Who gets cancer?

Describing the occurrence

Why do we get cancer?

Understanding the causes

Which measures work to prevent it?

Evaluating cancer prevention interventions

Mobilising the knowledge gained  
(Building global capacity)

Synthesizing and mobilizing knowledge and strengthening global capacities in cancer science

# Describing the occurrence GLOBOCAN estimates 2020

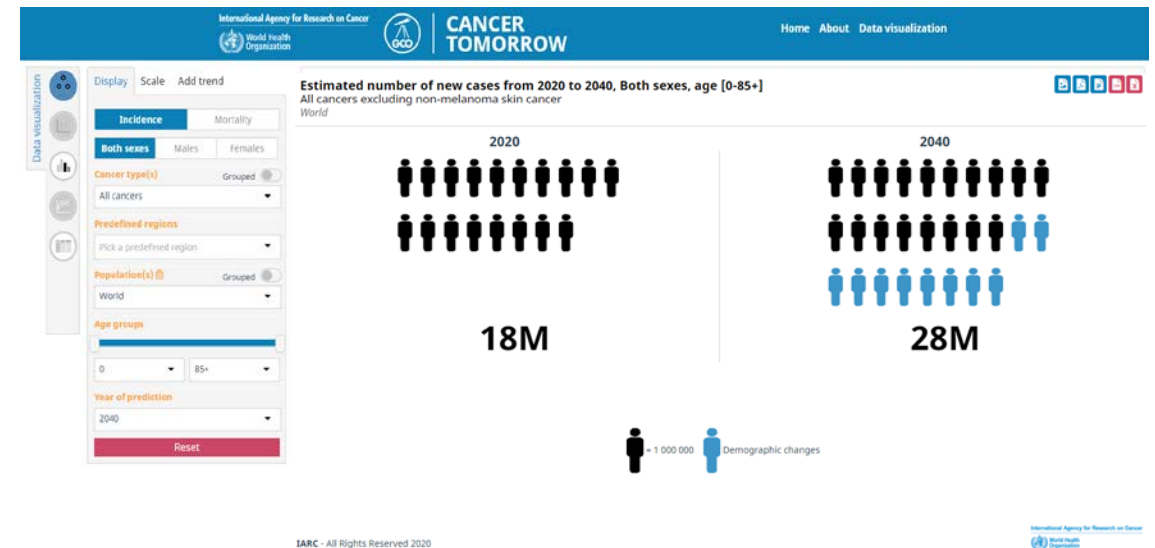
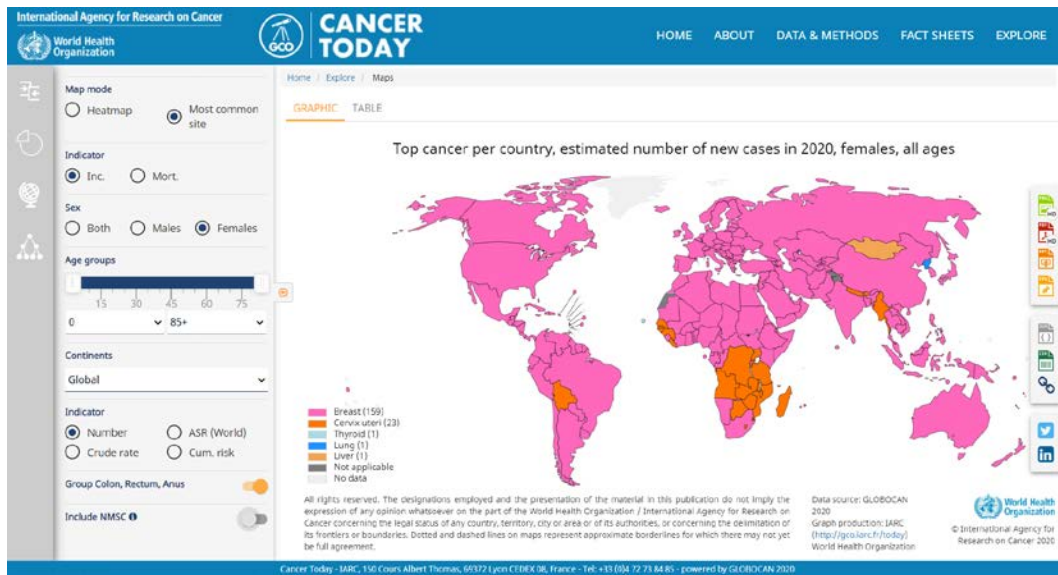


## GLOBAL CANCER OBSERVATORY



19.1 million new cancer cases  
worldwide in 2020

28 million predicted cancer cases by  
2040



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We are online

THE GLOBAL CANCER OBSERVATORY

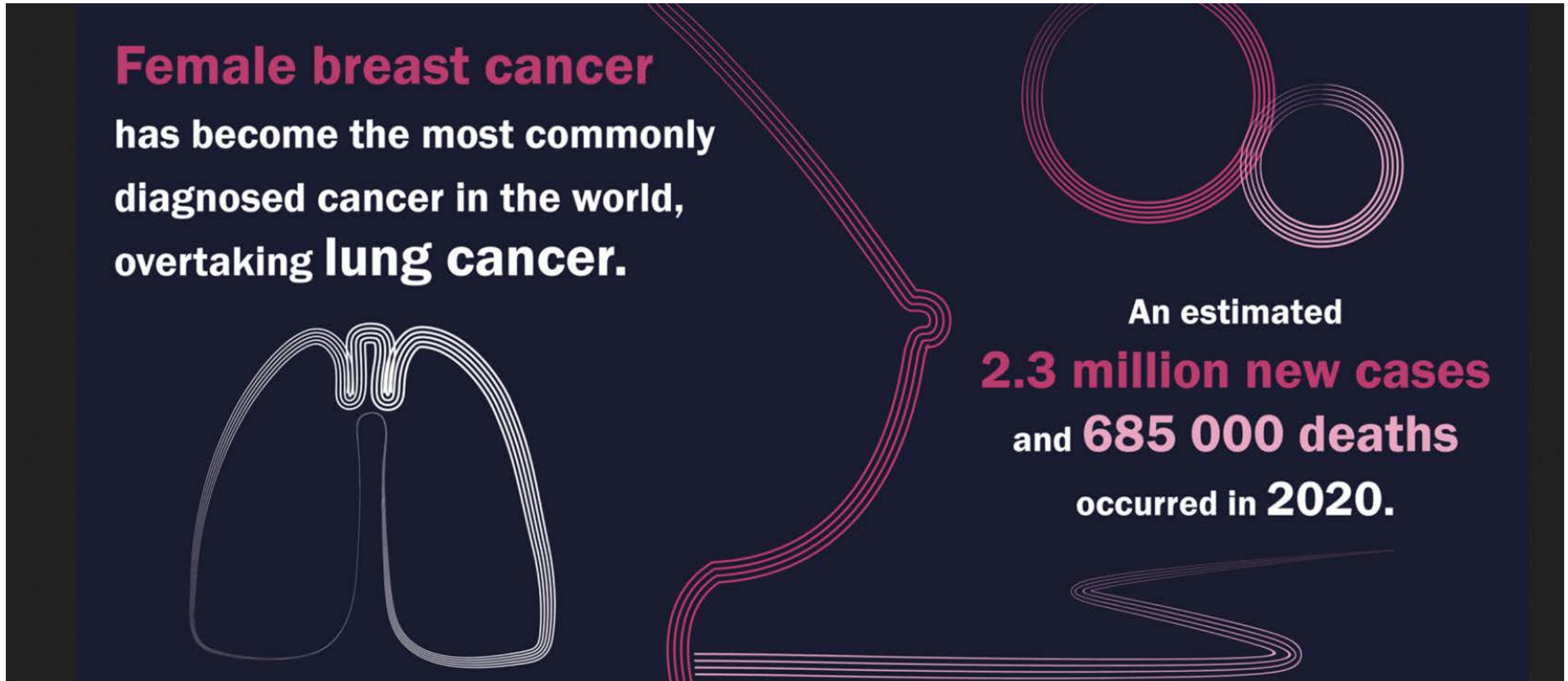


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## Describing the occurrence

