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DIRECTOR'S REPORT

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ACRONYMS AND ABBREVIATIONS

BMS	Business Management System
BMI	Body Mass Index
CCGMC	COVID-19 and Cancer Global Modelling Consortium
ECVSS	Early Career and Visiting Scientists
EDAG	IARC Equity and Diversity Advisory Group
ERP	Enterprise Management System
FENSA	Framework of Engagement with Non-State Actors
GAC	WHO Global Advisory Committee on formal complaints of abusive conduct
GACD	Global Alliance for Chronic Diseases
GCO	Global Cancer Observatory
GICR	Global Initiative for Cancer Registry Development
GWAS	Genome-wide association studies
HDI	Human Development Index
HIV	Human Immunodeficiency Virus
HPV	Human Papillomavirus
IAC	The International Academy of Cytology
IAEA	International Atomic Energy Agency
IARC	International Agency for Research on Cancer
imPACT	Programme of Action for Cancer Therapy
JECFA	Joint WHO/FAO Expert Committee on Food Additives
KPIs	Key Performance Indicators
LMICs	Low- and middle-income countries
LXP	Learning Experience System
MoU	Memorandum of Understanding
MTS	Medium-Term Strategy
NCC	National Cancer Centre
NCCP	National Cancer Control Plan
NCDs	Noncommunicable Diseases
NSAs	Non-State Actors
ODA	Official Development Assistance
OECD	Organisation of Economic and Co-operation and Development
SAC	Staff Association Committee
SOP	Standard Operating Procedure
TAD	Tobacco and Arms Disclosure
UICC	Union for International Cancer Control
UNESCO	United Nations Educational, Scientific and Cultural Organization
WHO	World Health Organization

EXECUTIVE SUMMARY

The Director's Report reflects on the research work and managerial activities accomplished since the last Governing Council session and includes:

Scientific highlights

The Director's Report starts with an overview of scientific achievements, followed by information about IARC publications and capacity building. Additional Key Performance Indicators (KPIs) are shown for 2022.

Highlights of IARC's research are reported across the four Pillars: i) data for action, ii) understanding the causes, iii) from understanding to prevention, and iv) knowledge mobilization (WHO Classification of Tumours, IARC *Monographs Programme*, IARC *Handbooks of Cancer Prevention*). Finally, IARC research at the intersection between COVID-19 and cancer is also underlined.

Cooperation, Partnerships and Strategic Engagement

The strengthened cooperation between IARC and the World Health Organization (WHO) is underlined, as showed by the finalization and implementation of the IARC-WHO joint strategic workplan 2023–25. Selected high-level partnerships and strategic engagements of the Agency are highlighted, as well as the specific actions taken last year to accelerate the Agency's resource mobilization efforts. Grants and contracts obtained over the past year are reported. The chapter ends with an update on IARC engagement under the Framework of Engagement with Non-State Actors (FENSA).

Management

In its continued effort to modernize IARC's administrative management systems, IARC joined forces with WHO and embarked on the implementation of a new Business Management System (BMS). Concurrently, IARC has devised an administrative transformation roadmap in support of the Medium-Term Strategy (MTS) 2021–25, inter alia to further strengthen IARC's data protection measures. Finally, information on IARC personnel is provided for the past year, as well as for IARC Working Groups and Programmes. The chapter concludes with a brief update on the Nouveau Centre.

Death of Dr Peter Boyle, IARC former Director

It was with great sadness that IARC learnt of the death of the IARC former Director, Dr Peter Boyle in July 2022: a short obituary appears on the IARC internet: <https://www.iarc.who.int/news-events/dr-peter-boyle-8-june-1951-23-july-2022/> and an electronic book of condolences was available.

The Governing Council is invited to consider DRAFT Resolution GC/65/R3 as a tribute to Dr Boyle.



1. INTRODUCTION

1. 2022 was another unprecedented year due to the preparation for the move to the Nouveau Centre, which brought IARC many challenges. IARC personnel has shown impressive and unwavering commitment and resilience to adapt and rise to these challenges as the situation has evolved.

2. After 50 years in the tower building in Grange-Blanche, IARC moved with success in its new headquarters in Lyon-Gerland at the end of 2022. IARC held a ceremony in the IARC Nouveau Centre building in Gerland on 20 January 2023, in the presence of Mr Grégory Doucet, Mayor of Lyon, and of Mr Bruno Bernard, President of the Métropole de Lyon, to welcome IARC personnel to the new building.

3. The move to the Nouveau Centre will enable IARC to transition smoothly to a state-of-the-art, eco-friendly Agency, embracing and living the concept of Open Science. The smart building provides an inspiring environment for scientific collaboration and for advancing global cancer research. Its physical structure emphasizes transparency and echo an Open Science concept.

4. IARC continues its work on cancer research priorities identified in its Medium-Term Strategy (MTS) 2021–25 and takes a step closer towards turning a vision of “a world where fewer people develop cancer” into a reality, as well as a step closer towards fulfilling its mission of “cancer research that matters”.

5. Indeed, cancer is an immense threat for sustainable development and for our societies. Over the course of this century, cancer will become the leading cause of premature death worldwide and the single most important barrier to further gains in life expectancy. In 2020, cancer affected almost 20 million people around the world and caused 10 million deaths. Given these alarming figures and the predicted increases in cancer burden in the next 20 years, given the enormous personal, societal and economic losses, and given the fact that up to half of all cancer cases could be prevented if preventive interventions were effectively implemented, investment on research on cancer prevention – from etiological research to implementation research – is the key response to address the great scientific knowledge gap and tackle the cancer epidemic.

6. The cancer burden is not equally distributed across countries, within countries, and between different groups within societies. In line with one of our emerging priorities – economic and societal impacts of cancer – a new study led by IARC on cervical cancer mortality across 18 countries in Europe revealed that between-country inequalities confined to differences among lower-education groups. This primarily reflects inequalities in the availability, access and uptake of effective screening programmes, which can detect and remove precancerous lesions and thus reduce incidence and mortality. The immediate implication is that the reduction of cancer mortality rates among the most disadvantaged groups within countries is a crucial step to lowering national average cancer mortality rates and the overall burden of cancer. Primary cancer prevention programmes should be tailored to the particular needs of the target populations, considering socio-economic, cultural and geographical conditions.

7. The Human Development Index (HDI) highlights the clear reality of increasing inequalities between countries. IARC estimated that the greatest increases in cancer burden by 2040 will mainly affect low- and middle-income countries (LMICs) assigned to a low HDI. Such inequalities can only be expected to grow unless resource-dependent, effective, and cost-effective interventions are urgently implemented. Efforts to plan, implement and evaluate prevention programmes must be considered greater priorities in LMICs.

8. IARC estimated the global, regional and country specific number of new and existing maternal orphans due to cancer in 2020, based on IARC's GLOBOCAN data and world fertility estimates. A staggering

1 million children became maternal orphans in that year. Most of these children were in Asia and Africa. By no coincidence, deaths from breast cancer and cervical cancer, the two female cancers targeted by WHO's Cancer initiatives, led to half of maternal orphans. This work further illustrates yet another reason for global action on preventable and premature cancer deaths, deaths which drive an intergenerational cycle of poverty.

9. For the betterment of implementation of cancer prevention interventions globally, IARC gave a strong endorsement to further intensify coordination and collaboration with WHO to enable more effective links between science and policy. In the past year, IARC and WHO have finalized and are now working on implementing a joint strategic workplan for 2023–25 and have intensified coordination of technical activities. As examples, IARC-led research on breast cancer survival in sub-Saharan Africa has informed KPIs for the WHO Global Breast Cancer Initiative Framework, and in cervical cancer, the WHO Strategic Advisory Group of Experts on Immunization used IARC-led research to conclude that a single-dose HPV vaccination delivers solid protection against infection.

10. The Fifty-Ninth Session of the IARC Scientific Council, held remotely via web conference on 8–10 February 2023, chaired by Dr Manami Inoue (Japan) reviewed key areas of IARC's research programme as well as the proposed IARC Programme and Budget 2024–25.

11. The Scientific Council stressed that the global scale of IARC's research activities provides a truly unparalleled example of cancer research informing policies and practice related to cancer worldwide, and that continued progress against cancer globally depends on stronger financial support from Participating States. As an international public health organization, IARC is uniquely positioned and plays a critical role in supporting national and international efforts to reduce the global cancer burden, and is a vital resource for governments, researchers, trainees, and health professionals around the world.

12. I look forward to welcoming you all to our new headquarters in May 2023.

2. SCIENTIFIC HIGHLIGHTS¹

13. The scientific highlights are arranged according to the four IARC Pillars, as spelled out in the MTS priorities ([Document GC/63/6A](#)). An update of IARC research at the intersection between COVID-19 and cancer is also provided.

2.1 Pillar I. Data for action

14. IARC and collaborators evaluated **global cervical cancer** rates in 2020 and identified inequalities and gaps between countries. The burden of cervical cancer is particularly heavy in LMICs. This study highlights that unless these countries scale up screening programmes and improve coverage of Human Papillomavirus (HPV) vaccination and access to affordable treatment, the WHO 2030 elimination targets will be missed.

15. IARC and collaborators estimated that 905 700 people were diagnosed with **liver cancer worldwide** and 830 200 people died from the disease in 2020. IARC predicted that the annual number of new cases and deaths will increase by more than 55% by 2040, unless a substantial decrease in liver cancer rates through primary prevention (lifestyle changes, immunization, testing, and treatment for Hepatitis B and C virus infection) is achieved.

16. IARC and collaborators estimated that more than 1.9 million people were diagnosed with **colorectal cancer worldwide** and more than 930 000 people died from the disease in 2020. The incidence rates were highest in Europe, Australia and New Zealand, and the mortality rates were highest in Eastern Europe. IARC predicted that by 2040 the burden of colorectal cancer will increase to 3.2 million new cases (an increase of 63%) and 1.6 million deaths (an increase of 73%). More than 80% of the new cases are predicted to occur in countries with high or very high HDI levels.

17. IARC and collaborators predicted that by 2040 the **global breast cancer burden** will increase to more than 3 million new cases (an increase of 40%) and more than 1 million deaths (an increase of 50%), emphasizing the need for global efforts to counteract the growing burden of breast cancer, especially in transitioning countries where incidence rates are rising rapidly.

18. IARC and collaborators predicted that the **global gastric cancer burden** will increase to about 1.8 million new cases and about 1.3 million deaths by 2040, representing increases of about 63% and 66%, respectively, compared with 2020.

19. IARC and collaborators estimated that 325 000 people were diagnosed with **melanoma worldwide** and 57 000 people died from the disease in 2020. The highest incidence rates were observed in Australia/New Zealand, followed by Western Europe, North America, and Northern Europe. Melanoma continued to be rare in most African and Asian countries. IARC predicted that the burden from melanoma will increase to 510 000 new cases (a roughly 50% increase) and to 96 000 deaths (a 68% increase) by 2040. Melanoma remains an important challenge to cancer control and public health globally.

20. IARC confirmed that the current **thyroid cancer** epidemiological landscape is strongly suggestive of a large effect of overdiagnosis in many countries and settings worldwide, confirming the relevance of thyroid cancer overdiagnosis as a global public health problem.

¹ Please refer to the IARC Organizational Structure in [Figure 7](#) for list of acronyms.

21. IARC and collaborators reported that the total **cost of management of patients with thyroid cancer** was about €200 million in France, of which between €60 million and €116 million (or between 29% and 57% of the total cost) was attributable to treatment of overdiagnosed cases. The management of thyroid cancer in France represents not only a relevant clinical and public health problem but also a potentially important economic burden.
22. IARC reported on the **cancer burden in sub-Saharan Africa**. A total of 801 392 new cancer cases and 520 158 deaths were estimated to have occurred in 2020. In women, the most common cancer types were breast cancer (which ranked first in 28 countries) and cervical cancer (in 19 countries). In men, the most common cancer type was prostate cancer, followed by liver cancer and colorectal cancer. The cancer burden is expected to nearly double during the next 20 years as a result of population growth and ageing.
23. IARC, in partnership with regional collaborators, reported on the **cancer burden in 32 countries in Latin America and the Caribbean**. A total of 1.5 million new cancer cases and 700 000 cancer deaths were estimated to have occurred in 2020. The most common cancer types were prostate cancer, breast cancer, colorectal cancer, lung cancer, and stomach cancer. Lung cancer remained the leading cause of cancer death, although the rates varied substantially between countries. The cancer burden in Latin America and the Caribbean is predicted to increase by 67% by 2040.
24. IARC, in collaboration with the Global Initiative for Cancer Registry Development (GICR), and population-based cancer registries worldwide, reported large international differences in **cancer survival** among patients diagnosed with 15 common cancer types in Asia, Africa, and Latin America and the Caribbean. These data are publicly available in the SURVCAN-3 online tool (<https://gco.iarc.fr/survival/survcan/>), which is part of the Cancer Survival subsite of the IARC Global Cancer Observatory (GCO).
25. IARC, in collaboration with partner institutions, found that **socioeconomic inequalities in cancer mortality** are large and exist everywhere in Europe and for most cancer types. This variation is predominantly due to the remarkable between-country differences in cancer mortality rates among individuals with lower socioeconomic status. The reduction of cancer mortality rates among the most disadvantaged groups is a crucial step to lower national average cancer mortality rates and the overall burden of cancer.
26. IARC launched a new website on **inequalities in cancer incidence and mortality**. The website describes IARC's specific projects on cancer inequalities. It also provides links to recently published articles and to news and media coverage of this research (<https://cancer-inequalities.iarc.who.int/>).

