

# IARC Impact in practice series

## The Russian Federation experience



As one of IARC's longest-standing Participating States, and a member since **1965**, the **Russian Federation** uses IARC as a strategic interface to turn nationally important exposure histories and scientific assets into internationally relevant cancer evidence. Through IARC, Russian strengths in **occupational epidemiology, radiation research, behavioural-risk analysis, and large population studies** are connected to global methods, standards and comparative platforms. This supports **prevention, risk assessment, early diagnosis and survivorship**, while ensuring that Russian data and policy-relevant contexts help shape how major cancer risks are understood and governed internationally.

### Why IARC membership made the difference to the Russian Federation:

- ➔ **Scale with strategic value:** Over the past decade, the Russian Federation co-authored **158 oncology publications with IARC**, typically through large international consortia, with a **median of 37 institutions per paper** versus **6** without IARC involvement. These collaborations span **167 countries** and **2,039 institutions**.
- ➔ **Evidence that enters official decision-making:** Public-sector and technical documents in the Russian Federation cite IARC outputs for **cancer burden benchmarking, screening and prevention framing, and survival comparisons**, showing that IARC evidence is used in formal health documentation and policy discussion.
- ➔ **High-impact platforms for major national risks:** IARC collaboration helps the Russian Federation generate internationally credible evidence on some of its most important long-latency and preventable risks, notably through the **Asbest chrysotile cohort** and the broader **Russian Occupational Cancer Studies** funded by the **Ministry of Health of the Russian Federation**, as well as through collaboration on **Chernobyl-related research, thyroid monitoring after nuclear accidents, and large prospective studies on alcohol and premature mortality**.
- ➔ **From scientific evidence to practical prevention:** The partnership has produced policy-relevant evidence on **alcohol, tobacco, occupational carcinogens, early diagnosis, and economic losses from preventable cancer**, helping make prevention priorities more visible, measurable and actionable.
- ➔ **Capability and standards that stay in the country:** The Russian Federation has a long-standing footprint in IARC's fellowship and training ecosystem, with a sustained stream of fellows since the 1960s. Russian experts also contribute to international standard-setting through the **IARC Monographs** programme, ensuring that skills, methods and global norms are embedded back into national institutions.

### Part I. Scientific leadership through international collaboration

#### ➔ Exceptional collaboration intensity and depth

The partnership between the **Russian Federation** and IARC is long-standing and strategically focused, reflecting a country with a major industrial legacy, large scientific capacity, and unique exposure histories. Russian institutions use IARC as a platform to embed nationally grounded research within large, coordinated, multi-country studies where harmonised methods and pooled datasets are essential.

Between 2016 and 2026, researchers from the Russian Federation co-produced **158 oncology publications with IARC**<sup>1</sup>, linking national expertise to a global

#### Box #1: Cancer in the Russian Federation: a high burden with major prevention opportunities

Recent [GLOBOCAN 2022 estimates](#) that cancer is a major public health challenge in the Russian Federation, with around **635,000 new cases** and **over 300,000 deaths** each year. Breast, lung, colorectal, prostate and stomach cancers account for much of the burden, while tobacco, alcohol, excess body weight, infections such as *H. pylori*, and occupational and environmental exposures remain major drivers.

Despite progress in treatment and detection, regional and socioeconomic inequalities persist. This highlights major opportunities for stronger prevention, earlier diagnosis and more equitable outcomes.

<sup>1</sup> Data derived from Web of Science records of IARC-Russia co-authored papers published between January 2016 and January 2026.

research infrastructure spanning **167 countries and more than 2,000 institutions**. Around **30% of these papers are IARC-led**, underscoring a partnership defined not simply by participation but by substantial scientific coordination and shared leadership. The depth of collaboration is particularly striking. IARC-linked publications involving the Russian Federation include a **median of 37 institutions per paper**, compared with **6 institutions** for Russian oncology publications without IARC involvement.