Breast cancer overtakes lung cancer as the most commonly diagnosed cancer worldwide



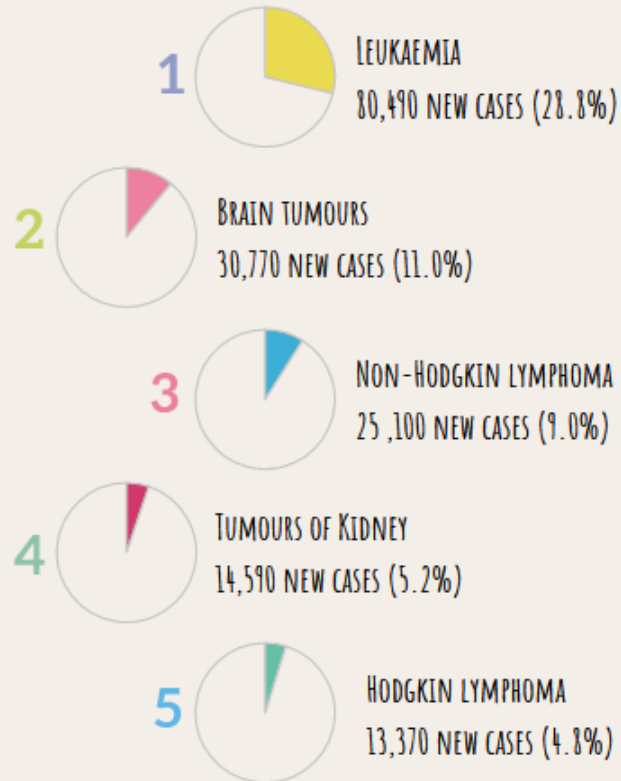
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# Describing the occurrence

## Targeting Childhood Cancer through the Global Initiative for Cancer Registry Development



### BOYS & GIRLS



### LEADING CANCER TYPES IN CHILDREN

(AGE 0-19 YEARS)



THE GLOBAL ESTIMATED NUMBER OF CANCERS IN CHILDREN (AGE 0-19 YEARS) WAS 279,420 CASES IN 2020. CANCER WAS SLIGHTLY MORE COMMON IN BOYS THAN IN GIRLS. LEUKEMIA WAS THE MOST COMMON NEOPLASM (29% OF THE TOTAL CASES).

# Describing the occurrence Cancer Risk In Childhood Cancer Survivors (CRICCS)





# Understanding the causes

## Viruses and cancer



*Helicobacter pylori*



Human papillomavirus (HPV)



Hepatitis B virus (HBV)



Hepatitis C virus (HCV)

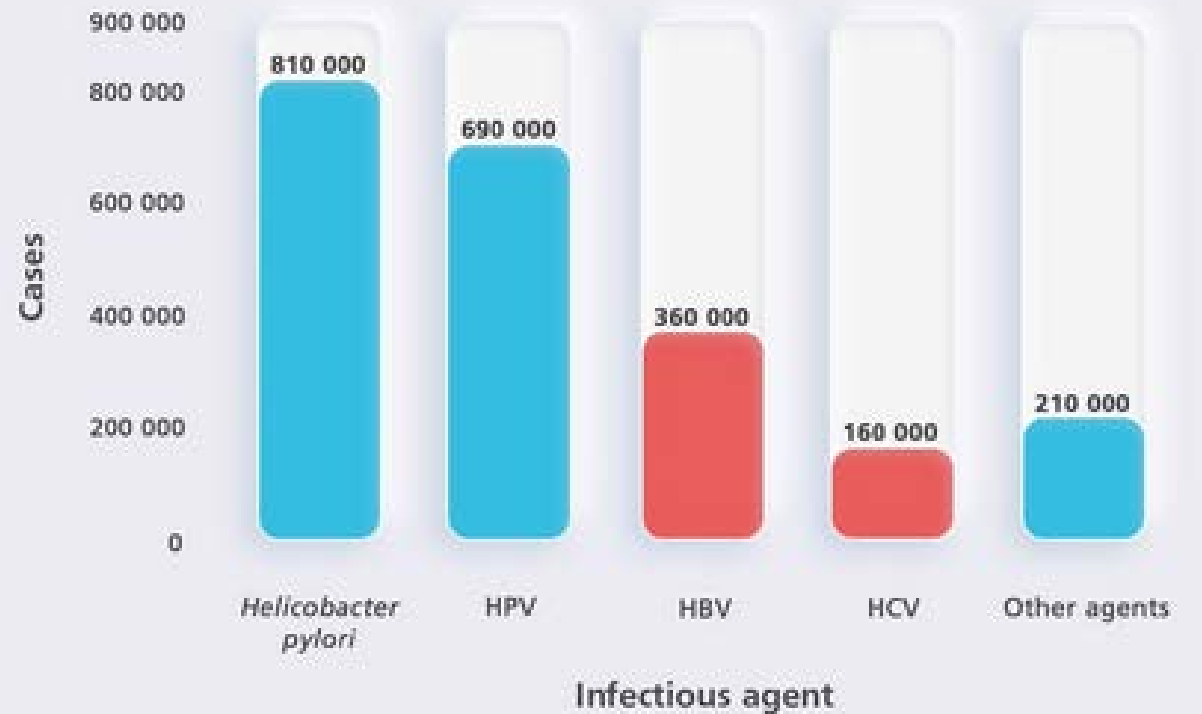


Other agents

Hepatitis B and C viruses are estimated to be responsible for almost **75% of liver cancer cases.**



Estimated numbers of new cancer cases in both sexes in 2018 attributable to infections, shown by infectious agent



# Understanding the causes

## Polygenic risk scores improve cancer risk prediction and stratification



<https://www.iarc.who.int/video/polygenic-risk-scores-improve-cancer-risk-prediction-and-stratification/>

# Understanding the causes

## Alcohol increases the risk of cancers

People who use both **alcohol and tobacco** have a **5 times** increased risk of developing cancers of the **oral cavity, oropharynx, larynx and oesophagus**, compared to people who use either alcohol or tobacco alone.



For heavy users, the risk is up to **30 times** higher.