2.2 Pillar II. Understanding the causes

27. IARC and partners showed that the substitution of 10% of ultra-processed foods with 10% of minimally processed foods was associated with reduced risks of **head and neck cancers, colon cancer, and hepatocellular carcinoma in Europe**. These findings will help to put in place public health nutrition policies.
28. IARC, in collaboration with partner institutions, found that four distinct body shapes capturing the heterogeneous expression of adiposity were differentially associated with the risk of **overall cancer and 17 site-specific cancers in Europe**. The current cancer burden associated with adiposity and body size based on classic anthropometric traits is probably underestimated.

29. IARC, in collaboration with partner institutions, provided evidence suggesting that obesity influences nearly all major pathways involved in **colorectal carcinogenesis**. A higher Body Mass Index (BMI) is associated with a higher risk of colorectal cancer but present little evidence of heterogeneity of the association across individual molecular subtypes.
30. IARC and collaborators showed that BMI has a direct effect on **cancer survival** that is independent of pre-diagnostic cardiometabolic disease in Europe. This finding may contribute to improved prognostic stratification in patients with cancer who are affected by cardiometabolic comorbidities.
31. IARC and partner institutions provided new evidence that obesity in childhood and young adulthood is a risk factor for developing **endometrial cancer and kidney cancer**.
32. IARC and partners found significant higher risk of **ovarian cancer** associated with current or recent use of estrogens combined with progesterone or dydrogesterone.
33. IARC and partners identified multi-omics markers of exposure to ultraviolet radiation that are critically involved in immune function, have the potential to drive cancer development, and could be used to predict the survival of patients with **cutaneous melanoma**.

2.3 Pillar III. From understanding to prevention

34. IARC scientific highlights listed below provided key indicators to support the implementation of the **WHO Global Cervical Cancer Elimination Initiative**:
35. IARC and partner institutions demonstrated the high and durable immune response in women and girls who received a single dose of vaccine against HPV at 10 years after vaccination. The durability of protection offered by a single dose is a key consideration for adoption of a single-dose schedule for HPV vaccination as recommended by WHO.
36. IARC found that a national single-dose HPV vaccination programme for girls in India could substantially reduce the incidence of cervical cancer, to below the incidence rate set by WHO as the threshold for the elimination of cervical cancer as a public health problem. If introduced now, HPV vaccination would prevent close to 1 million cases of cervical cancer over the lifetime of birth cohorts currently aged 10 years or younger.
37. IARC found that the proportion of cancer cases attributable to infections was higher in 31 fragile states than globally. Only half of these countries had an updated cancer control plan or cancer management guidelines, and only 39% had a cervical cancer early detection programme and guidelines.
38. IARC demonstrated in 9 countries in Latin America that colposcopy with proper standardization of the protocol can be successfully optimized to triage HPV-positive women. This result reinforces recent WHO recommendations on the use of colposcopy as triage for HPV-positive women.
39. IARC reported that HPV-negative women living with HIV have a very low risk of developing cervical intraepithelial neoplasia grade 2 or 3 or invasive cancer within a follow-up period exceeding five years. This finding provides an early indication that the currently recommended screening interval of 3–5 years in women living with HIV may be extended to at least five years in the subgroup of HPV-negative women.
40. IARC launched a new IARC atlas, a practical online guide (<https://screening.iarc.fr/atlasHPV.php>) designed to help health professionals use HPV tests for cervical cancer screening and managing HPV-

positive women. The new IARC HPV atlas will be a key component of the WHO Academy learning programme that can be used by master trainers in different countries to train various groups of health professionals.

41. IARC, in collaboration with the Lalla Salma Foundation for Cancer Prevention and Treatment (Morocco), launched a new report that provides solutions to overcome some of the common system-level barriers to implementation of cervical cancer screening, which are faced in many countries in sub-Saharan Africa. This new report summarizes the outcomes of the Care4Afrique pilot project, which was initially implemented in Benin, Côte d'Ivoire, and Senegal in close collaboration with the ministries of health of those countries.

42. IARC scientific highlights listed below provided key indicators to support the implementation of the **WHO Global Breast Cancer Initiative**:

43. IARC and partner institutions showed that improving breast awareness and ensuring access to timely treatment are almost as good as systematic clinical breast examination screening in reducing mortality from breast cancer.

44. IARC launched a new digital atlas, the *Atlas of Breast Cancer Early Detection*, a step-by-step guide to the procedure of clinical breast examination and its interpretation, diagnostic mammography, diagnostic breast ultrasound, image-guided fine-needle aspiration cytology, and core biopsy of the breast (<https://screening.iarc.fr/atlasbreastdetail.php?Index=001&e=%3E>).

45. IARC and partners showed that about 1 million children became maternal orphans in 2020 as a result of the estimated 4.4 million women who died from cancer. Almost half of these children were in Asia, and more than one third were in Africa. 45% of the new maternal orphans in 2020 were due to breast cancer and cervical cancer, the two female cancers targeted by WHO's Cancer Initiatives. Prevention, vaccination, early detection and effective treatment have the potential to not only prevent millions of cancer deaths in women but also prevent millions of maternal cancer orphans and disrupt the intergenerational cycle of poverty.

46. Additional scientific highlights are listed below:

47. IARC, WHO, and the Geneva University Hospitals found that infection with viral hepatitis accounts for almost two thirds of the **global burden of cirrhosis of the liver**, a known precursor of liver cancer. These findings provide empirical data that can be used to accelerate the elimination of viral hepatitis as a public health threat and support the WHO Global Hepatitis Programme.

48. IARC and partners found that the risk of **oesophageal squamous cell carcinoma in East Africa** was higher in people who consumed very hot food or beverages. Avoidance of consumption of very hot food or beverages may contribute to the prevention of oesophageal squamous cell carcinoma in East Africa.

49. IARC and partners showed a significant dose–response relationship between computed tomography (CT)-related radiation dose and **risk of brain cancer in children and young adults** in Europe. The study stresses the importance of justifying CT examinations in young people and lowering the radiation dose as much as is reasonably achievable.

50. IARC developed a risk-adapted strategy for **prostate cancer screening** with improved use of prostate-specific antigen levels, in combination with age, prostate volume, and the application of prostate cancer risk calculators. This improved screening strategy could enable the introduction of more effective prostate cancer screening programmes with better benefit-to-harm ratios.

51. IARC estimated the 10-year risk of **oropharyngeal cancer** after a positive HPV16-E6 serology test as 27% for men and 6% for women at age 60, underlining the need to develop minimally invasive surveillance protocols.

52. IARC and partner institutions showed that polygenic risk scores derived from genome-wide association studies (GWAS) enable effective identification of individuals at high risk of developing **nasopharyngeal carcinoma**. When used together with tests for Epstein–Barr virus serology, the GWAS-derived polygenic risk scores significantly improve risk stratification and can inform personalized screening.

2.4 Pillar IV. Knowledge mobilization

53. IARC published the 1st Edition, volume 1, of the IAC-IARC-WHO Cytopathology reporting systems: **WHO reporting System for Lung Cytopathology**.

54. IARC published the 5th edition, volume 8, of the WHO Classification of Tumours: **urinary and male genital tumours**.

55. IARC launched a new website dedicated to Mapping the Evidence for the WHO Classification of Tumours: **a Living Evidence Gap Map by Tumour Type project** (<https://wct-evi-map.iarc.who.int/>).

56. *IARC Monographs* classified industrial chemicals 1,2-diphenylhydrazine, diphenylamine, *N*-methylolacrylamide, and isophorone as *possibly carcinogenic to humans (Group 2B)*, mainly on the basis of *sufficient evidence* for cancer in experimental animals. 1,1,1-Trichloroethane was classified as *probably carcinogenic to humans (Group 2A)* on the basis of *limited evidence* for cancer in humans and *sufficient evidence* for cancer in experimental animals. For all agents, there was *limited mechanistic evidence*.

57. *IARC Monographs* classified occupational exposure as a firefighter as *carcinogenic to humans (Group 1)*, on the basis of *sufficient evidence* for cancer in humans.

58. *IARC Monographs* classified trivalent antimony as *probably carcinogenic to humans (Group 2A)* on the basis of *limited evidence* of carcinogenicity in humans, *sufficient evidence* of carcinogenicity in experimental animals, and *strong mechanistic evidence* in human primary cells and in experimental systems. Cobalt metal and soluble cobalt(II) salts were classified as *probably carcinogenic to humans (Group 2A)* on the basis of *sufficient evidence* in experimental animals and *strong mechanistic evidence* in human primary cells. Cobalt(II) oxide and weapons-grade tungsten alloy were classified as *possibly carcinogenic to humans (Group 2B)* on the basis of *sufficient evidence* in experimental animals. Cobalt(II,III) oxide, cobalt(II) sulfide, other cobalt(II) compounds, and pentavalent antimony were each evaluated as *not classifiable as to its carcinogenicity to humans (Group 3)*.

59. A Special Report published in *The New England Journal of Medicine* summarized all available evidence on the effectiveness of primary and secondary preventive interventions in reducing the incidence of and mortality from oral cancer. Oral cancer is highly prevalent in South-East Asia and is linked to chewing smokeless tobacco products. There is sufficient evidence that quitting tobacco smoking, alcohol consumption, or use of areca nut products (with or without tobacco) reduces the risk of oral cancer. The detailed assessments will be published as Volume 19 of the IARC Handbooks of Cancer Prevention. This volume of the IARC Handbooks will play a major role in the regulation of smokeless tobacco in the South-East Asia region and will help fight a major public health problem.

2.5 IARC research at the intersection between COVID-19 and cancer

60. As of March 2022, two years since the beginning of the COVID-19 outbreak, a total of 6 million deaths due to COVID-19 have been reported across the world. Responding to the international need to provide evidence on the impact of disruptions and their mitigation, the *COVID-19 and Cancer Global Modelling Consortium (CCGMC)* was established in May 2020. The CCGMC aims to synthesize relevant evidence on COVID-19 and cancer and configure modelling platforms that inform decision-making in cancer control.

61. The COVID-19 and cancer initiative or IARC-C19 led by IARC in collaboration with partner institutions aims to provide widespread and long-term impact of the pandemic on cancer outcomes to improve the health system resilience of countries and provide guidance to help them to build back better.

62. Three main activities were carried out in 2022, including compiling data on the impact of the COVID-19 pandemic on cancer based on published studies, qualitative assessment of the impact on cancer services, and development of tools to estimate the impact of COVID-19 on major global cancer initiatives. For the first, systematic reviews have been published or ongoing on the impact of the pandemic on risk of COVID-19 among patients with cancer, risk of dying from COVID-19 among patients with cancer, on prevalence of tobacco smoking, and cancer services. Ongoing qualitative assessment is being performed to assess disruptions and mitigations strategies during COVID-19 pandemic in several Participating States. Finally, an online tool to assess the impact of COVID-19 pandemic on the Global Cervical Cancer Elimination Initiative is being developed, to be launched early 2023.

63. A Report on IARC C-19 is provided in [Document GC/65/3](#).

64. IARC participated to the development of a review highlighting the ethical, epistemological, as well as practical reasons that guidelines for cancer care issued during the COVID-19 crisis were not always followed. These findings provide some lessons learned for future crises to enable better guideline development processes.

65. IARC and collaborators evaluated temporal changes of the incidence of childhood cancer in Germany during the COVID-19 pandemic. They found a remarkable increase in incidence rates of childhood cancer overall for 2020 compared to the incidence rates of the previous five years. Based on current scientific knowledge, scientists argue that an actual increase in risk for childhood cancer overall in direct or indirect response to the COVID-19 pandemic appears highly unlikely but seems conceivable for lymphoid leukaemias.

2.6 Report on Key Performance Indicators (KPIs)

2.6.1 Publications

66. A broader range of KPIs began to be reported in 2020. In addition to the productivity (number of IARC articles in a given year), the current KPIs highlight the influence of IARC research (h-index), international collaboration, and visibility.

67. These KPIs form the baseline for comparison going forward, and the evolution of these KPIs will be monitored during the period of the MTS 2021–25.

68. **Productivity.** In 2022, IARC scientists published a total of **406 articles** in 194 journals, of which 319 (79%) were peer-reviewed papers*. The total number of articles and the proportion of peer-reviewed papers were quite similar to recent years (see [Table 1](#)).

*Records were retrieved via the Web of Science database, specifically from Science Citation Index and Emerging Sources Citation Index. Records were restricted to 2022 as the final publication year and records marked "Meeting Abstract" were removed prior to analysis.

69. **Influence of research: citation index (h-index).** [Table 2](#) shows an **h-index of 12** for IARC's 2022 output, meaning that 12 articles have been cited at least 12 times each, with an average citation count of 2.4 per article. The top 10 most cited articles published in 2022 are listed in [Table 3](#). Comparative data for the previous five years is also shown. The h-index for articles from 2018 to 2022 inclusive is 93, with an average citation rate of 60.4 per article.

70. **International collaboration.** Analysing the proportion of IARC's publications whose co-author affiliations include addresses in more than one country. Of the 406 total articles for 2022, 383 (94%) involved international collaboration, including a co-author affiliation from at least one other country. This percentage is in line with that of the last five years overall, 2018–2022, in which 1983 (96%) of 2061 total articles involved at least one other country affiliation.