Micro-topic analysis shows that Russian Federation–IARC outputs are concentrated in high-impact, policy-relevant domains, including:

- **Occupational and environmental carcinogens, particularly asbestos and industrial exposures**
- **Alcohol and tobacco epidemiology, including large prospective mortality studies and post-diagnosis cessation research**
- **Radiation-related cancer risks and long-term health monitoring after nuclear accidents**
- **Genome-wide association studies and pooled genetic analyses, including kidney and colorectal cancer**
- **Molecular and translational research, including TERT promoter mutations as non-invasive biomarkers for urothelial cancer**
- **Stage distribution and early-diagnosis disparities in breast and cervical cancer across newly independent states**

This thematic profile reflects a partnership built around **industrial and environmental exposures, behavioural risk factors, long-latency outcomes, and translational biomarker research**, where multinational coordination is required to achieve statistical power and policy-relevant conclusions. The Russian Federation's strengths in occupational-health documentation, radiation cohorts, and large population studies make it a distinctive and valuable contributor to these global platforms.

#### ➔ Leadership in global research infrastructure

Through IARC, institutions from the **Russian Federation** are helping generate evidence that shapes how major cancer risks are understood and managed globally. Over the past decade (2016–2026), this collaboration has linked Russian cohorts, exposure records and scientific expertise to international platforms that inform prevention, occupational regulation, radiation protection and early diagnosis. Examples include:

- **Occupational cancer infrastructures:** Funded by the **Ministry of Health of the Russian Federation**, IARC collaborates with the **Federal State Budgetary Scientific Institution Izmerov Research Institute of Occupational Health** on the **Asbest chrysotile cohort** and the broader **Russian Occupational Cancer Studies** initiative (see Box #1). These projects turn Russia's uniquely rich occupational records and long-term follow-up into high-value evidence for worker protection at home and hazard evaluation worldwide.
- **Radiation and post-nuclear-accident research platforms:** Through cooperation on **Chernobyl health research (CO-CHER)** and participation in the **International Expert Group on Long-term Strategies for Thyroid Monitoring after Nuclear Accident**, the Russian Federation contributes to the development of global standards on radiation-related cancer surveillance. Drawing on decades of research on Chernobyl-affected populations and exposures in the Southern Urals, these

#### Box #2: From industrial legacy to prevention science: the Asbest chrysotile cohort

The Russian Federation's long history of asbestos production and heavy industry has created one of the world's most important settings for understanding occupational cancer risk. Through a major collaboration funded by the **Ministry of Health of the Russian Federation**, IARC works with the **Federal State Budgetary Scientific Institution Izmerov Research Institute of Occupational Health (FSBSI RIOH)** to turn this industrial legacy into robust evidence for prevention.

At the heart of the partnership is the historical cohort study of workers at the **Uralasbest enterprise in Asbest (Sverdlovsk region)**, one of the world's largest chrysotile mining and milling operations. Using exceptionally detailed employment records, exposure histories and long-term mortality follow-up, the study provides rare, [high-quality evidence on the cancer risks associated with prolonged occupational exposure to chrysotile asbestos](#).

This flagship effort is part of the broader **Russian Occupational Cancer Initiative**, also supported by the Ministry of Health and a joint initiative between FSBSI RIOH and IARC, which is building a stronger national evidence base on occupational cancer through harmonised epidemiological methods and optimized study protocols.

The value of this work is both national and global. For the **Russian Federation**, it provides country-specific evidence to strengthen worker protection, guide occupational-health regulation and support efforts to eliminate asbestos-related diseases. Internationally, it contributes directly to **IARC Monographs** and wider global assessments of occupational carcinogens.

collaborations inform international guidance on thyroid screening, overdiagnosis, risk communication and long-term monitoring after nuclear incidents.



*“With the large industrial workforce in the Russian Federation and their excellent surveillance of workplace exposure and workers’ health, our joint research directly informs prevention against occupational cancer in those settings but also is scientifically very insightful for worker protection on a global scale.”*

Dr Joachim Schuz  
IARC Liaison Officer  
For Russia

- **Alcohol and mortality consortia:** [Large prospective studies of alcohol consumption and premature mortality in the Russian Federation](#), coordinated with IARC, have produced some of the clearest quantitative evidence worldwide on the impact of heavy alcohol use on premature death, giving policy-makers a stronger basis for prevention.
- **Molecular and genomic consortia:** Russian researchers contribute to pooled genome-wide analyses of kidney cancer risk and [international studies of mutational processes in colorectal cancer](#), embedding national data in large comparative datasets that enable more precise risk stratification and translational insight.
- **Translational biomarker platforms:** Collaboration with **Lomonosov Moscow State University** on ultra-sensitive detection of **TERT promoter mutations in urine** aims to develop [clinically applicable, non-invasive biomarkers for early detection and surveillance of urothelial cancer](#), linking Russian scientific innovation to global early-detection efforts.