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World Health  
Organization



World Health  
Organization

REGIONAL OFFICE FOR

Europe

# Understanding the causes

## Household fuel use increases the risk of digestive cancers

### Golestan Cohort Study

> 50 000 participants  
> 10 years of follow-up



Golestan Province, north-eastern  
Islamic Republic of Iran

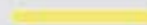
### Household fuel type used in the previous 20 years and risk of digestive cancers



The combustion of biomass and kerosene fuels has been shown to produce multiple carcinogenic compounds that can be absorbed through the respiratory and digestive tracts.



Oesophageal cancer



Stomach cancer

Lower risk

Higher risk

The use of biomass fuels for household heating and for cooking is associated with higher risk of developing oesophageal, stomach, and colon cancers.

The use of kerosene for household heating and for cooking is associated with higher risk of developing oesophageal cancer.

### Heating stove type used for household fuel burning and risk of digestive cancers



Higher risk

Oesophageal cancer

Stomach cancer

Colon cancer



Lower risk

# Understanding the causes

## The origins of childhood cancer




[https://www.iarc.who.int/video/researching\\_the-origins\\_childhoodcancer/](https://www.iarc.who.int/video/researching_the-origins_childhoodcancer/)

# Evaluating cancer prevention interventions

## IARC research supports the WHO Cervical Cancer Elimination Initiative

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World Health Organization

**More than  
600 000  
women were diagnosed with  
cervical cancer**



**and more than  
340 000  
deaths were caused by  
cervical cancer in 2020.**


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International Agency for Research on Cancer  
World Health Organization

**CERVICAL CANCER  
AWARENESS MONTH**  
*January*


Cervical cancer is the 4th most common cancer type in women. Worldwide in 2018, an estimated 570 000 women were diagnosed with cervical cancer and about 311 000 women died from the disease.



- Almost 85% of new cases of cervical cancer and almost 90% of deaths from cervical cancer occurred in low- and middle-income countries.
- Cervical cancer is an almost completely preventable disease.
- Persistent infection with high-risk human papillomavirus (HPV) types is the main cause of cervical cancer.

**IARC supports the WHO Cervical Cancer Elimination Initiative** to scale up HPV vaccination and screening to reduce the incidence of and mortality from cervical cancer by:

- Developing and supporting population-based cancer registries
- Evaluating and validating the most efficient vaccination and screening programmes
- Developing methods to facilitate treatment of cervical precancer in low- and middle-income countries

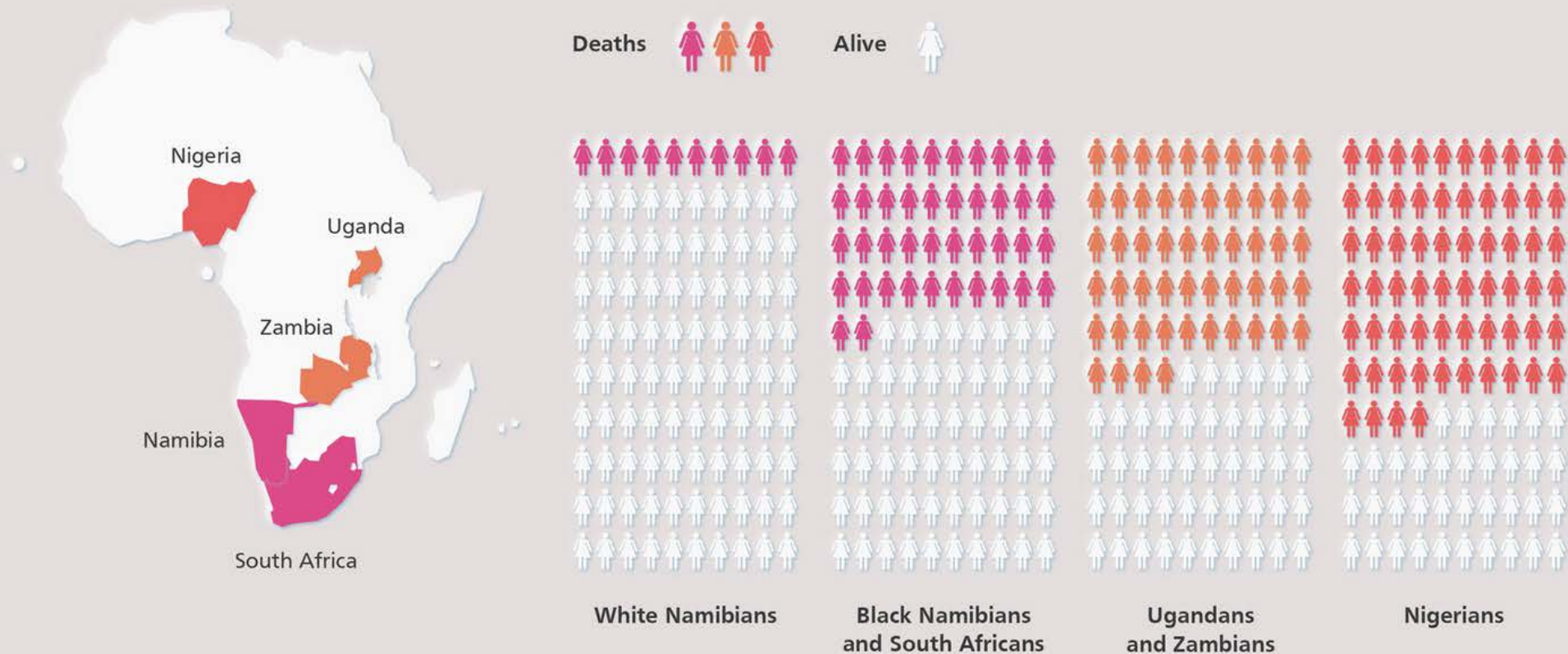


**IARC Research**

# Evaluating cancer prevention interventions

## Breast cancer survival and survival gap apportionment in Sub-Saharan Africa (ABC-DO)

### Deaths (%) of African women within 3 years of their breast cancer diagnosis



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# Synthesizing and mobilizing knowledge

## IARC Monographs Programme

### Scientific Accomplishments in 2020

- Adapted *Monographs* meetings to be fully remote due to Covid-19
- Held three remote *Monographs* meetings (126-128) from May to November 2020
- New or updated classifications for 8 agents:
  - Group 1: Opium consumption
  - Group 2A: Acrolein, Aniline, *ortho*-Anisidine, *ortho*-Nitroanisole
  - Group 2B: Arecoline, Crotonaldehyde, Cupferron
- Published three articles in *Lancet Oncology*
- Published three *Monographs* volumes
  - v.123: Some nitrobenzenes & other industrial chemicals
  - v.124: Night shift work
  - v.125: Some industrial chemical intermediates & solvents

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World Health Organization

IARC MONOGRAPHS VOL. 127: SOME AROMATIC AMINES AND RELATED COMPOUNDS  
(25 MAY–12 JUNE 2020)