71. **Visibility.** The Altmetric database tracks mentions of IARC research output in the news, social media, policy documents and other non-traditional sources of citation. It therefore complements traditional citation tracking from sources such as Web of Science and other databases in the scholarly ecosystem. [Figure 1](#) gives a snapshot of IARC's altmetrics profile for its 2022 output.

72. [Table 4](#) reported the number of visitors to the IARC websites in 2022. Among IARC research project websites, the Global Cancer Observatory (GCO) received the highest number of total visits in 2022.

73. [Figure 2](#) reported the number of visits to the IARC websites throughout 2022. The peak of 8236 visits (28 October 2022) is the day of the publication of the news item "[Vacancy, Director, IARC](#)".

74. [Figure 3](#) reported the number of visits to the Monographs website in 2022.

- The peak of 2417 visits (18 February 2022) is due to the large number of visits to the following webpages:

<https://monographs.iarc.who.int/agents-classified-by-the-iarc/> and <https://monographs.iarc.who.int/list-of-classifications>

- The peak of 2346 visits (31 July 2022) is due to the large number of visits to the following webpages:

<https://monographs.iarc.who.int/> and <https://monographs.iarc.who.int/agents-classified-by-the-iarc/>

75. [Figure 4](#) reported the number of visitors to the GCO website in 2022. The peak of 5642 visits (10 May 2022) is on the day of publication of the research article "Cancer in sub-Saharan Africa in 2020: a review of current estimates of the national burden, data gaps, and future needs" in *The Lancet Oncology*. The following web content was published: [IARC Press Release 313](#), [News item](#).

76. The most popular downloads from the IARC Publications website are presented in [Table 5](#). Because of a change in methodology, the number of downloads of PDF publications in 2022 is somewhat small compared to 2021.

2.6.2 Capacity building

77. In 2022, IARC hosted a total of **195 Early Career and Visiting Scientists** (ECVS) from 56 countries through its Research Training and Fellowship Programme, out of which 81 were new arrivals.
78. Although there was no call leading to awards of IARC Fellowships in 2022, IARC was successful in negotiating with the Mark Foundation for Cancer Research, which supported a two-year postdoctoral fellowship awarded to one of the applicants from the reserve list of the 2021 selection. This is reflected in [Table 6](#).
79. The call for applications for IARC Postdoctoral Fellowships tenable in 2023–25 opened between September and December 2022 and targeted early career scientists from LMICs. The selection has been carried out since January and the final decision on the number of awards funded on Regular Budget will be made after the Governing Council, based on the outcome of the budget 2024–25 discussions. In addition, fund raising efforts have led to the renewed support of Children with Cancer UK, which will support two additional two-year postdoctoral fellowships focusing on childhood cancer research. Negotiations with other potential donors are ongoing, to increase the number of awardees from this selection.
80. As per [Resolution GC/64/R4](#), authorizing the conversion of the 12-month Senior Visiting Scientist Award into shorter Mid-Career Visiting Scientist Awards, to be funded from the Special Account for Undesignated Contributions, the above-mentioned process included a call for two to three Mid-Career Visiting Scientist Awards. The aim of these new fellowships is to develop collaborative research projects with IARC and contribute to enhancing their career prospects and build the capacity of their instruction through longer term collaborations initiated/strengthened through the Fellowship.
81. The IARC Courses Programme enhances research capacity of the global research community, in particular in LMICs, through lifelong learning opportunities in the areas of the Agency's expertise.
82. In 2022, and as shown in [Table 7](#), the Agency organized 26 training courses and webinars targeting researchers and health professionals from many countries, in particular LMICs. It is to be noted that, as a result of the recent global health crisis, most courses were organized online in 2022. Courses were redesigned to combine live sessions with facilitated self-learning and lasted between a few days (e.g. Cancer Registration: Principles and Methods) to several months (e.g. Research Leadership training).
83. In view of budget constraints, the IARC Summer School on Cancer Epidemiology was not organized in 2022.
84. As a key complement to live events, IARC continued to produce self-learning resources, including the two following examples:
85. Based on a combination of IARC learning material, a new self-paced learning programme "[Introduction to Cancer Prevention and Early Detection](#)" was launched to introduce the concepts of cancer surveillance and the role of cancer registration in cancer control. It provides an overview of primary and secondary prevention concepts and strategies, an understanding of measures to improve the quality of cancer screening programmes, and of the benefit of robust health systems to support cancer control efforts. Some basic concepts of implementation research will also be of interest for anyone involved in cancer prevention. This introductory learning path was a prerequisite to apply for the corresponding module of the IARC Summer School 2023, whose organization is ongoing.

86. As part of the [World Cancer Report Updates Learning](#) project, IARC launched a [training toolkit](#) designed to support anyone involved in transmitting knowledge and skills on cancer research for cancer prevention. It consists of a PowerPoint file, including the following: modifiable slides for lectures, with an attractive, attention-grabbing design; text that trainers can use to prepare their sessions; links to the sources of the figures, and advice on how to adapt them to the context; suggested quizzes and exercises, including instructions for trainers. The material can be used in a modular and flexible way. It can also be adapted for use in different countries or settings. The first module of the toolkit, "Rationale and Scope of Cancer Research for Cancer Prevention" was launched in September 2022. In line with IARC's commitment to open science, the material in this training toolkit is published under a Creative Commons licence ([Attribution-Non-Commercial-Share Alike 3.0 IGO \(CC BY-NC-SA 3.0 IGO\)](#)), allowing reuse, adaptation/translation and publication under the same license.

87. The above-described resources are available through the IARC Learning Portal, which attracts a growingly increasing audience (<https://learning.iarc.fr/>). In 2022, 1485 new user accounts were created on the portal, a 32% increase compared to the number of new accounts created in 2021 (1128). These new users registered from 134 countries. As described in section 3.1.3 of this report, IARC and the WHO Academy have developed a collaboration within the development of the Academy's Learning Experience System, which will progressively replace the current IARC Learning infrastructure.

88. Regional learning centres are a powerful way to leverage the impact of an institution's courses and learning resources. Based on the recommendation provided by China during the 64th IARC Governing Council in May 2022, the Agency and the National Cancer Centre (NCC) China have collaborated to set up a first regional centre, the IARC-NCC Learning Centre. This joint Centre will include: i) the organization of the IARC Summer School's modules in China, targeting researchers and health professionals from China and the Association of Southeast Asian (ASEAN) countries, ii) the joint development of new learning modules, and iii) the organization of train the trainers courses in the framework of initiatives such as GICR, CanScreen5 or primary prevention programmes. The first course of the IARC-NCC Learning Centre (Introduction to Cancer Epidemiology) is planned for end 2023/early 2024. It is planned that the related Memorandum of Understanding between IARC and NCC China will be signed during the week of the 65th IARC Governing Council in May 2023.

3. COOPERATION, PARTNERSHIPS AND STRATEGIC ENGAGEMENTS

3.1 Cooperation with WHO

3.1.1 Thematic cooperation

89. Close collaboration between IARC and WHO is critical to successful delivery of respective mandates and has been strategically identified as a priority in IARC's MTS 2021–25 as well as in the [World Health Assembly Resolution 70.12](#) (2017). IARC and WHO have complementary functions and mandates to advance cancer control globally. In that regard, and as part of broader strategic activities, the IARC Statute places emphasis on cancer research, while WHO has the mandate in cancer control to support policy formulation and implementing programmes towards effective global cancer control. This pathway of research into policies and programmes is the basis for the complementary relationship between IARC and WHO.

90. Coordination and collaboration between IARC and WHO intensified in 2022, resulting in the finalization of a joint strategic workplan for 2023–25 to enable more effective links between science and policy. The agreed strategic workplan proposes three core elements to further strengthen collaboration:

(i) Implementation of IARC Teams related to each WHO Global Initiative (Global Cervical Cancer Elimination Initiative, Global Breast Cancer Initiative, Global Childhood Cancer Initiative) to improve sharing of information and knowledge. As a priority project in this Strategic workplan, IARC's Global Initiative for Cancer Registry Development (GICR) will be adapted by IARC and WHO as GICR+, upon consensus, to optimally support the provision of relevant indicators to inform and evaluate progress in scaling-up the three WHO Cancer Initiatives and more broadly in the support of the implementation of NCCP.

91. IARC scientists and WHO technical units met routinely to examine research gaps, generate and interpret implementation research and review policy implications. For example, the Framework for the WHO Global Breast Cancer Initiative Framework has KPIs informed by the IARC-led research in sub-Saharan Africa. In cervical cancer, WHO Strategic Advisory Group of Experts on Immunization used IARC-led research to conclude that single-dose HPV vaccination delivers solid protection.

(ii) Identification of a set of priority projects co-designed between WHO and IARC to be implemented in the next two years. Three projects have been selected because of their potential to be developed through shared resource investments and resource mobilization as well as their scale, scope and potential impact: GICR+, cancer modelling and economics, IARC Handbook Supplements.

92. As an example, Handbook volume 19 on the prevention of cancer of the oral cavity has considered the development of a Supplement. This Supplement is a set of "products" which aims to deepen the results of the Handbook and present data and knowledge that can be directly useful to governments and other decision-making bodies in the implementation of prevention strategies.

(iii) Creation of governance mechanisms with the setting up of committees to support implementation of this workplan and to strengthen broader engagement. Leadership oversight for implementation build on existing structured dialogue between IARC and WHO. This also includes the recent development of IARC-IAEA-WHO quarterly meeting of directors from IARC, IAEA and WHO Department of Noncommunicable Diseases (NCDs) supported by the technical leads from each agency.

93. A new Policy Review by IARC, IAEA, WHO, and partner institutions presented the evolution of the IAEA, IARC, and WHO joint advisory service to help countries assess national capacities and the readiness of the health system to plan and implement cancer control strategies. These assessments are known as integrated mission of Programme of Action for Cancer Therapy (imPACT) Reviews. The Policy Review was published in *The Lancet Oncology*.

94. IARC contributed to a new special report on cancer control in the WHO Eastern Mediterranean Region that examined issues influencing the cancer burden in the region, actions being taken to address these issues, and how the situation may evolve in the future (<http://www.cancercontrol.info/cancer-control-eastern-mediterranean-region-special-report/>).

95. IARC Director attended the WHO 72nd Regional Committee for Europe session in Tel Aviv on 12–14 September 2022 for strategic discussions on cancer prevention and control. Discussions were focused on the dissemination of IARC scientific evidence to support and reinforce WHO/Europe programmes, especially the European framework for action on alcohol and the roadmap to accelerate the elimination of cervical cancer as a public health problem in the WHO European Region 2022–30.

3.1.2 Communication/liaison

96. IARC marked Rare Disease Day 2023 with a video highlighting the lungNENomics project led by IARC, which aims to improve the diagnosis and clinical management of lung neuroendocrine tumours, a type of rare cancer.

97. IARC marked International Childhood Cancer Day 2023 by highlighting IARC's global research on childhood cancer, supporting the WHO Global Initiative for Childhood Cancer launched in September 2018.

98. IARC marked World Cancer Day 2023 by a series of videos highlighting IARC's research on cancer inequalities and on the dramatic consequence of deaths from breast cancer and cervical cancer, the two female cancers targeted by WHO's cancer initiatives, on the number of maternal orphans (1 million in 2020, globally), driving an intergenerational cycle of poverty.

99. IARC marked Cervical Cancer Awareness Month 2023 by highlighting the work that remains to be done for the world to eliminate this disease by the end of this century, and by promoting the tools that are available to achieve this goal, supporting the WHO Global Cervical Cancer Elimination Initiative.

100. IARC marked Lung Cancer Awareness Month 2022 by highlighting the burden and principal risk factors of lung cancer around the world.

101. IARC marked Breast Cancer Awareness Month 2022 by focusing on the need for breast cancer screening worldwide and the intergenerational effects of breast cancer deaths, underlining the urgent need for continued global action to improve breast cancer survival.

102. IARC marked Rare Cancer Day 2022 by highlighting the burden of disease attributable to rare cancer types and the work IARC researchers are doing to address these tumour types.

103. IARC celebrated World Cancer Research Day on 24 September 2022 by highlighting IARC's efforts that strive to ensure equitable cancer outcomes for all.

104. IARC marked Childhood Cancer Awareness Month 2022 by highlighting the global burden of childhood cancer and IARC's actions to prevent and address childhood cancer worldwide.

105. IARC marked World Hepatitis Day 2022 by highlighting the need to bring hepatitis care closer to primary health facilities and communities so that people have better access to treatment and care, no matter what type of hepatitis they may have.

106. IARC marked World No Tobacco Day 2022 by publishing three posters highlighting the contribution of tobacco smoking to the global cancer burden, as well as the addictive nature of cigarettes and the difficulty a tobacco user faces when trying to quit.

107. IARC marked European Week against Cancer 2022 by launching the French version of the Cancer Prevention Europe self-paced online learning programme.

108. At its Sixtieth session in May 2018, the Governing Council endorsed the "Interim Standard Operating Procedure (SOP)", as a basis for implementing coordination between IARC and WHO on assessments of hazards and risks, focusing on communication between the *Monographs* and the *Handbooks* programmes and WHO HQ, recognizing that the SOP, as a living document, will be updated based on further consultation and experience gained in its application. This SOP can be used as a reference for communication of other programmes of mutual interest (see Annex 1 in https://events.iarc.who.int/event/46/attachments/110/483/GC60_13_CoordinationWHO.pdf).