## → Shaping the global cancer research agenda and standards

Russian experts and diplomats help steer IARC's direction. Through seats on the **Scientific Council and Governing Council**, and active involvement in developing the [Medium-Term Strategy \(MTS\)](#), the Russian Federation contributes directly to setting IARC's research and capacity-building priorities. This high-level engagement is a form of **soft power**. By shaping IARC's work programme, the Russian Federation brings national and regional realities into global decision-making while gaining early insight into emerging priorities, methods, and partnership opportunities, aligning its own cancer plans and investments with cutting-edge international evidence.

The Russian Federation also play a central role in developing widely respected **international evidence frameworks and classification standards** that shape global cancer science, prevention, and regulation. During the 2020-2025 cycle, 4 Russian experts have contributed to the IARC's flagship Monographs programme, including:

- **IARC Monographs Volume 130:** *1,1,1-Trichloroethane and four other industrial chemicals*
- **IARC Monographs Volume 133:** *Anthracene, 2-bromopropane, butyl methacrylate, and dimethyl hydrogen phosphite*
- **IARC Monographs Volume 138:** *Automotive gasoline and some oxygenated gasoline additives*

## Part II. From evidence to action: IARC's impact on national Public Health

### → Evidence that informs national regulations and prevention policies

In the **Russian Federation**, IARC evaluations are used as practical tools for public-health authorities, specialised medical institutions and technical experts. They help anchor decisions on cancer surveillance, prevention priorities, screening approaches and survival benchmarking in internationally harmonised evidence.

An [Overton](#) analysis of public-sector documents (2015–2026) identifies government reports, regulatory assessments, technical guidance documents and parliamentary materials that explicitly cite IARC research and hazard evaluations. Most of these citations come from public authorities and state institutions, showing that IARC evidence is embedded in formal policy and technical documentation rather than used symbolically. Across these materials, IARC outputs support several concrete functions:

- **Cancer surveillance and burden benchmarking:** Government of the Russian Federation disease profiles use IARC global surveillance products to frame incidence and mortality. For example, a 2022 Government document on **“рак желудка” (Stomach cancer)** cites **Global Cancer Statistics/GLOBOCAN 2018** (Bray et al.), while a 2021 Government publication cites **GLOBOCAN 2008** (Ferlay et al.).
- **Screening and prevention framing:** A 2022 Government of the Russian Federation document on benign breast disease cites the IARC Working Group viewpoints on **breast-cancer screening** (*NEJM*, 2015) and **body fatness and cancer** (*NEJM*, 2016), using them to frame screening approaches and prevention priorities.
- **Childhood cancer survival benchmarking:** A 2017 document from the **Russian National Research Medical University** cites the IARC-linked **ACCIS** study on childhood cancer survival comparisons across Europe

### Box #3: Behavioural risks and premature mortality: making prevention visible in the Russian Federation

In the Russian Federation, IARC collaboration has helped turn two of the country's most important behavioural risks - **alcohol and tobacco** - into measurable targets for prevention policy.

[A landmark IARC-led prospective study, published in \*The Lancet\*](#), followed **151,000 adults** in the Russian Federation for up to a decade to quantify the mortality impact of spirits (vodka) consumption. During follow-up, **8,000 participants died**. The findings revealed an exceptionally steep gradient in premature mortality: the estimated **20-year risk of death at ages 35–54** was **35%** for men consuming **three or more half-litre bottles of vodka per week**, compared with **16%** for those consuming **less than half a litre**. At **ages 55–74**, the corresponding risks were **64%** versus **50%**. These results made visible, in unusually concrete terms, the scale of avoidable mortality associated with harmful alcohol consumption, including cancers causally linked to alcohol such as liver and oesophageal cancer.

IARC collaboration has also strengthened the case for **tobacco control and cessation as part of cancer care**, not only prevention before disease occurs. [Studies in the Russian Federation \(study 2\)](#) show that **quitting smoking after diagnosis of lung or kidney cancer significantly reduces the risks of disease progression and death**, demonstrating that behaviour change can improve survival even after cancer has developed. [Research among chrysotile asbestos workers in Asbest](#) further highlights the interaction between behavioural and occupational risks, documenting very high smoking prevalence among male workers exposed to industrial carcinogens (see Box #2).