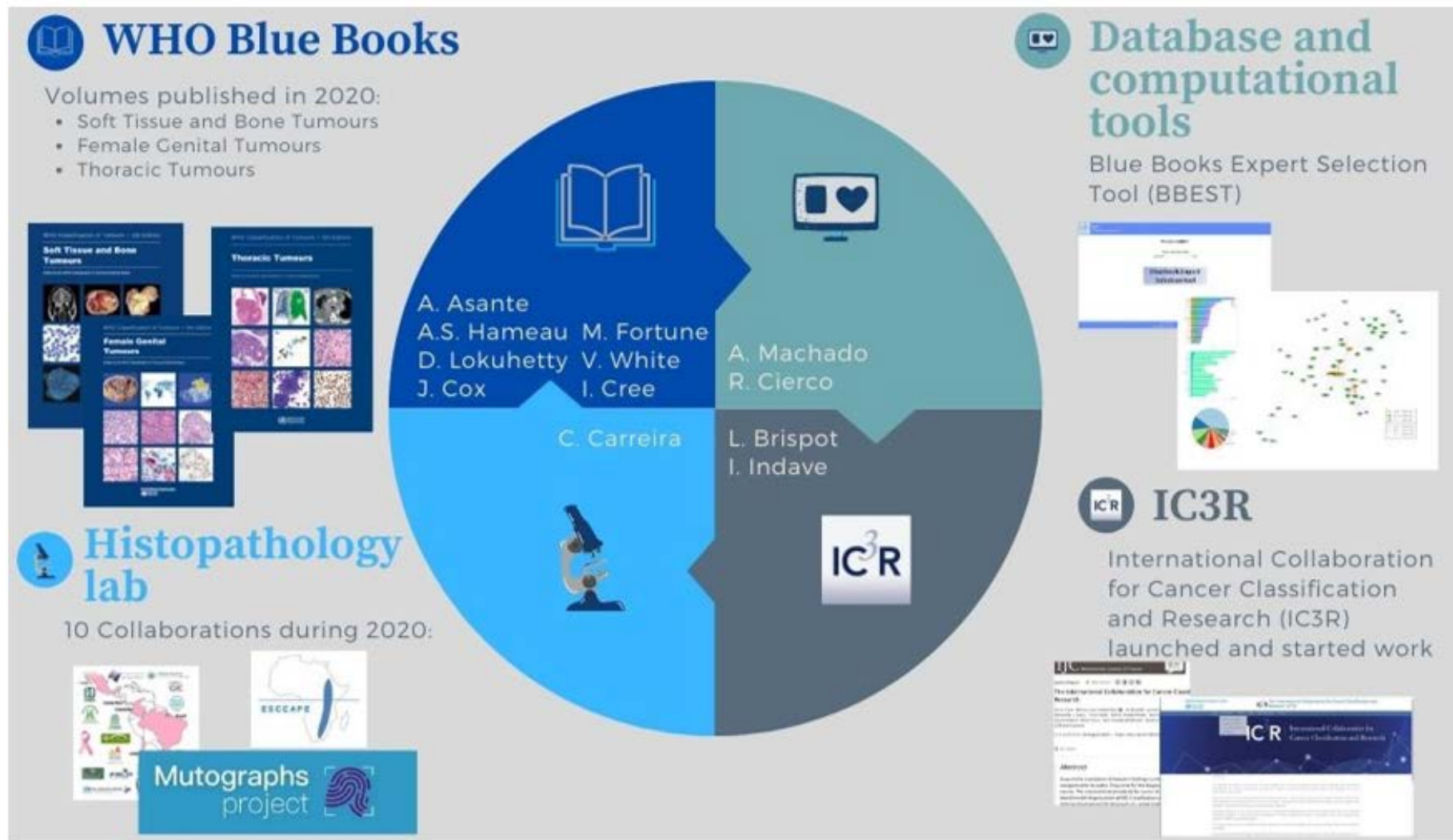
GROUP EVALUATED WITH	ANILINE	<i>ortho</i> -ANISIDINE	<i>ortho</i> -NITROANISOLE	CUPFERRON
	<chem>Nc1ccccc1</chem>	<chem>Nc1ccc(OC)cc1</chem>	<chem>Oc1ccc([N+](=O)[O-])cc1OC</chem>	<chem>[O-]N(=O)c1ccccc1</chem>
	Aniline hydrochloride	<i>ortho</i> -Anisidine hydrochloride		
	Group 2A Probably carcinogenic to humans	Group 2A Probably carcinogenic to humans	Group 2A Probably carcinogenic to humans	Group 2B Possibly carcinogenic to humans
USES	Aniline is a chemical with a high production volume that is used as a starting material in several industries (plastics, rubber, colourants, and pharmaceutical drugs).	<i>ortho</i> -Anisidine and its hydrochloride salt are used mainly to make azo pigments and dyes that are used in consumer products such as textiles and paper goods.	<i>ortho</i> -Nitroanisole is used mainly to make azo pigments and dyes that are used in consumer products such as textiles and paper goods.	Cupferron is used to separate and precipitate metals, and as a reagent for analytical techniques. Production is found primarily in East Asia and India.
POTENTIAL EXPOSURE	Cigarette smoking, industrial workers, tattoo ink	Cigarette smoking, industrial workers, tattoo ink	Industries that produce dyes and pigments, industrial workers	Industries that manufacture cupferron
WHO	For all these agents, exposures are expected to be higher in workers than in the general population.			

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# Synthesizing and mobilizing knowledge

## WHO Classification of Tumours



# Synthesizing and mobilizing knowledge

## IARC Handbooks Programme

- ❖ Handbook 18 - Cervical Cancer Screening
  - Run completely remotely over 4 months
  - First meeting with the new Preamble (new evaluation scheme / comparative statements)
- ❖ Collaboration with WHO on the Cervical Cancer Elimination Initiative
  - Handbooks Statements (in bold) for used for making the WHO recommendations
  - Summaries/evaluations as Annex to the guidelines
  - Simultaneous launch of IARC Handbook vol. 18 and WHO recommendations in Spring 2021
- ❖ Handbook 19 – Oral cancer prevention (Dec. 2021)
  - Special emphasis on oral cancer prevention in South Asia
  - Collaboration with WHO-HQ and WHO-SEARO on scientific and logistics aspects

Evaluations		Group
Visual inspection with acetic acid		A / B
Conventional cytology		A
Liquid-based cytology		A
HPV-nucleic acid tests		A
<u>Romanovski</u> Giemsa stain		C
Statements	Balance benefit-harm	
<b>HPV vs VIA</b>	<b>HPV &gt;&gt; VIA</b>	
<b>HPV vs cytology</b>	<b>HPV &gt; Cytology</b>	
HPV vs co-testing	HPV > Co-testing	