109. The experience gained during the five years of the SOP existence being timely, and as agreed by the Chairs and Vice-Chairs of the Scientific and Governing Councils during the regular meetings held in 2022, the interim SOP will be updated through 2023 in consultation with WHO/HQ, and the agreed updated version will be prepared for review by the Scientific Council in February 2024 and be discussed and endorsed by the Governing Council in May 2024.

110. Procedures are in place at IARC to ensure that the *Monographs* and *Handbooks* evaluations are planned according to well-defined priority criteria and that these criteria are carefully followed. This is done in close collaboration with WHO/HQ to avoid any potential communication issues.

111. As per our SOP, results, including infographics and Q&A of *Monographs* evaluations, volume 132 (occupational exposure as a firefighter) and volume 133 (anthracene, 2-bromopropane, butyl methacrylate, and dimethyl hydrogen phosphite) were communicated to WHO immediately upon publication in *The Lancet Oncology*.

112. As per our SOP, the list of agents proposed to be evaluated by the Working Groups in 2023 has been cleared by WHO for the upcoming *Monographs* meetings: aspartame, methyl eugenol and isoeugenol (volume 134; 6–13 June); Perfluorooctanesulfonic acid (PFOS), Perfluorooctanoic acid (PFOA) (volume 135; 7–14 November).

113. As per our SOP, the dates for the next Advisory Group meeting on priorities for 2025–29 for the *Monographs*: 26–29 March 2024, were communicated to WHO. IARC posted the meeting announcement on the IARC website on 27 March 2023 (one year ahead of the Advisory Group meeting). The announcement included the call for experts and call for nominations of agents for consideration (or reconsideration).

114. As per our SOP, WHO and IARC jointly addressed and coordinated communication and organization challenges in the context of the evaluation of aspartame to be undertaken by the IARC *Monographs* programme and the Joint WHO/FAO Expert Committee on Food Additives (JECFA) programme.

115. IARC and JECFA posted the respective meeting announcement (one year ahead of the meeting) and a brief note to communicate the main concepts of the evaluations, on both IARC and WHO websites, respectively to announce the *Monographs* and JECFA meetings.

116. As per our SOP, the IARC Director and the WHO Deputy Director-General/Programmes agreed fully that there is no inherent conflict or duplication of work between endeavours of IARC and JECFA and that IARC carcinogenic hazard identification should precede the full JECFA risk assessment for aspartame.

117. IARC's hazard identification will be conducted from 6–13 June 2023 and JECFA's risk assessment from 27 June–6 July 2023. The IARC meeting summary will be published in *The Lancet Oncology* shortly after the JECFA meeting. The Governing Council will be apprised of its publication date in advance by email.

118. Dr Tamás Landes, Director of Administration and Finance, continued to be the IARC focal point for general management, business operations, and legal matters. He continued to take active part in the WHO network of Directors of Administration and Finance, as well as on the WHO Staff Health Insurance Global Oversight Committee. He is also invited as an observer to the Business Management System (new ERP) Programme Board meetings.

119. IARC is part of the WHO Global Advisory Committee on formal complaints of abusive conduct (GAC). The GAC's role is to review Internal Oversight Services investigation reports on allegations of abusive conduct (i.e. abuse of authority, discrimination, harassment, and sexual harassment) and to provide a recommendation to the Director-General/Regional Director/Executive Director concerning an appropriate course of action, in accordance with the options set out in the Policy on Preventing and Addressing Abusive Conduct (PAAC).

120. Dr Berth Ntanga Atik, IARC/WHO Staff Physician (shared with WHO Academy), joined IARC in September 2022.

3.1.3 WHO Academy and the Global Health Hub in Lyon

121. The WHO Academy will provide millions of people around the world with rapid access to the highest quality training courses in health. The Academy will be a key lifelong learning platform to accelerate the implementation of evidence-based health practice and policy, and an important future partner for IARC. The Agency therefore continued to contribute to the planning of the Academy through participation in several work streams and to relevant activities of the WHO Academy.

122. The Comprehensive Learning Programme on Screening, Diagnosis and Management of Cervical Precancer has therefore been developed by a consortium of WHO/HQ and the six Regional Offices coordinated by the IARC Early Detection, Prevention and Infections (EPR) Branch. The Managing Infrastructure for Medical Research Learning Programme was also selected and is led by the Nutrition and Metabolism (NME)/Laboratory Support, Biobanking and Services (LSB) Branch.

123. In 2022, IARC and the Academy set up a collaboration within the development of the Academy's Learning Experience System (LXP). In the frame of this collaboration, the IARC Learning and Capacity Building (LCB) Branch has provided training design expertise to support the development of the LXP, including through advises on key LXP functionalities and testing of demo versions. The Academy team has created a dedicated Learning Space on the LXP, which will be managed by IARC autonomously. IARC self-paced and facilitated courses will progressively be migrated to the LXP, which will eventually replace the current IARC Learning infrastructure.

3.2 Partnership highlights

124. Selected partnerships of the Agency are highlighted below. Strengthened partnerships will enable new projects to begin and add momentum to ongoing projects, and directly contribute to the IARC mission to promote international collaboration in cancer research.

125. IARC was part of a unique public-private partnership to support the evaluation of a quadrivalent HPV vaccine manufactured by the Serum Institute of India in females and males aged 9–26 years. The Subject Expert Committee on Vaccines to advise the Drugs Controller General of India recommended granting marketing authorization for the new vaccine for females and males aged 9–26 years. This will be a huge step to accelerate cervical cancer elimination in India and globally.

126. IARC scientists presented the World Code Against Cancer Framework at the occasion of the first China Primary Cancer Prevention Conference held in Taiyuan, China, on 25 March 2023.

127. IARC Director took part in the institutional peer review of the Tata Memorial Centre and the International Collaboration for Research methods Development in Oncology (CReDO) workshop, both held in Mumbai, India on 26 February to 7 March 2023.

128. IARC Director and Head of the Environment and Lifestyle Epidemiology (ENV) Branch gave lectures on cancer prevention and inequalities in cancer incidence and mortality during the Conference on Strategies to Decrease Inequalities in Cancer Therapeutics/Care and Prevention, hosted by the Pontifical Academy of Sciences and the European Academy of Cancer Sciences in Vatican City on 23–24 February 2023.

129. IARC, the Organisation of European Cancer Institutes, and the Erasmus University Medical Center (The Netherlands) presented recommendations to Latvian health sector specialists, politicians, public officials, and patient advocate organizations for creating, improving, and ensuring equally high-quality and equally accessible cancer care for all patients in Latvia. The event is part of the Improving Cancer Care Coordination and Screening in Latvia and Slovakia (ICCCS) project, which is led by IARC.

130. IARC, in collaboration with the African Organisation for Research and Training in Cancer (AORTIC), conducted a survey on The Language of Cancer Communication in Africa. The information collected from this survey will help to highlight the state of cancer communication in Africa and serve as a platform and basis for future work in this area.

131. IARC Director and almost 20 other researchers from IARC attended the Union for International Cancer Control (UICC) World Cancer Congress in Geneva, Switzerland, on 18–20 October 2022 and presented the latest IARC research on a range of topics, including personalized cancer screening, equity in cancer prevention, improving screening programmes, and COVID-19 and cancer.

132. IARC and the Instituto de Salud Carlos III (ISCIII) in Madrid, Spain, held a series of scientific webinars in 2022. The webinars addressed key areas of IARC cancer research to promote collaboration with ISCIII and to establish the basis for possible new joint initiatives in the future.

133. Selected new projects or initiatives, led by IARC in line with IARC's MTS 2021–25, that started in 2022 in collaboration with partner institutions, are highlighted below.

134. IARC and the Department of Health and the Health Service Executive of Ireland developed a partnership to address global issues relating to the quality and coverage of cervical screening programmes, as part of the CervScreen Project.

135. IARC and partners across Europe have begun an ambitious new project that will incorporate large-scale cancer biorepositories and novel exposomics techniques to understand the causes of renal, pancreatic, and colorectal cancer in Europe. The project, Discovering the Causes of Three Poorly Understood Cancers in Europe (DISCERN), also aims to help explain the geographical distribution of these cancer types, including their high incidence in central and eastern Europe. The project is funded by a grant from the European Commission in the framework of the Horizon Europe Mission on Cancer.

136. IARC is a partner in a new project called Boosting the Usability of the EU Mobile App for Cancer Prevention (BUMPER) funded by the European Union (EU) EU4Health programme, aiming to bring the messages of the European Code against Cancer to a broader and more diverse population through an EU Mobile App for Cancer Prevention.

137. IARC, the National Institute of Public Health of Slovenia, Community Healthcare Center Dr Adolfo Drolc Maribor (Slovenia), the Institute of Clinical and Preventive Medicine of the University of Latvia, and the University Hospital Centre of Nantes (France) launched a new joint project to accelerate gastric cancer reduction in Europe.

138. IARC joined partner institutions to launch a new initiative to defragment the landscape of European cancer research. The new project, called the canSERV consortium, will enable academia and industry to access cutting-edge services and support – from basic science to clinical translation – to foster personalized medicine for patients with cancer.

139. IARC and the National Cancer Center Japan (NCC) launched a joint initiative to follow up patients before and after a cancer diagnosis on a long-term basis, to study the impact of lifestyle risk factors before cancer diagnosis on the prognosis, survival, and quality of life of patients with cancer.

140. IARC and partner institutions are part of a team that has been awarded a grant of up to US\$25 million over five years as part of the Cancer Grand Challenges initiative, which is coordinated by Cancer Research UK and the United States National Cancer Institute (NCI). The funded project, “PROMINENT: Discovering the molecular signatures of cancer PROMotion to INform prevENTION” will facilitate the identification of the causative lifestyle and environmental factors that promote cancer and will provide routes to new methods and global approaches to cancer prevention for the wide population, including those most at risk.

3.3 Strategic engagement highlights

141. The Agency continued building a strong collaborative global network with strategic partners. In 2022, the Agency signed **four Memoranda of Understanding (MoU)** with the Programme National de Lutte Contre le Cancer, Côte d'Ivoire, Abidjan, Côte d'Ivoire; the National Centre for Disease Informatics and Research Indian Council of Medical Research (Department of Health Research, Ministry of Health and Family Welfare, Govt. of India), Bengaluru, India; the Union for International Cancer Control (UICC), Geneva, Switzerland; the Charles University, Prague, Czech Republic; and the National Central Cancer Registry, National Cancer Center, Beijing, China; **Two MoU initiated in 2022 are in negotiation** with the Pan-American Health Organization (PAHO), Washington, DC, USA; and the World Cancer Research Fund, London, UK; and **one MoU is in preparation** with the Kenya Medical Research Institute, Nairobi, Kenya.

142. In addition, the Agency **has renewed three MoU** with the Danish Cancer Society, Copenhagen, Denmark; the National Cancer Center, Tokyo, Japan; and the Beijing Genomics Institute at Shenzhen – China National Genebank, China.

143. IARC GICR launched **new Collaborating Centres in Côte d'Ivoire, Kenya, and South Africa** to improve access to cancer data within the framework of the GICR. These Collaborating Centres have a vital role to play in controlling this growing burden, by providing the data upon which cancer control planning and investments can be based.

144. Dr Arunah Chandran, Public Health Officer in the Early Detection, Prevention, and Infections (EPR) Branch at IARC has been elected as one of the co-chairs of the Cancer Research Programme of the Global Alliance for Chronic Diseases (GACD). Over the next two years, Dr Chandran will act as representative for investigators involved in the programme, which spans 19 projects in 33 countries – totaling a \$30 million investment in global cancer research.

145. IARC, the National Cancer Center (NCC) Japan, and the Ministry of Health, Labour and Welfare of Japan met virtually on 30 November 2022 to celebrate the 50th anniversary of Japan becoming an IARC Participating State.

146. On 7–11 November 2022, IARC Director was invited to the US National Cancer Institute to: i) discuss advancing Implementation Science for global cancer control and identify areas of mutual interests; and ii) explore potential collaborative opportunities to understand the impact of COVID-19 on cancer screening, diagnosis, and treatment access and ultimately discover the recovery and preparedness strategies necessary for future international emergencies or disasters. IARC Director met with US Cancer Moonshot representatives (White House/Office of Science and Technology Policy) to discuss and identify IARC activities to support the Cancer Moonshot program.

147. IARC was represented at the Science Summit at the 77th session of the United Nations General Assembly (UNGA77), which opened on 13 September 2022.

148. IARC Director welcomed Dr Hans Kluge, WHO Regional Director for Europe, Professor Jérôme Salomon, Director-General for Health of the French Ministry of Health and Prevention, and delegates from their organizations on 24 June 2022 to IARC for strategic discussions on improving cancer prevention and control in Europe and worldwide.

149. IARC Director participated in a high-level meeting in Paris on 23 June 2022 on the Horizon Europe Mission on Cancer: “Mission Cancer: joining European forces to understand cancer” within the framework of the French Presidency of the Council of the EU. UNCAN.eu, a European Initiative to Understand Cancer, is an EU-wide research programme to support the development and implementation of effective cancer prevention strategies and policies within Member States and the EU. IARC is part of the UNCAN.eu programme.