(Sankila et al.), reflecting the use of international survival benchmarking evidence in Russian clinical and health-system analysis.

#### ➔ Economic evidence for priority setting

IARC has also generated macro-level evidence showing why prevention should be treated as an economic as well as a health priority. [An IARC-led analysis estimated that productivity losses from premature cancer deaths across the BRICS countries reached US\\$46.3 billion in 2012](#), underlining the economic cost of delayed prevention and late diagnosis.

For the Russian Federation, the analysis points to the importance of cancers such as **liver** and **head-and-neck cancer**, showing how preventable risks translate into lost productivity and wider societal costs. Complementing this, [IARC modelling across seven countries, including the Russian Federation, estimated that around 2 million deaths each year are due to preventable cancers linked to four major risk factors: tobacco, alcohol, overweight/obesity and HPV, with tobacco the larg](#).

Together, these analyses strengthen the case for prioritising cost-effective prevention policies, not only because they save lives, but because they reduce avoidable economic losses and support more efficient allocation of public resources.

### Part III. Building capacity for lasting impact

#### ➔ Training as a gateway to international science

Training and knowledge exchange are long-standing features of the **Russian Federation–IARC** partnership, creating two-way flows of expertise between Russian institutions and international research networks. The Russian Federation has a deep historical footprint in IARC's training ecosystem, with a sustained stream of IARC fellowship alumni since the 1960s (including multiple fellows in **1966–1967** and regular cohorts through the 1970s–1990s, with more recent fellows in **2009** and **2013**). This legacy is complemented by current training links: during the **2021–2025 cycle, two trainees** from the Russian Federation undertook short- or medium-term research attachments at IARC.

These placements remain strategically valuable: they give early-career researchers and technical experts hands-on experience with harmonised methods, international standards, and multidisciplinary teamwork, particularly relevant to the Russian Federation's strengths in occupational epidemiology, long-latency cohorts, and population-based evidence generation. They also show how IARC training can lead to practical implementation work. A testimonial from **Dr Vitaly Smenov (Russian Federation)** describes how an IARC fellowship pathway led to involvement in missions linked to the global **Cervical Cancer Elimination Initiative** and later to deeper engagement as a visiting scientist at IARC, contributing to the organisation of screening programmes. This illustrates how training can evolve into sustained international collaboration with direct operational relevance.



*“With regular joint symposia and seminars at the “Occupation and Health” Russian National Congress, we ensure the optimal dissemination on emerging knowledge on how to prevent occupational cancer – a classic example of joint capacity” building.*

**Dr Joachim Schuz**  
IARC Liaison Officer  
For Russia

This engagement is part of IARC's wider capacity-building ecosystem, which includes the Postdoctoral Fellowship Programme, the IARC Summer School, the IARC Learning Platform, and global networks for cancer registries, screening, and biobanking. Together, these initiatives train thousands of professionals worldwide and generate durable benefits: in a 2024 outcome survey, **98% of postdoctoral respondents reported transferable skills, 72% maintained research ties with IARC after training, and over half progressed to leadership roles (53%) or managed independent research funding (52%).** This creates a **two-way multiplier effect**: expertise gained at IARC is reinvested in national institutions, while the priorities, data, and methodological strengths of participating countries feed back into IARC's networks, helping shape future research, standards, and capacity-building efforts.

#### ➔ **Strengthening screening quality and early diagnosis in Russian-speaking countries**

Beyond individual training, the Russian Federation contributes to wider capacity-building across **Russian-speaking countries of the WHO European Region**, where language and implementation barriers can limit access to international guidance. IARC-linked initiatives include:

- **A Russian-language CanScreen5 self-paced training programme** to strengthen understanding of screening quality and the prerequisites for evidence-based screening implementation;
- The **DEDICA** project applying the WHO Europe tool to identify determinants of late diagnosis and delayed treatment of breast cancer in Russian-speaking settings, supporting tailored early-diagnosis strategies;
- **Translation and validation into Russian** of the WHO/IARC digital **Atlas of Breast Cancer Early Detection** and **Atlas of Colposcopy**, expanding access to practical clinical guidance and strengthening the skills base needed for earlier detection and timely treatment.

Together, these efforts extend the impact of the Russian Federation-IARC partnership beyond individual projects: they support a shared technical language, raise quality standards, and help build sustainable early-diagnosis and screening capacity across the wider Russian-speaking region.