# IARC's research at the intersection of COVID-19 and cancer

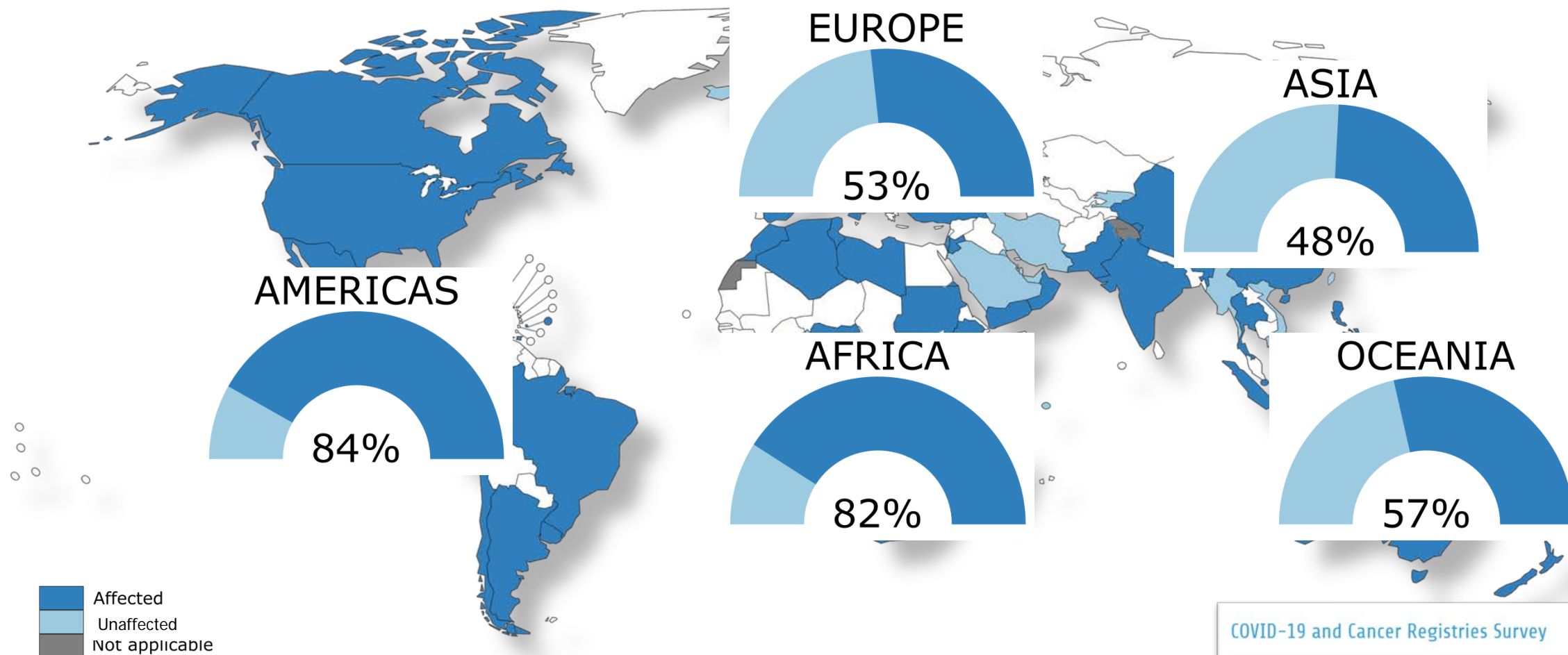


Three priorities for action:

1. Assessment of Covid-19 on cancer outcomes with an emphasis on real-time analysis
2. Build consortium for collaborative efforts of infectious disease and cancer modellers in the short and longer term
3. Assessment of national impact on frontline healthcare workers as pandemic progresses

# Registry operations affected by COVID-19

(incl. staff performance and funding)



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**COVID-19 and Cancer Registries Survey**

Created on Saturday, 09 May 2020 01:49

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World Health Organization

IACR International Association of Cancer Registries

GLOBAL INITIATIVE FOR CANCER REGISTRY DEVELOPMENT

INITIATIVE MONDIALE POUR LE DEVELOPPEMENT DES REGISTRES DU CANCER

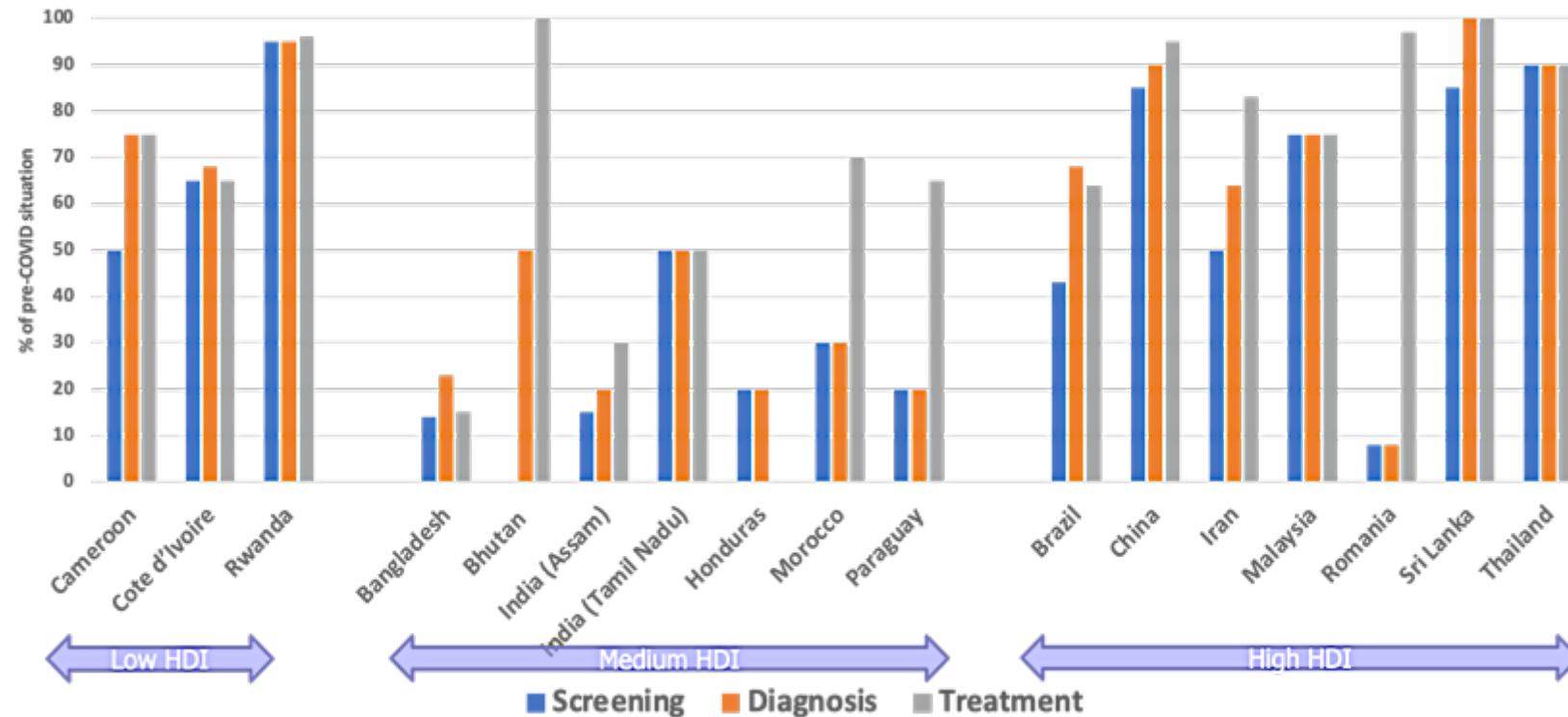
INICIATIVA MUNDIAL PARA EL DESARROLLO DE REGISTROS DE CANCER



# Impact of COVID-19 outbreak on cancer screening programmes in 17 LMICs belonging to different HDI categories

- Managers/supervisors of cancer screening programs from 17 LMICs participated in an online survey & subsequent in-depth interview.
- Screening was suspended for 30+ days in all except Iran.
- Diagnostic services were suspended for 30+ days in all except Iran, Malaysia & Sri Lanka.
- Cancer treatment services were suspended for 30+ days in Cameroon, Bangladesh, India, Honduras & China.