150. IARC welcomed five delegates from the Ministry of Health of Brazil at IARC on 13–17 June 2022 to learn about IARC's activities and meet with IARC scientists. Strategic discussions focused on freely accessible information sources that could be used to strengthen cancer prevention programmes in Brazil.

151. IARC Director was invited as an observer to the 69th session of the Scientific Committee of the United Nations Scientific Committee on the Effects of Atomic Radiation (UNSCEAR) held from 9–13 May 2022 in Vienna, Austria.

152. IARC has continued to further solidify its data protection framework and data security measures over the last year, to ensure IARC's data protection framework remains in line with internationally recognized standards, inter alia through the following actions:

- IARC established a permanent Data Protection Officer position;
- The IARC Data Protection Policy, focusing on the processing of personal data for scientific purposes, that was published on our public website in 2021, has been widely shared with our collaborators and was well-received;
- The IARC Data Protection General Awareness training is now mandatory for all personnel and is followed on a yearly basis. Newcomers follow the training within their first month at IARC and receive a briefing of IARC's Data Protection Officer afterwards to further discuss data protection;
- IARC maintained the established comprehensive Register of Records of Data Processing Activities (ROPA) for all scientific and non-scientific data processed at IARC;
- IARC found solutions for data protection challenges within several scientific projects, ensuring scientific collaborations can continue and data and samples can be shared with IARC;
- IARC continuously works, in collaboration with WHO, on strengthening our data protection framework taking into account new developments and internationally recognized standards;
- IARC has worked on solutions that enable us to share data with our collaborators remotely via our Scientific IT Platform, these solutions have been set up in accordance with internationally recognized standards, the initial pilot phase has been successful;
- IARC continues to collaborate with our collaborators, the European Commission, the European Data Protection Supervisor, several networks of International Organizations and data protection authorities to work on long-term solutions to simplify data sharing with IARC.

3.4 Resource Mobilization highlights

153. IARC's Resource Mobilization strategy highlights four main sources of funding for the Agency. The following targeted actions have been taken since the last Governing Council meeting on each of the four main focus areas: (i) Increase assessed contributions; (ii) Explore innovative resource mobilization; (iii) Enlarge direct and flexible funding; (iv) Strengthen competitive funding (under [3.4.1. Voluntary contributions to IARC – grants and contracts](#)).

(i) *Increase assessed contributions.* One of the Agency's objectives is to increase the number of Participating States. The Secretariat created a priority list of potential countries and several actions have been put in place, as listed below:

- Identify a short list of potential countries. The IARC membership fees are quite expensive compared to the contribution made by most countries to WHO or other UN agencies. Countries are split into five different groups. With the entry of China as a Participating State in 2021, all countries from Groups 1, 2 and 3 are now members of IARC. Any new Participating States will thus come from Groups 4 or 5. The level of annual contribution is around €750 000 for a Group 4 country and €600 000 for a Group 5 country. There are 16 countries in Group 4 of which 8 are already IARC Participating States. Based on this classification, IARC has worked on a shortlist of 10 potential members, which includes:

- Saudi Arabia
 - Portugal
 - Israel
 - Kazakhstan
 - New Zealand
 - Mexico
 - South Africa
 - Egypt
 - Czech Republic
 - United Arab Emirates
- Establish IARC investment case for countries to join. It is worth noting that the current economic environment is not very conducive for Ministries of Health to explore the possibility to become an IARC Participating State. Over the last three years, those Ministries have been at the fore front of the COVID-19 crisis and their budgets have been spent on health crisis relief activities. Moreover, the cost-benefit analysis done by the potential countries regarding their IARC membership does not seem, on face value, to favour IARC. Being part of the United Nations system, IARC was created on the principle of providing free and universal access to its research. That is why IARC's largest and most reputed programmes are completely open source. This is the case for the GCO, the *Monographs*, the *Handbooks of Cancer Prevention* and the World Cancer Report. Becoming one of IARC's Participating States provides the opportunity to help advance cancer research globally, with a focus on LMICs.

154. Countries that could become IARC Participating States want a tangible return on their investment for their contribution. As they already have access to open source IARC publications, they tend to believe that becoming an IARC Participating State is not worth the investment. The Secretariat has thus worked on an analysis of what countries can gain from being an IARC Participating State (e.g. internationalization of their research, shaping the world cancer prevention research agenda) to strengthen its argument when discussing with a potential new Participating State. Based on this analysis, the Secretariat has developed a strong investment case and has produced attractive communication materials to present to potential new countries.

- Specific background research on specific country needs. Based on the specific situation of the potential new countries, the Secretariat has also adapted its pitch to make it as relevant as possible to their needs and expectations. For example, understanding the willingness of Saudi Arabia to enhance its regional leadership in the Gulf area, the Secretariat has proposed the creation of a regional hub based in Riyadh for its CanScreen5 programme. This will help position Saudi Arabia as a strong regional leader in cancer research.
- Create and activate networks of advocates. Making sure the visibility and attractiveness of IARC could be enhanced in a specific country required the support of well-placed and renowned personalities to work in close collaboration with IARC, to introduce us to the right interlocutors within the different Ministries and advocate strongly for IARC membership. In some of the shortlisted countries, the Secretariat has developed networks of strong advocates who have been extremely helpful in communicating IARC's work and the benefits of becoming a Participating State.

155. For example, Dr Samar Jaber Alhomoud, colorectal surgeon and researcher at the King Faisal hospital in Riyadh and current chairperson of IARC Ethics Committee, has been actively engaged and has helped the Secretariat navigate through the country's administration. Similarly, the Secretariat has also contacted the Saudi embassy in Paris and IARC Director has visited the Ambassador to ensure clear endorsement from the Ministry of Foreign Affairs. One of IARC's senior scientists, Dr Valerie McCormack, also made a presentation on breast cancer prevention during an event organized by the Saudi Embassy in Paris for Pink October month.

- Results as of now. As mentioned earlier, the IARC membership fees are perceived to be high compared to the contribution made by countries to other UN agencies (such as the WHO for example). Hence, while there is always a strong commitment from Ministries of Health to join IARC and a clear endorsement from Ministries of Foreign Affairs, things become more complex when Ministries of Finance come into the picture for the final decision. Moreover, the health crisis that the world has suffered over the last few years has prevented some countries from allocating the proper budgetary resources.

156. The Secretariat has been able to overcome some of those challenges by developing more tailored and attractive pitches according to specific needs and expectations of the potential countries. Thanks to a strong network of advocates, the Secretariat has been able to navigate administrative systems and while there has not been any final application letter sent to the WHO Director-General office yet, there are at least two countries that should become IARC Participating States hopefully this year, and if not, in 2024: Saudi Arabia and Egypt.

(ii) Explore innovative resource mobilization.

- The Nouveau Centre. In 2021 and 2022, this concerns mostly the Nouveau Centre fundraising campaign. IARC has developed a three-pronged strategy to mobilize in-kind and financial resources for the Nouveau Centre project. This strategy includes:
 - Local campaign targeting major donors and key influencers in Lyon and its surroundings.
 - In-kind contribution campaign targeting corporate, for-profit entities.
 - Major gift campaign targeting Ultra-High Net-Worth individuals and/or Participating States.Over the last two years, all three axes of the campaign have been implemented.
- In-kind contribution campaign. IARC formally launched the in-kind contribution campaign in October 2020 on the United Nations Global Marketplace (UNGM). The equipment needed for the Nouveau Centre was divided into three packs: furniture/IT-audio-video/laboratory equipment. Specific donor acknowledgement guidelines were also discussed and finalized with WHO Due diligence of Non-State-Actors and the Legal Unit.

157. IARC secured in-kind donations from more than 10 different companies. Not only the most iconic and visible locations of the Nouveau Centre (reception areas, café, conviviality spaces) are furnished by these companies but IARC also obtained the in-kind donation of 93 new high-adjustable desks for its new offices.

- Major donors campaign. IARC is currently discussing with a few potential major donors, especially from India and from the Middle East geographic area.

158. IARC has also worked on a possibility to engage more meaningfully with potential donors, being IARC Participating States or High Net-Worth Individuals. IARC has identified 11 locations on the ground

floor that could be named after a country, a city or even a well-known cancer scientist. These locations can be split into two categories: meeting rooms and other iconic locations. They are distributed as follows:

- One meeting room with a capacity of 100 pax
- Two meeting rooms with a capacity of 50 pax
- Two meeting rooms with a capacity of 30 pax
- One training room with a capacity of 15 pax
- One videoconferencing room with a capacity of 15 pax
- Four remaining iconic locations: the reception hall, the atrium garden, the cafeteria and the library (the auditorium will bear the name of Dr Christophe Mérieux, Alain Mérieux's late son).

159. IARC offers the possibility to name one of these locations in recognition of a voluntary contribution made by an IARC Participating State or a High Net-Worth Individual. Every contribution higher than €100 000 will give the opportunity to name one of the meeting rooms. This will be done on a first-come first-served basis. As regards to the iconic locations, this will have to be discussed bilaterally with IARC.

- Beyond the Nouveau Centre. IARC has also worked on creating a more structured legacy programme which could become an important source of funds in the years to come. A new brochure has been designed and contacts made with notary offices (the best advisers when it comes to legacies).

(iii) *Enlarge direct and flexible funding*. The third objective of the Resource Mobilization strategy is to increase the proportion of direct funding received by the Agency. As explained in the last Director's report, important steps have been taken in this regard: the Secretariat has designed new and improved communication materials and has conducted match-making exercises to find out the most relevant donors for IARC.

- Using our Official Development Assistance (ODA)-compliant projects. Since April 2020, IARC has been recognized by the Organization for Economic Co-operation and Development (OECD) as an international organization eligible to receive ODA funding with a coefficient of 51%. This means that 51% of the assessed contribution from Participating States can be accounted for as part of their country's ODA statistics.

160. IARC reached out to its current Participating States for possible investment in some 100% ODA-compliant LMIC focused projects that could help them fulfil their objective of development.

161. The Secretariat has used fact sheets on LMIC-focused research projects and has reached out to many different development agencies. Most development agencies (USAiD, AFD, DFID or SIDA) still have a very limited focus when it comes to cancer/noncommunicable diseases. Moreover, the flow of funds for these development agencies is from the capital to the country they want to support. As IARC does not have any offices in LMIC countries and as research (even more when focused on prevention) is far from their traditional focus, it remains very difficult to convince those agencies to invest in cancer research. They prefer spending their funds in mother and child health as they can see the direct and immediate impact of their contribution.

162. IARC has also designed an ODA-compliant project, focusing on LMICs, to study the effect of the COVID-19 health crisis on cancer outcomes. The main objective of this project is to study the impact of a large health crisis on cancer outcomes and help improve the resilience of health systems, especially those of LMICs. This project was presented to IARC Governing bodies in 2021 and 2022 and several one-to-one

meetings with Participating States were organized. At the end of 2022, IARC had already received two contributions, one from UK MRC (€874 350) and one from Australia (€64 100). Other Participating States, including but not limited to Canada, Sweden and the USA seem interested in being part of this large project.

3.4.1 Voluntary contributions to IARC (grants and contracts)

163. Voluntary contributions to IARC are obtained mainly through competitive research grants from national and international funding agencies and increasingly through direct funding requests. The success in obtaining peer-reviewed funding is an external indicator of the overall quality of the research at the Agency.

164. These contributions represent a substantial component of the Agency's overall funding to successfully implement its programmes and the MTS 2021–25. This income supplements the investment made by Participating States through their assessed contributions.

165. As part of the objective to increase competitive funding, the Secretariat is screening permanently more than **200 funders** and has posted on its intranet Resource Mobilization pages **259 funding opportunities** in 2022 for IARC colleagues to consider.

166. Funding opportunities available to IARC under the Horizon Europe, EU4Health and Cancer Mission programmes have also been closely monitored throughout the year. In 2022, IARC has proved to be a successful candidate for these extremely competitive funding mechanisms.

167. The number of new grant applications and funding requests submitted in 2022 reached **a total of 203 (Table 8)**. This reflects the commitment of the Agency's scientists to secure sufficient extrabudgetary funds to conduct the research defined within the MTS.

168. The Agency signed extrabudgetary contracts amounting to a total value of **€65,53 million in 2022; of which €24.38 million was attributed to IARC**. The large proportion of the total value of signed contracts going to IARC collaborators indicates that IARC's participation in projects can bring benefits to a wide network of institutions and organizations at national levels.

169. Overall, the figures on extrabudgetary contracts represent an outstanding achievement given the increasingly competitive nature of research funding, triggered by the decreasing number of funding opportunities available for cancer research. Indeed, the pandemic situation had the effect of shifting some funders' priority toward COVID-19 research projects. In addition, some of IARC's past funders had to cancel some of their usual calls for proposals, as a result of the impact of the pandemic on their ability to fundraise for cancer research.

170. These sources of funding being unpredictable and unstable by nature, a stable and robust IARC Regular Budget is key to continue obtaining these strategic extrabudgetary contracts. Voluntary Contribution (grants and contracts) expenditure in 2022 was **€18.78 million**. This represented approximately 47% of the overall combined expenditure from Regular Budget and Voluntary Contributions (**Figure 5**).

171. About 89% of the contributions signed in 2022 came from the following **9 funders**, as shown in [Figure 6](#).

- European Commission – Compilation of various agencies (EC, Belgium),
- National Institutes of Health/National Cancer Institute (NIH/NCI, USA),
- Institut National du Cancer (INCa, France),
- Medical Research Council (MRC, United Kingdom),
- Bill & Melinda Gates Foundation (BMGF, USA),
- World Cancer Research Fund International (WCRF, United Kingdom),
- Cancer Research UK (CRUK, United Kingdom),
- Imperial College of Science, Technology and Medicine (ICL, United Kingdom),
- The Dutch Cancer Society (KWF, the Netherlands).

3.4.2 Implementation of the Framework of Engagement with Non-State Actors (FENSA) at IARC

172. During its 60th session in May 2018, the IARC Governing Council reviewed the “Recommendations from the Governing Council Working Group on the implementation of FENSA” ([Document GC/60/17](#)) and noted the “IARC-Specific Guide on Engagement with Non-State Actors” prepared by the Governing Council Working Group. Following [Resolution GC/60/R17](#), the Secretariat is requested to annually report on IARC engagement under FENSA as part of the Director's Report.

173. During the course of 2022, IARC has continued the implementation of the simplified procedure as the default procedure for the assessment of engagements with Non-State Actors (NSAs) to be conducted by IARC FENSA focal points, following the recommendation from the WHO Due Diligence and Non-State Actors Unit.

174. WHO and IARC are aligned in their approach of implementing FENSA, using two levels of due diligence and risk assessment, by distinguishing between low-risk simplified procedures and standard procedures prior to engaging with NSAs. The identification of risk factors does not automatically exclude the possibility of engaging with NSAs. Determination of whether a potential conflict of interest exists is made taking into account the specificities of the project at stake. The risks are balanced against the expected benefits for IARC, also considering the foreseeability of the risk.

175. Under the simplified procedure, due diligence and risk assessment are conducted by the Resource Mobilization and Management Office on potential donors and project partners related to resources (competitive grants and direct funding); and self-assessment or due diligence and risk assessment on NSAs under other types of engagement (technical collaboration, participation, evidence, and advocacy) is carried out by the Director of Administration and Finance with the support of the IARC Ethics and Compliance Officer.

176. Under the standard procedure, complex cases and those potentially presenting a higher reputational risk should be referred to WHO Due Diligence and Non-State Actors Unit for their assessment and recommendations.

177. In August 2022, IARC contributed to the report presented to the 152nd session of the WHO Executive Board by providing information on the implementation of FENSA at IARC ([Document EB152/39](#)).

178. In 2022, IARC applied the low-risk simplified procedure for **430 NSAs** with whom IARC engaged either through funding applications and contribution agreements (417 NSAs) or through other types of engagement (13 NSAs). Noting that IARC has sometimes engaged several times with the same NSA partner throughout the year, i.e. through different projects, IARC has applied the simplified procedure more than 540 times. Internal due diligence evaluations and risk assessments were conducted to screen for potential reputational risks, by scrutinizing the NSAs' legal status, governance and sources of funding. Information is systematically gathered from the documentation submitted by the NSAs (ByLaws, Governance, financial reports) and complemented by various publicly available sources such as reports and media. Reference has been made to the WHO Register of NSAs when information on the entity was available.

179. IARC has not applied the standard procedure for complex engagement with NSAs in 2022.

180. IARC maintains its own Due diligence Register where it keeps profiles of all the NSAs it has engaged with since January 2017 (a total of 914 NSA profiles had been uploaded and updated by the end of 2022). IARC also maintains a NSA Register in which 239 NSAs have a complete set of FENSA-relevant documentations, including Tobacco and Arms Disclosure (TAD) forms signed by the authorized representative of the NSA (IARC has collected 285 signed TADs in 2022). This internal resource has allowed IARC colleagues to rely on already acquired documentation in the great majority of our engagements (on average, the documentation was already available in the NSA register in 65% of the cases).

181. Despite its inherent challenges, FENSA provided the Agency with the opportunity to further expand its engagement with NSAs, including the private sector, and to increase transparency and accountability, inter alia towards WHO Member States and IARC Participating States.

4. MANAGEMENT

4.1 Modernizing IARC's administrative systems

182. In its continued effort to modernize its administrative management systems, IARC joined forces with WHO and embarked on the implementation of a new Business Management System (BMS). IARC's current Enterprise Management System (ERP) is out of date, requiring time and resource intensive manual entries, leading to inefficiencies, risk of errors and demotivation of staff. As IARC's currently outdated system will be decommissioned by the supplier by the end of the biennium, IARC explored alternative ERP solutions to modernize its administrative management systems in support of IARC's MTS 2021–25. The best value for money solution has been identified by joining forces with WHO and transition together to a new ERP solution, coined as the new BMS. This will allow IARC and WHO to jointly simplify its processes and adapt its rules applying best in breed solutions available. The implementation of the new BMS will take two years with an expected go live date on 1 January 2024. The new system will be seamless, more user friendly and intuitive, simpler to use, reduce the risk of manual entries, provide business intelligence and analytical tools for improved resource planning, and integrate all existing IT systems, enabling them to communicate with each other.

183. Concurrently, IARC has devised an administrative transformation roadmap in support of the MTS 2021–25, inter alia to further strengthen IARC's scientific IT capacity and data protection measures. These important investments during the biennium 2022–23 will pave the way for IARC to become a truly modern organization, as mandated by Participating States in the IARC MTS for 2021–25, being probably the most innovative, progressive and modern MTS implemented so far, bringing IARC truly into the 21st century.

184. The unbudgeted assessments of new Participating States allow the Director (Resolution GC/54/R18) to invest in support of IARC activities. The Governing Council noted ([Resolution GC/64/R2](#)) the partial use of such funds to modernize IARC's administrative management system by joining WHO's new BMS project, to further strengthen IARC's data protection mechanism as well as scientific data management systems. The Director is pleased to report that, as of 28 March 2023, €191 457 have been used for this purpose (additional information can be found in Document GC/65/7). The Director will further report on the use of these funds in next year's Report.

4.2 Personnel

185. IARC is deeply saddened by the passing of Dr Massimo Tommasino at the age of 64. Dr Tommasino was a beloved member of the IARC community for 19 years, making indelible scientific contributions in his position as Head of the Infections and Cancer Biology Group (2002–2020) and then as Head of the Early Detection, Prevention, and Infections Branch (2020–2021) until his retirement at the end of 2021. Dr Tommasino contributed enormously to knowledge of the role of human papillomaviruses in carcinogenesis.

186. As of **28 February 2023**, there were a total of **351** personnel, 232 staff members and 119 Early Career and Visiting Scientists (ECVS), contributing to the activities at the Agency. For comparison, the number of personnel at the Agency **in 2020, 2021 and 2022 was 366, 345, and 373 respectively**.

187. On the pre-doctoral level, ECVSs include 1 Bachelor's student, 7 Master's students, 3 Continuing Professional Development Trainees, and 19 Doctoral students. On the post-doctoral level and above, ECVSs include 18 Visiting Scientists, 7 Senior Visiting Scientists, and 64 Postdoctoral Scientists (which

include 6 Fellows covered by the regular budget, 1 Fellow funded by external budget from the Mark Foundation for Cancer Research, and 8 Fellows extended on the Scientific Branches' budget).

188. Of the 207 fixed-term staff, an increase of 2 compared to 2022, **90 (43.48%)** are Professional staff, an *increase* of **3**, (38 men; 52 women) and 117 (**56.52%**) are General Service Staff, a *decrease* of 1 (30 men; 87 women); in addition, there are 25 temporary staff members, a decrease of **1**. Of the 90 Professional staff, 16 (*increase of 1*) are in the support services.

189. The number of staff positions on the Regular Budget *has decreased*, with a total of 154.20 approved staff posts in 2022–2023 funded through the assessed contributions of Participating States, compared with 153.20 posts in 2022.

190. 32% of staff from the General Services and 24% of Professional staff are covered by the Regular Budget. In 2022, 33% of staff from the General Services and 25% of Professional staff were covered by the Regular Budget.

191. The total evolution of staff positions funded by the Regular Budget since 2015 to date is reported in [Table 9](#). Since 2015, the number of staff positions funded by the Regular Budget *has decreased*, the number of temporary positions *has increased*, and the number of Professional staff *has decreased*.

192. As noted above, the Agency has more women than men in Professional staff positions (**57.78 %** as of **28 February 2023**). At the senior level (P4 and P5 and above), the proportion of women is *lower in the P5 and above category* (50% P4, 20% P5 and above).

193. Overall, IARC staff members come from 41 different countries worldwide, as first nationality with a total of 48 nationalities represented at the Agency. Of the staff on fixed-term contracts, **91.30%** are from Participating states (**189 out of 207**).

194. The period since the last Governing Council session has been characterized mostly by the departure and appointment of several staff members, as reported below.

Resignations

Dr David ACHAINTE, LY4, Research Assistant

Dr Melina ARNOLD, P2, Scientist

Ms Catherine BASSOMPIERRE, P2, Associate HR Officer

Ms Laurène BOUVARD, LY5, Project Assistant

Ms Audrey GICQUIAU, LY3, Laboratory Technician

Dr Marc GUNTER, P5, Scientist

Mr Rémi VALETTE, LY5, Senior IT Assistant (development)

Retirements or pre-retirements

Ms Corinne CASAGRANDE, LY6, Principal Research Assistant

Mr Jacques FERLAY, P3, Informatics Officer

Mr Gilles FERRO, LY6, Principal Research Assistant

Ms Susan GAMON, LY4, Secretary

Dr Ian GROSSE, P3, Scientist

Mr Michel JAVIN, LY3, Clerk (reprography)

Mr H el ene RENARD, LY5, Senior Research Assistant

Dr Augustin SCALBERT, P4, Scientist

Fixed-term appointments:

Dr Dilani SAMARAWICKREMA LOKUHETTY, P4, Scientist, Head of the WHO Classification of Tumours (WCT) programme

Dr Berth ATIK, P4, Staff Physician, 50% IARC/50% WHO

4.3 IARC Advisory Groups and learning programmes

195. The IARC Equity and Diversity Advisory Group (EDAG) was established in 2020 to focus on institutional challenges of inclusion and diversity at IARC and to provide the Director with specific, concrete recommendations on how to implement equitable practices.

196. The IARC Equity, Diversity, and Inclusion Strategy has been finalized, in response to an implemented request from the European Commission on grant applications.

197. In June 2022, two documents comprising the IARC Diversity, Equity, and Inclusion strategy and action plan were launched: (i) The Strategy Document which lays the foundation for sustainable and transformative progress on Diversity, Equity, and Inclusion at IARC; (ii) The Action Plan outlines the current policies in place for Diversity, Equity, and Inclusion and provides concrete actions to be taken to address the gaps in relevant policies, to create a more diverse, inclusive, and equitable culture at IARC.

198. EDAG launched a call for nominations for the second annual IARC Award for Women in Cancer Research on 24 February 2023. Established in 2022, this award recognizes outstanding contributions in the field of cancer prevention research by scientists who identify as women. Professor Cristina Stefan, Director of the Institute of Global Health Equity Research in Kigali, Rwanda, received the first Award during an online ceremony on 19 May 2022 for her work in the field of global cancer prevention, national cancer control plans and childhood cancer, as well as in registries in South Africa and across Sub-Saharan Africa.

199. EDAG marked International women's Day 2023 on 8 March with new videos highlighting some of the issues faced by women in science.

200. Dr Mathilde His, a Postdoctoral Scientist in the Nutrition and Metabolism (NME) Branch of IARC, received a Young Talent Award France 2022 For Women in Science (*Prix Jeunes Talents France 2022 Pour les Femmes et la Science*) from the L'Or el Foundation, in partnership with the United Nations Educational, Scientific and Cultural Organization (UNESCO).

201. A Survey on Physical Disability was launched at IARC in July and August 2022. This survey was complemented by a presentation from Dr Reyes-Castro on the WHO Affinity resource group – Embracing Disability, which works to increase inclusion and awareness of disability at WHO.

202. Elections for the Staff Association Committee (SAC) are in progress. There will be no SAC statement this year.

203. Mitigation measures have been put in place: the WHO SAC temporarily participates in the IARC Selection Committees; an Information session on the role of the Staff Association was organized by the WHO on 3 March 2022.

204. As part of the Learning and Development (L&D) Framework implementation, the overall participation rate in various types of online and face-to-face L&D activities increased compared to the previous two years, reaching 82% of personnel in 2022. In order to ensure the continuity of learning during teleworking and hybrid working, the offered learning methods were enriched with blended learning opportunities. Blended learning optimizes the learning experience by offering flexibility and combining online self-paced solutions with regular social interaction, and collaborative learning experience. A total of 36 webinar (online instructor-led) and blended learning sessions were promoted and organized internally by HRO and LCB during 2022, completed by 481 participants, as reported in the [Table 10](#).

205. In the framework of the Quality of Work Life (QWL) work plan and in the light of the Respectful Workplace initiative, efforts were dedicated to support and promote cultural transformation, to increase colleagues' engagement in driving and embedding cultural change. Topics related to the implementation of WHO/IARC values, effective teamwork, implicit bias, challenging conversations, career in hybrid environment were addressed through 13 IARC-specific sessions attended by 155 participants, alongside 13 WHO colleague-led online webinars and workshops attended by 87 IARC participants. Individual coaching sessions were offered to provide further support to supervisors, managers, and their teams in strengthening interpersonal relationships, effective communication, and teamwork.