*Availability of cancer screening, diagnostic & treatment services in Sept-Oct 2020 compared to the pre-COVID situation – as rated by program managers in a scale of 0 to 100*



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# Key figures 2020: Scientific Publications

470 Articles

387 Peer-reviewed papers

707,039 visits to the  
Global Cancer Observatory

340,454 visits to the Monographs

377,211 visits to the IARC Publications

Altmetric database summary report of IARC 2020 output

## REPORT OVERVIEW



# Key figures 2020: Capacity Building

**177** Early Career and Visiting Scientists

**68** new arrivals

**2** new IARC Post Doctoral Fellows from Brazil and Kenya supported by “Children with Cancer UK”

**2** Return Grants awarded to 2 former IARC Post-Doctoral Fellows from Brazil and Togo



**18** Training courses and webinars targeting low- and middle-income countries

**300** participants from **100** countries for the webinars on “Human Papillomavirus Vaccination” and “Obesity and Cancer”



learning.iarc.fr

World Cancer Report Webinar Series - Obesity and cancer

"Evidence linking obesity and cancer" and "Interventions - What are the successes? What about the future?"



Monday 14 December 2020
16:00 CET
Click here to check your local time

Live webinar sessions are limited. Register now and join early as the list of attendees will close for enrolment from this stage.

Register now

FORMAT

- This session will last 1 hour
- Evidence linking obesity and cancer" is featured

SUMMARY

Obesity is an established risk factor for cancer, as its prevalence also will grow in globally transitioning countries, it is a key risk factor that will contribute to a growing number of incident cancers in the coming decades.

The link between obesity and cancer raises questions regarding the underlying mechanisms of this association and effective prevention strategies. In this webinar we will discuss the scientific evidence linking the two conditions and

identify the key evidence on interventions of cancer prevention in the context of the growing prevalence of obesity, as well as addressing research questions.

Obesity and its impact on the development of cancers

CHAIR



Dr Marc Gunter, Head of the Section of Nutrition and Metabolism

International Agency for Research on Cancer (IARC)

World Cancer Report Updates

The Learning Platform from the 2020 World Cancer Report



World Cancer Report

World Cancer Report provides a comprehensive overview of cancer research for cancer prevention and is published by IARC about every 3 years (most recently in 2020).



Join the World Cancer Report learning community



Highlights

The editors of the 2020 World Cancer Report have identified key findings, or highlights to guide the development of

Obesity and lifestyle



Key finding



World Cancer Report bookmarks

LEARNING RESOURCES



World Cancer Report - Chapter 11: Physical activity, sedentary behaviour, and obesity: Evidence and emerging evidence on factors



Open available online learning resources. Get full content online



World Cancer Report - Chapter 4.3: Universal Cancer Screening: Research and promising prevention are still needed



Open available online learning resources. Exercise fact sheet



World Cancer Report - Chapter 4.4: Increasing diet and physical activity and body weight from evidence to practice



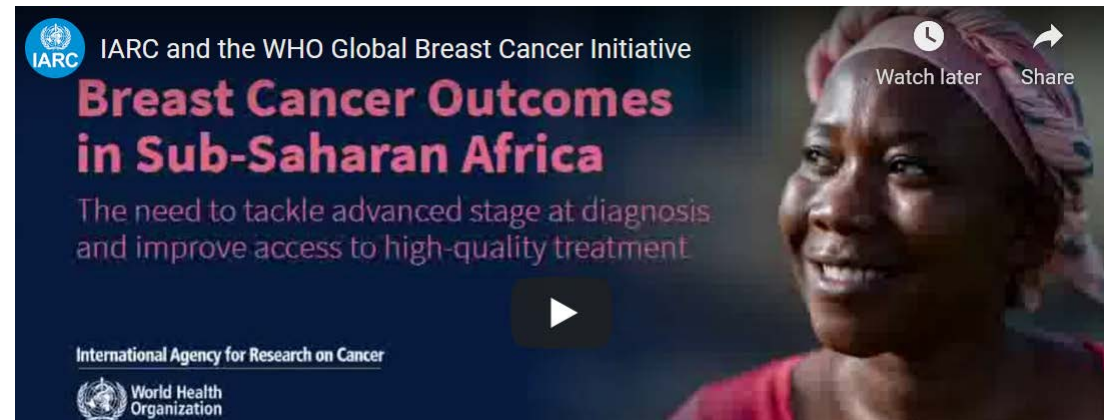
Open available online learning resources. Exercise fact sheet



# Cooperation, partnerships, and strategic engagement

# Strengthened cooperation between IARC and WHO

IARC research provides an evidence base for cancer prevention that is readily translated by WHO into advice and policy recommendations to Member States





# Strengthened partnerships

IARC and St. Jude Children's Research Hospital partner to expand global childhood cancer registration

5 Memoranda of Understanding (MoU) with China, Brazil, Georgia, USA, and Hungary

1 MoU renewed with Japan

1 Memorandum of Agreement (MoA) with France

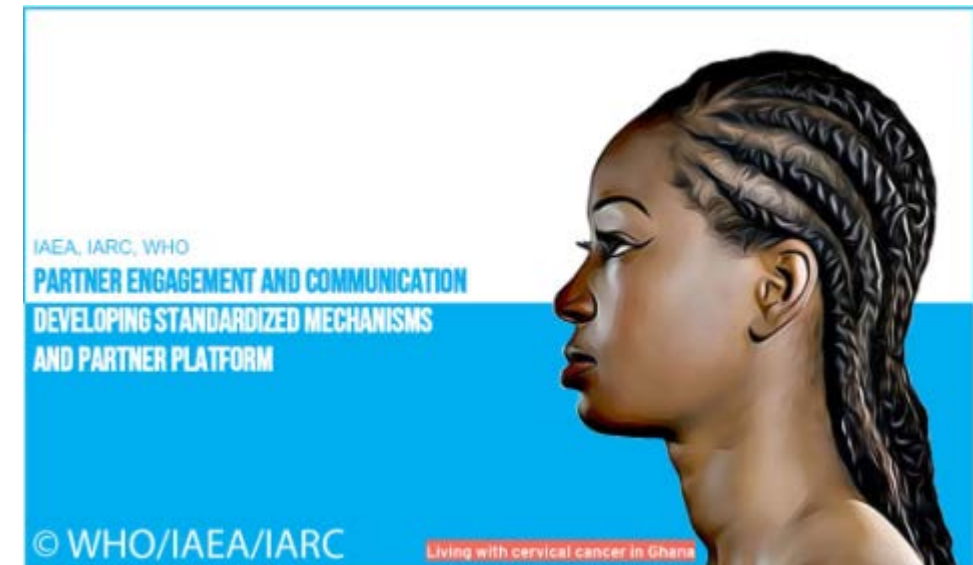
3 MoA renewed with Italy, China, and Iran