206. In addition, to contribute to the implementation of culture-shift toward a project and activity-based work environment, specific learning paths were designed to the new generic Secretaries and Project Assistant functions. Seven different learning modules were planned for five different Secretaries and Project Assistant functions aiming to equip staff members with the necessary knowledge and competencies to execute their functions in support of the Agency's work and mandate, and to facilitate the alignment of administrative functions with the IARC MTS 2021–25. Efforts will be continued in 2023 to implement the learning path through a structure and phased roll-out.

207. The compliance rate for the two online mandatory trainings aiming to increase awareness of cybersecurity and phishing prevention was above 92% at the end of 2022. Similarly, high compliance rate was reached (93%) for the newly launched data protection general awareness mandatory training that provides clear guidance on how to apply data protection principles within IARC. In order to promote harmonious work environment and to ensure that the information and mechanisms outlined in the related WHO/IARC policies are accessible to all personnel, two new mandatory trainings were introduced in the second half of 2022. The mandatory trainings aim to increase awareness on abusive conduct, sexual abuse, and exploitation, and to equip IARC personnel with specific guidance, tools, and techniques on how to prevent and address various types of prohibited conduct.

208. The Research Leadership Training Programme aims to reinforce strategic leadership culture at IARC and to strengthen partnership and collaborations with researchers outside the Agency. In 2022, the two rounds of the extensive 40-hours long learning programme were completed by 23 IARC scientific managers and leaders together with 27 external researchers coming from research institutes, organizations, and public institutes from 17 different countries. The implementation of the two rounds demonstrated the

need to support cancer research leaders in fulfilling the vision and mission of their organizations, and research institutes. In the future, and if external funding resources are identified, one yearly training programme will be offered, targeting in priority researchers from Participating States and LMICs, alongside IARC managers and leaders.

4.4 Update on the Nouveau Centre

209. A detailed update on the Nouveau Centre and on resource mobilization is provided in Document GC/65/4.

ANNEXES

Tables and Figures are listed in order of appearance in the text.

Table 1: Total article output and percentage of peer-reviewed papers

Year	Peer-reviewed articles	Reviews	Other	Total
2018	284 (81%)	37	30	351
2019	292 (79%)	43	36	371
2020	387 (82%)	43	40	470
2021	350 (82%)	41	35	426
2022	319 (79%)	45	42	406

Table 2: IARC h-index for 2022 and for five-year period (2018–2022)

	2022 output	Five-year output (2018–2022)
Number of articles	406	2061
Sum of the times cited	958	124571
Average citations per item	2.36	60.44
h-index	12	93

Table 3: IARC top 10 most cited articles published in 2022

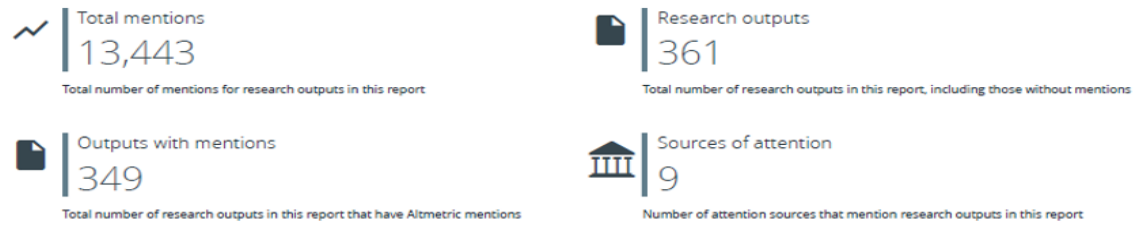
Reference	Total times cited (as of 1 March 2023)
Mao JJ, Pillai GG, Andrade CJ, Ligibel JA, Basu P, Cohen L, et al. Integrative oncology: Addressing the global challenges of cancer prevention and treatment. <i>CA-Cancer J Clin.</i> 2022;72(2):144-64.	34
Arnold M, Singh D, Laversanne M, Vignat J, Vaccarella S, Meheus F, et al. Global Burden of Cutaneous Melanoma in 2020 and Projections to 2040. <i>JAMA Dermatol.</i> 2022;158(5):495-503.	32
Pizzato M, Li MM, Vignat J, Laversanne M, Singh D, La Vecchia C, et al. The epidemiological landscape of thyroid cancer worldwide: GLOBOCAN estimates for incidence and mortality rates in 2020. <i>Lancet Diabetes Endocrinol.</i> 2022;10(4):264-72.	28
Skakkebaek NE, Lindahl-Jacobsen R, Levine H, Andersson AM, Jorgensen N, Main KM, et al. Environmental factors in declining human fertility. <i>Nat Rev Endocrinol.</i> 2022;18(3):139-57.	27
Pfister SM, Reyes-Mugica M, Chan JKC, Hasle H, Lazar AJ, Rossi S, et al. A Summary of the Inaugural WHO Classification of Pediatric Tumors: Transitioning from the Optical into the Molecular Era. <i>Cancer Discov.</i> 2022;12(2):331-55.	26
Rumgay H, Ferlay J, de Martel C, Georges D, Ibrahim AS, Zheng RS, et al. Global, regional and national burden of primary liver cancer by subtype. <i>Eur J Cancer.</i> 2022; 161:108-18.	22
Debras C, Chazelas E, Srouf B, Druesne-Pecollo N, Esseddik Y, De Edelenyi FS, et al. Artificial sweeteners and cancer risk: Results from the NutriNet-Santé population-based cohort study. <i>PLoS Med.</i> 2022;19(3):20.	20
Ngwa W, Addai BW, Adewole I, Ainsworth V, Alaro J, Alatise OI, et al. Cancer in sub-Saharan Africa: a Lancet Oncology Commission. <i>Lancet Oncol.</i> 2022;23(6): E251-E312.	19
Morgan E, Arnold M, Camargo MC, Gini A, Kunzmann AT, Matsuda T, et al. The current and future incidence and mortality of gastric cancer in 185 countries, 2020-40: A population-based modelling study. <i>EclinicalMedicine.</i> 2022; 47:10.	18
Demers PA, DeMarini DM, Fent KW, Glass DC, Hansen J, Adetona O, et al. Carcinogenicity of occupational exposure as a firefighter. <i>Lancet Oncol.</i> 2022;23(8):985-6.	17

Figure 1: Altmetric database summary report of IARC 2022 output



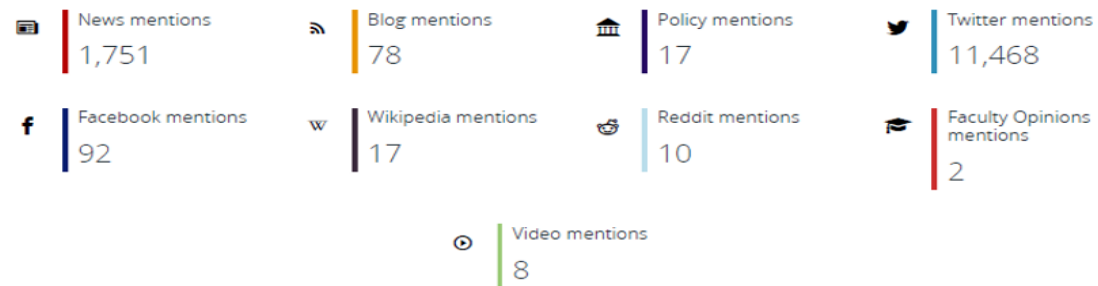
Report for **Attention highlights** for **articles** from the **full Altmetric database** sorted by **Altmetric Attention Score** published between **2021-01-31** and **2021-12-31** affiliated with **International Agency For Research On Cancer**

REPORT OVERVIEW



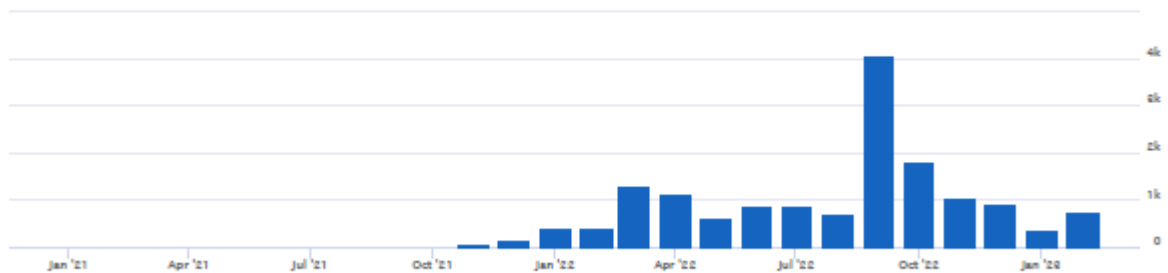
ATTENTION SOURCE BREAKDOWN

The number of mentions from each source that Altmetric has tracked for the research outputs in this report.



ATTENTION OVER TIME

This chart shows **all mentions** for research outputs in your report.



TOP 5 RESEARCH OUTPUTS

Below is a list of the top 5 research outputs in this report. Each research output has an *Altmetric Attention Score*, which provides an indicator of the amount of attention that has been received.

RANK	ATTENTION SCORE	RESEARCH OUTPUT
#1	4162	Artificial sweeteners and risk of cardiovascular diseases: results from the prospective NutriNet-Santé cohort Article in <i>British Medical Journal</i> , September 2022
#2	2977	Is early-onset cancer an emerging global epidemic? Current evidence and future implications Article in <i>Nature Reviews Clinical Oncology</i> , September 2022
#3	2449	Artificial sweeteners and cancer risk: Results from the NutriNet-Santé population-based cohort study Article in <i>PLOS Medicine</i> , March 2022
#4	1405	Identifying molecular mediators of the relationship between body mass index and endometrial cancer risk: a Mendelian randomization analysis Article in <i>BMC Medicine</i> , April 2022
#5	1189	Cellular Telephone Use and the Risk of Brain Tumors: Update of the UK Million Women Study Article in <i>JNCI: Journal of the National Cancer Institute</i> , March 2022

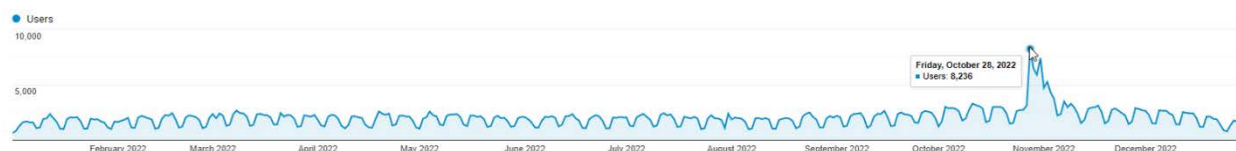
Table 4: Visitors to IARC websites in 2022 (in brackets corresponding figures in 2021)

Website	Total visitors	Average visitors/day	Total visits	Average visits/day
IARC Publications	616 267 (485 201) 298 090 (301 196)	1688 (1329) 816 (825)	807 489 (640 995) 387 914 (395 530)	2212 (1756) 1062 (1083)
Monographs	226 442 (220 557)	620 (604)	361 191 (343 012)	989 (939)
Global Cancer Observatory	606 256 (540 369)	1660 (1480)	1 026 551 (934 557)	2812 (2560)

Visitor/User: A user that visits a given site. The initial session by an individual user during any given date range is considered to be an additional visit and an additional visitor. Any future sessions from the same user during the selected time period are counted as additional visits, but not as additional visitors.
Visit/Session: The number of times a visitor has been to the site (number of individual sessions initiated by all visitors).

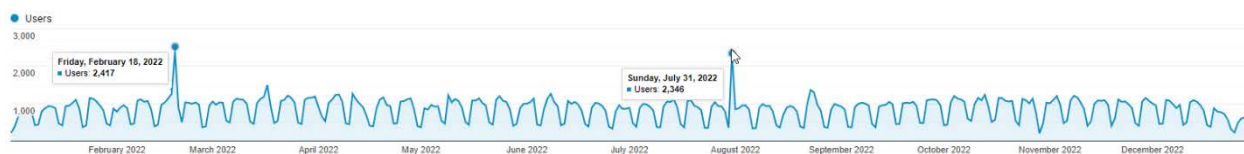
If a user is inactive on the site for 30 minutes or more, any future activity will be attributed to a new session.

Figure 2: Number of visitors to the IARC website in 2022



The peak of 8236 visits (28 October 2022) is the day of the publication of the news item "[Vacancy, Director, IARC](#)".

Figure 3: Number of visitors to the IARC Monographs website in 2022



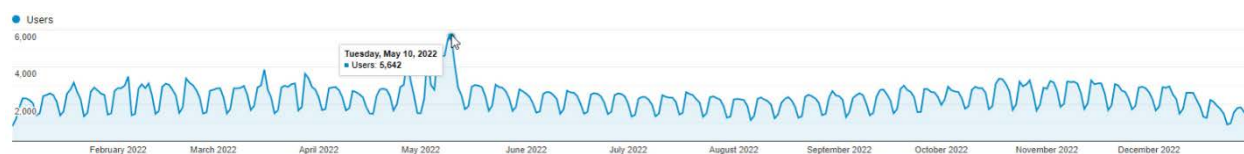
The peak of 2417 visits (18 February 2022) is due to the large number of visits to the following webpages:

<https://monographs.iarc.who.int/agents-classified-by-the-iarc/> and <https://monographs.iarc.who.int/list-of-classifications>

The peak of 2346 visits (31 July 2022) is due to the large number of visits to the following webpages:

<https://monographs.iarc.who.int/> and <https://monographs.iarc.who.int/agents-classified-by-the-iarc/>

Figure 4: Number of visitors to the Global Cancer Observatory (GCO) website in 2022



The peak of 5642 visits (10 May 2022) is on the day of publication of the research article “Cancer in sub-Saharan Africa in 2020: a review of current estimates of the national burden, data gaps, and future needs” in *The Lancet Oncology*. The following web content was published: [IARC Press Release 313](#), [News item](#).

Table 5: Most popular downloads from the IARC Publications website ranked by 2022 data and corresponding figures in 2021

Item	2022	2021
	Scientific Publication 163: Molecular Epidemiology: Principles and Practices	68 692
Monographs Volume 71: Re-evaluation of Some Organic Chemicals, Hydrazine and Hydrogen Peroxide (Part 1, Part 2, Part 3)	42 209	48 148
Monographs Volume 82: Some Traditional Herbal Medicines, Some Mycotoxins, Naphthalene and Styrene	36 017	37 699
Cancer Epidemiology: Principles and Methods	35 962	57 886
Technical Publication 45: Colposcopy and Treatment of Cervical Precancer	25 144	34 099
IARC Handbooks of Cancer Prevention Volume 8: Fruit and Vegetables	21 252	70 481
Monographs Volume 79: Some Thyrotropic Agents	20 048	22 660
Le cancer dans le monde 2003	18 678	27 185
Cancer Registration: Principles and Methods	17 584	18 664
Technical Report 10: Manual for Cancer Registry Personnel	15 986	33 315
Monographs Supplement 7: Overall Evaluations of Carcinogenicity: An Updating of IARC Monographs Volumes 1–42	15 238	23 645
Monographs Volume 73: Some Chemicals that Cause Tumours of the Kidney or Urinary Bladder in Rodents and Some Other Substances	15 173	18 153

Table 6: Education and Training – IARC Fellowships

Year	No. of IARC Fellowships awarded ^a	No. of Fellows from LMICs
2014	21 (13 + 8)	12
2015	22 (10 + 12)	13
2016	17 (7 + 10)	10
2017	14 (7 + 7)	12
2018	7 (0 + 7)	6
2019*	7 (7 + 0)	7
2020	9 (2 + 7)	9
2021	9 (7 + 2)	9
2022	8 (1 + 7)	8

^a Post-doctoral fellowships (new + second year renewals), including IARC-Australia and IARC-Ireland Fellows in 2014–2015

*Since 2019, only candidates from LMICs have been eligible to apply

Table 7: Education and Training – IARC Courses

Year	No. courses organized	No. different countries	No. courses in LMICs	No. participants
2013	15	7	8	566
2014	17	14	12	576
2015	24	14	11	647
2016*	36	23	19	1410
2017	32	16	15	1324
2018	26	14	11	763
2019	28	18	15	1083
2020*	16	Online		868
2021	21	Online		1851
2022	26	Mostly online		1145

* Figures differ slightly from those presented in a previous Director's report to the Governing Council, as some additional data were received after its conclusion.

Table 8: Extrabudgetary funding

Year	Number of applications	Number of signed contracts	Total value of signed contracts ^a (in Euros)	Value attributed to IARC (in Euros)	Voluntary contribution expenditure ^b (in Euros)
2017	193	65	38 931 975	11 855 145	11 357 348
2018	204	68	20 987 750	9 183 834	13 362 692
2019	236	81	41 488 350	12 408 032	14 365 018
2020	236	94	20 072 571	12 337 370	13 017 438
2021	245	101	36 179 741	19 037 426	13 110 514
2022	203	123	70 342 245	24 378 699	18 776 046

^a The figures show total budgets of all grants signed irrespective of whether IARC is coordinating the studies or not.

^b Voluntary contribution expenditure as reported in the IARC Financial Report and Financial Statements, which includes amount passed through to partners for IARC coordinated projects.

Figure 5: Percentages of expenditure on Regular Budget and Voluntary Contributions

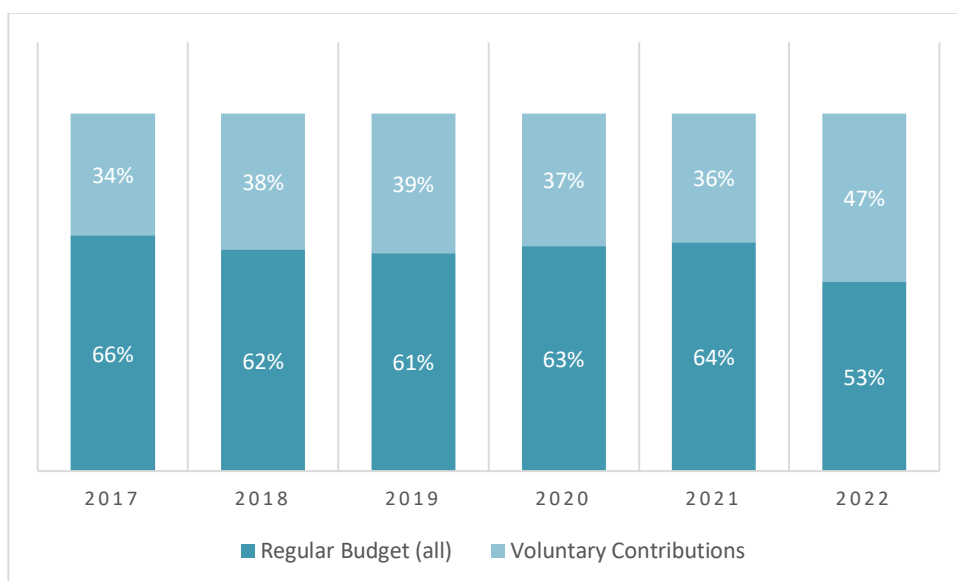


Figure 6: Value of contracts signed in 2022 and top 9 funders (amount in million euros)

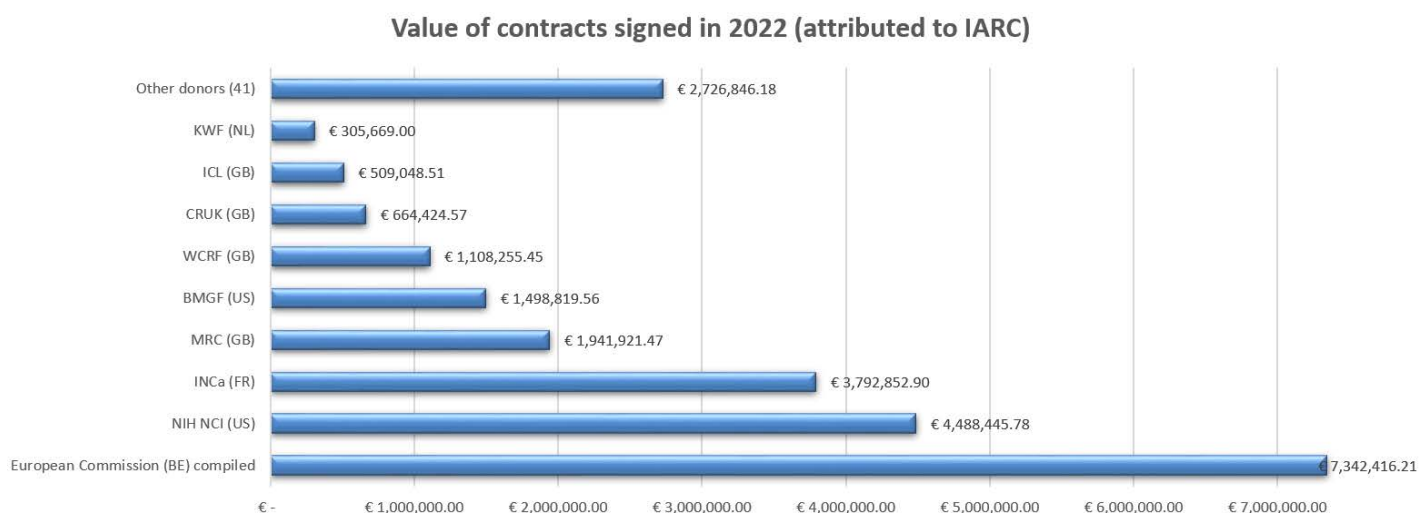


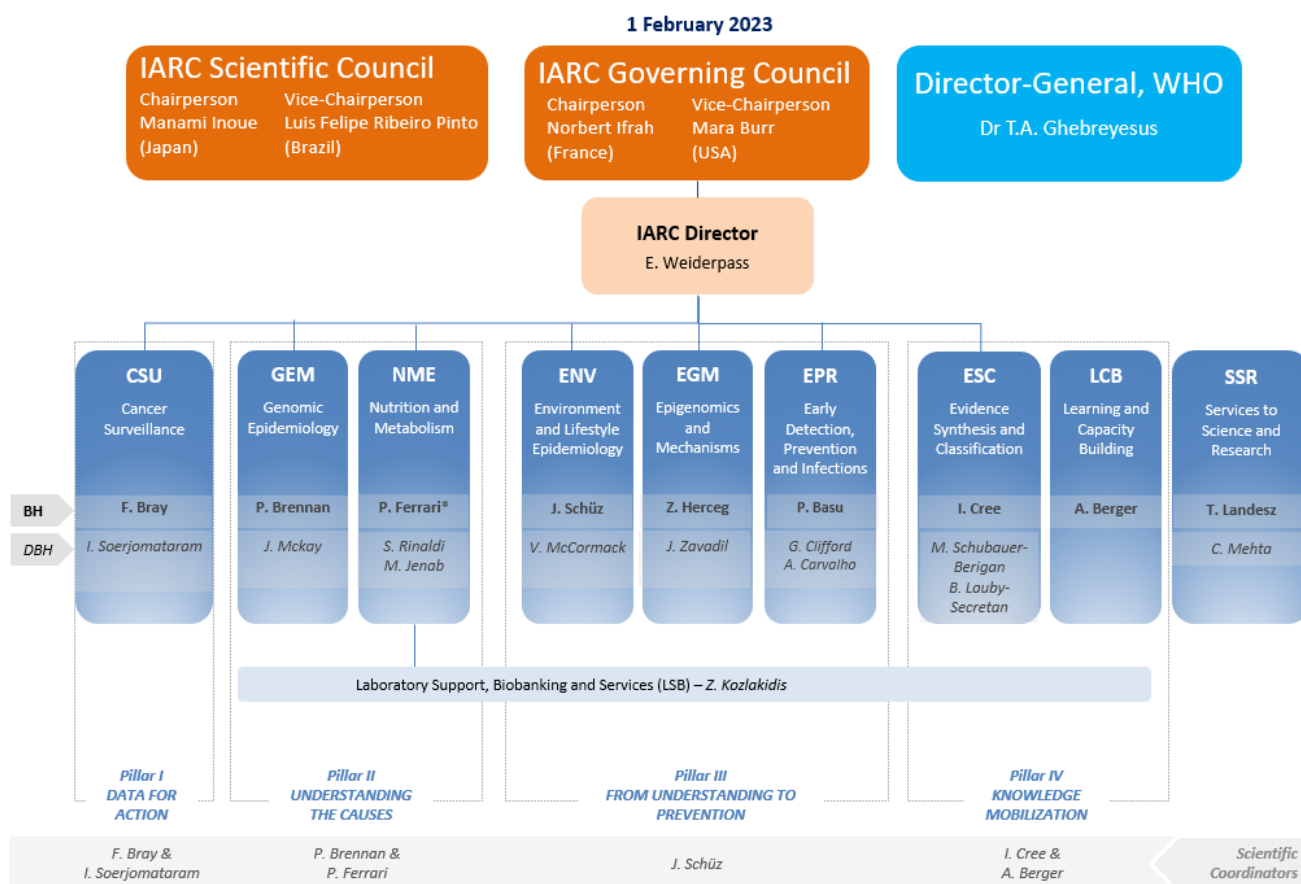
Table 9: Evolution of staff positions since 2015 to date

Year	Total Staff	P Total	P Male	P Female	GS Total	GS Male	GS Female	Fixed Term	Temporary	RB Funded
2015	228	99	45	54	120	30	90	219	9	158.28
2016	235	103	49	54	118	29	89	221	14	158.2
2017	241	106	48	58	125	32	93	231	10	158.2
2018	237	102	49	53	131	33	98	233	4	158.8
2019	249	106	50	56	134	38	96	240	9	158.8
2020	240	103	50	53	129	35	94	232	8	154.2
2021	238	98	47	51	124	34	90	222	16	154.2
2022	231	87	41	46	118	32	86	205	26	153.2
2023	232	90	38	52	117	30	87	207	25	154.2

Table 10: Webinar sessions organized in 2022

Type of training	No. of training session	No. of participants	
		Staff members	Early career and Visiting Scientists (ECVS)
Core competencies training	19 (19)	96 (185)	74 (72)
Job-specific training	12 (10)	70 (66)	171 (79)
Managerial and leadership training	5 (2)	69 (29)	1 (0)
Total	36 (31)	235 (280)	246 (151)

Figure 7: IARC Organizational Structure



BH = Branch Head (*Acting Branch Head)
DBH = Deputy Branch Head