12 meetings with Permanent Missions in Geneva

# Strategic engagement highlights

- ❑ IARC has established the IC<sup>3</sup>R to promote evidence-based practice and standards for cancer classification
- ❑ The report of the Mission Board for Cancer was presented to the European Commission. The IARC Director is an expert member of the Mission Board. The outline for the proposed mission, **Conquering Cancer: Mission Possible**, focuses on five areas, including “prevent what is preventable”
- ❑ Launch of the **CBIG-SCREEN** project, a collaborative Europe-wide effort to tackle inequalities in cervical cancer screening
- ❑ Launch of the **Cancer Risk in Childhood Cancer Survivors (CRICCS)** funded by Children with Cancer UK
- ❑ WHO, IARC, and IAEA held an online consultation to formulate new joint strategies

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# Data protection

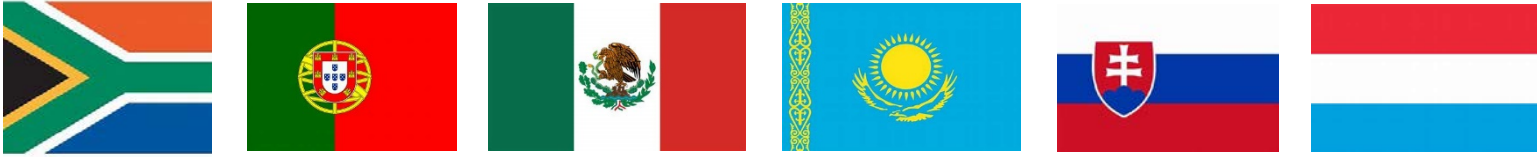
## Way Forward

- **Continue dialogue with European Commission** in close collaboration with UN system agencies, IOs and WHO to find a lasting solution for data sharing with EU institutes for scientific purposes
- IARC intends to **find immediate solutions to currently stalled projects in Nordic countries**. Meetings are planned in 2021 with Danish and Nordic Data Protection Authorities with the support of the European Commission
- **IARC data protection measures are being further solidified** with the support of external data protection consultants

# Resource mobilization highlights

IARC Secretariat focused on the following aspects as regards to Resource Mobilization:

## ❑ Discuss with potential Participating States



(South Africa, Portugal, Mexico, Kazakhstan, Slovakia and Luxembourg)

## ❑ Increase the proportion of direct funding

- The Organisation for Economic Co-operation and Development (OECD) put IARC on the list of Official development assistance (ODA)-eligible organizations with a coefficient of 51%
- Creation of a portfolio of ODA-100% compliant projects. On-going discussions with potential donors

## ❑ Explore novel and innovative fundraising for IARC's flagship projects



# Grants and contracts: key figures 2020

**344** funding opportunities identified

**236** new grants applications and funding requests

**€20.07 million** of extra budgetary contracts signed, of which  
**€12.34 million** attributed to IARC

**81%** of contributions to IARC came from **13** funders

# Management



# Medium-Term Strategy (MTS) 2021-2025

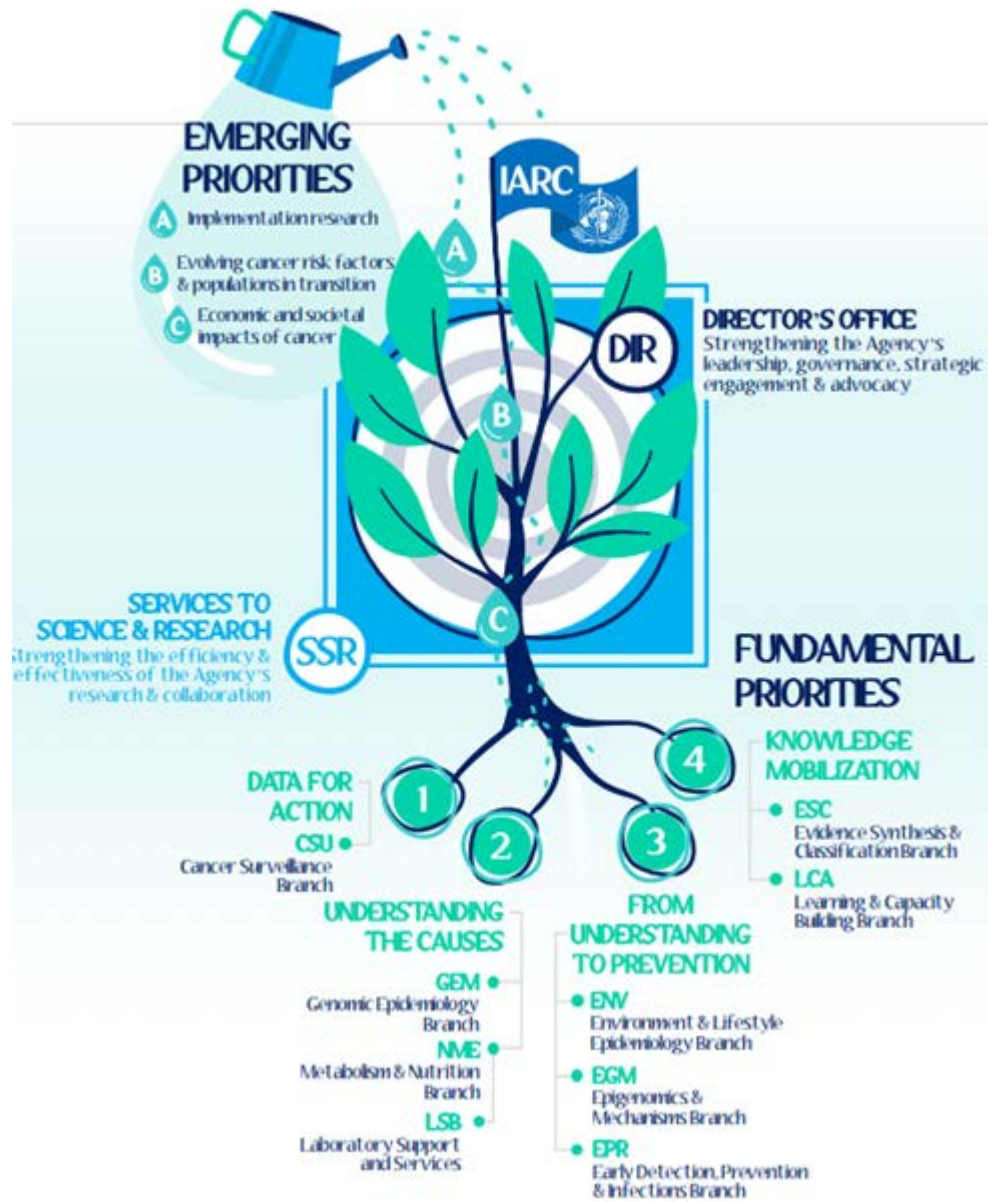
## From preparatory work to the MTS



# Medium-Term Strategy 2021-2025

## Priorities 2021-2025

- **The 4 Fundamental Priorities & the 3 Emerging Priorities** representing the scientific backbone of the new roadmap
- A new paradigm promoting scientific excellence as a key lever for stronger **public health impact**
- Cooperation with **WHO** (SDG & Global Initiatives on Cancer) and **partnerships** (public & private)
- Consolidation of role as the **leading global cancer authority**, maintaining its neutral and independent position



# Implementing the Medium-Term Strategy 2021-2025

## A gradual approach

- **Prioritization of IARC activities: a gradual approach:**
  - IARC will continue **strategic fundamental activities** in:
    - Describing the cancer burden
    - Understanding the causes of cancer
    - Evaluating cancer prevention interventions
    - Synthesizing and mobilizing knowledge and strengthening global capacities for cancer
  - IARC will gradually **strengthen IARC's engagement** in the **three emerging priorities identified**, with a stronger emphasis on **implementation research**
    - Evolving cancer risk factors and populations in transition
    - Implementation research
    - Economic and societal impacts of cancer

# Implementing the Medium-Term Strategy 2021–2025 will facilitate the transition towards a stronger IARC

- Global hub for open science for cancer prevention
- Leader in prevention research
- Recognized for public health impact
- Global capacity builder for cancer science and research

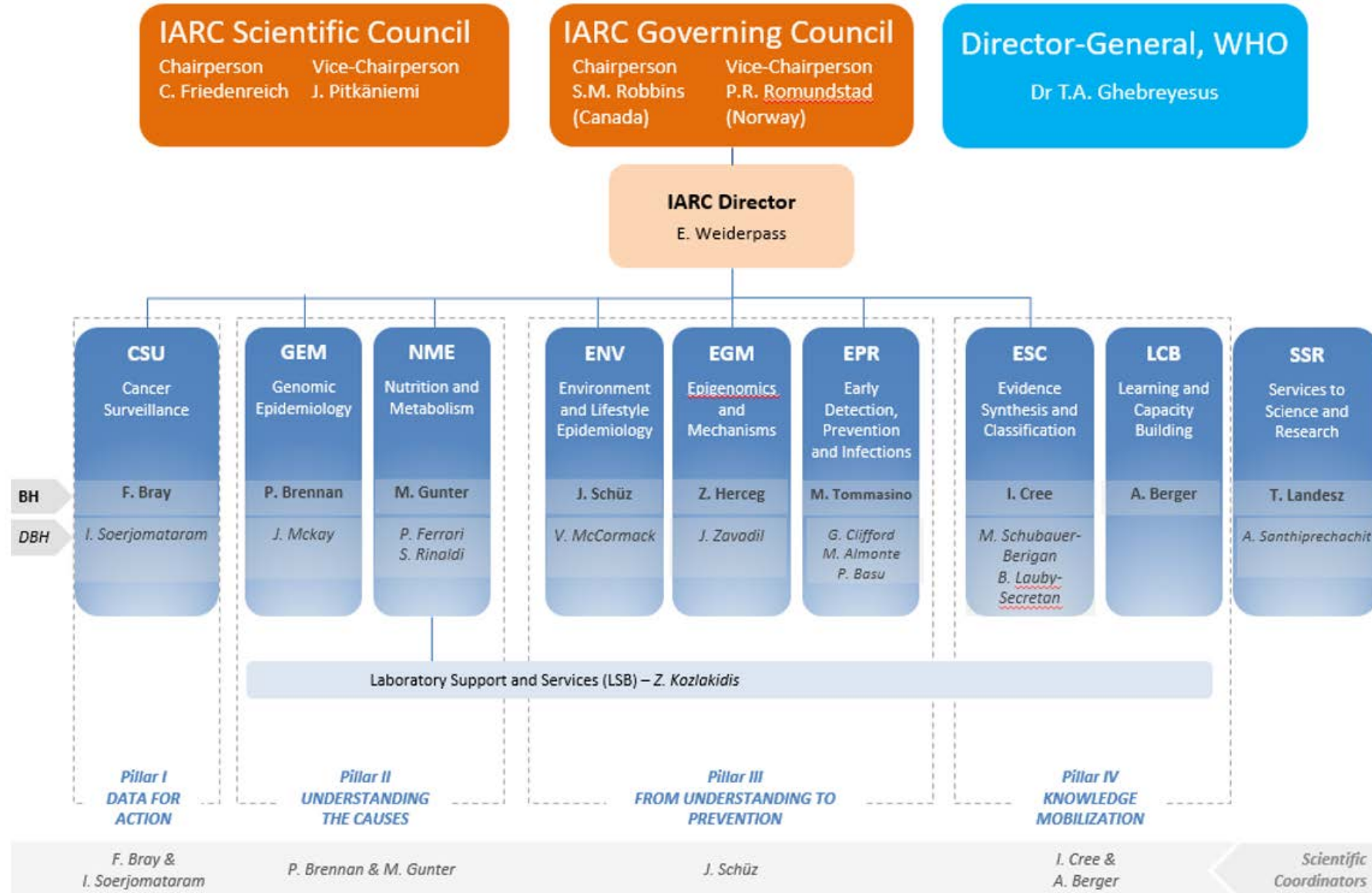


# Organizational changes to accommodate new areas of focus

- Flexibility: new structure should facilitate quick responses to emerging needs and opportunities
- New emphasis on implementation research should be well reflected and future growth of this area should be promoted
- Research collaboration across Branches (Agency-wide projects) should be improved

# IARC Organizational structure

10 March 2021



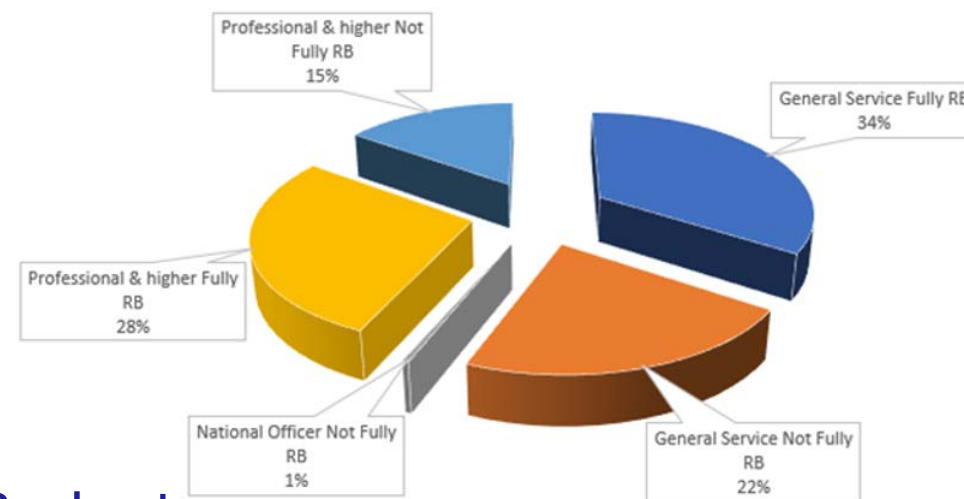
# Personnel

345 Personnel; 238 staff members; 107 Early Career and Visiting Scientists

44% are P-staff

Overall ratio men/women = 0.57

154.20 staff posts in 2020-21 on the Regular Budget



Overall, IARC staff members come from 37 different countries worldwide as first nationality, with a total of 55 nationalities represented at the Agency

# Thank you!