

IARC Impact in practice series

The Sweden experience



“Participating on the international scientific community that IARC provides has benefited Sweden by access to materials and data to perform global health research.”

Prof Gisselsson Nord, Lund University

Since becoming an IARC Participating State in **1979**, Sweden has used IARC as a practical lever to link world-class national data and methods to international evidence and standards, strengthening prevention, guiding regulation, and improving screening while helping define how cancer burden is measured across Europe. Membership gives Sweden influence through IARC governance and real operational value through shared methods, benchmarking platforms, and large coordinated studies.

Why IARC membership made the difference for Sweden:

- **Scientific leadership at scale:** Sweden is among IARC's most active collaborators, with 800+ joint publications in the past decade, placing Swedish institutions at the centre of large multicountry research programmes rather than stand-alone projects.
- **Evidence used across government:** Swedish authorities routinely rely on IARC evaluations in policy and technical guidance, 180+ public-sector documents cite IARC evidence on radiation, environmental exposures, alcohol and diet, and screening, supporting defensible decisions on prevention and risk management.
- **Registry power that drives system improvement:** Sweden's population-based registries feed into Nordic and international benchmarking (notably NORDCAN and IARC-coordinated survival/staging comparability work), enabling long-term trend tracking, fair comparison with peers, and targeted action where outcomes or equity lag.
- **Standards, capability, and “beyond projects” impact:** Training placements and scientific exchanges sustain national expertise in epidemiology and surveillance, while Swedish experts contribute to global standard-setting (Monographs, Handbooks, WHO tumour classifications). Long-standing collaboration also shapes national action outside formal programmes, for example, informing the design and evaluation approach of Sweden's lung cancer screening pilot.

Part I. Scientific leadership through international collaboration

→ Exceptional intensity and depth of collaboration

Sweden's partnership with IARC represents one of the most extensive and scientifically integrated collaborations among all Participating States. Over the past decade, Swedish institutions have co-authored **826 scientific publications with IARC**, averaging **more than 80 joint papers per year**¹. These outputs account for **almost one in ten Swedish oncology publications**, placing Sweden among the most active contributors to IARC-led research globally.

The collaboration is characterised by an exceptional level of international integration and coordination. Nearly **one-third of these studies are IARC-led (32%)**, reflecting Sweden's embedded role in large, coordinated, multicountry research infrastructures. The scale of integration is particularly striking: IARC-linked publications involve a **median of 35 institutions per paper**, compared with **4 institutions** for Swedish oncology publications

Cancer in Sweden: a high-income burden with opportunities for prevention

Based on recent [Globocan estimates](#), cancer remains a significant public health challenge in Sweden, with around **61,800 new cases diagnosed each year** and one of the **highest age-standardised incidence rates in Europe**, reflecting both organised screening and continued exposure to modifiable risk factors. Although mortality rates are comparatively low, cancer remains a leading cause of premature death.

This profile underlines that, even in a high-performing health system, substantial opportunities remain to reduce the cancer burden through prevention, early diagnosis, and targeted action on avoidable risk factors.

¹ Data derived from Web of Science records of IARC–Sweden co-authored papers published between January 2016 and January 2026.

without IARC participation. Collaborators span **2224 institutions across 181 countries**, positioning Sweden at the centre of truly global research networks.

Web of Science micro-topic analysis shows that Sweden-IARC outputs are strongly concentrated in **high-impact, data-intensive fields**, led by **Genome-wide Association Studies, Nutrition & Obesity, and Screening Disparities**, with additional clusters in **HPV & cervical cancer, metabolomics, genetic testing, and cancer prevention**. This pattern indicates a partnership focused not on dispersed topics but on **large-scale, cohort-based and molecular epidemiology research**, where multinational coordination is essential.

➔ **Leadership in European and global research infrastructure**

Through IARC, Swedish institutions are embedded in major international research infrastructures that generate evidence at population scale and directly inform prevention, screening, and risk assessment across Europe and beyond. This gives Sweden access not only to global scientific networks, but also to the shared data, materials, and collaborative platforms needed to shape high-impact international research. Examples from the past decade include:

- **Nordic Cancer Registries platform (NORDCAN)**, the Nordic cancer statistics platform jointly maintained with IARC, which provides harmonised incidence, mortality, prevalence, and survival data across the Nordic region and supports international benchmarking (see Box #2);
- **Cohort Study of Mobile Phone Use and Health (COSMOS)**, a multinational cohort investigating mobile phone use and

“Sweden and the other Nordic countries have these uniquely rich registries that allow much more detailed analyses than most places, that infrastructure really stands on its own.”
Dr Mattias Johansson
IARC Liaison Officer
for Sweden

brain tumour risk, with findings informing radiation protection policy and public health guidance in Sweden and across Europe (see Box #3);

- **Discovering the causes of three poorly understood cancers in Europe (DISCERN)**, which combines biorepositories, exposomics, proteomics, and genomics to identify causes of renal, pancreatic, and colorectal cancers;
- **European Prospective Investigation into Cancer and Nutrition (EPIC)**, one of the world's largest prospective cohort studies, in which the Swedish centres in Malmö and Umeå have enrolled about **53,800 participants** with detailed dietary and lifestyle data, blood samples, and long-term follow-up through national registers, enabling high-quality analyses of diet, obesity, metabolic risk factors, multimorbidity, and rare cancers;
- **European research networks on cancer, environment, diet, and biomarkers**, linking Swedish expertise to wider multicountry efforts;
- **International pooling initiatives** examining lifetime overweight, obesity, and cancer survival.

Box #2: Nordic registry leadership in global cancer evidence

A distinctive strength of the Sweden-IARC partnership lies in Sweden's **population-based cancer registries and long-term follow-up systems**, which enable decades of nationwide tracking of incidence, survival, and outcomes. Near-complete coverage and reliable linkage across health registers provide some of the most robust data in international cancer surveillance, forming a strong foundation for epidemiology, screening evaluation, and health system planning.

Through IARC, these national assets feed directly into **NORDCAN, the Nordic cancer statistics platform**, which delivers harmonised and comparable data on **incidence, mortality, prevalence, and survival across seven Nordic populations**, covering more than **70 years of trends for over 40 cancer sites**. NORDCAN has become an international reference for benchmarking outcomes, monitoring inequalities, and assessing the real-world impact of prevention and early detection strategies.

Sweden also plays an active role in the **International Cancer Benchmarking Partnership (ICBP)**, which compares cancer survival across countries to identify opportunities for earlier diagnosis and improved care. Within this framework, **SurvMark-2**, coordinated by IARC, develops standardised survival indicators, staging definitions, and registry quality methods to ensure fair and robust international comparisons. Swedish registry experts contribute both data and methodological expertise to these efforts.

By embedding its registries within IARC-coordinated platforms, Sweden does more than supply data: it **helps set the international standards for how cancer burden and survival are measured and compared**, ensuring that Nordic experience directly informs global evidence and policy.

→ Shaping the global cancer research agenda and standards

Swedish 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 \(MTS\)](#), Sweden 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, Sweden 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.

Sweden's engagement with IARC extends to **active leadership in international standard-setting**. During the 2020-2025 cycle, 9 Swedish experts have contributed to IARC's flagship normative programmes, including:

- **IARC Monographs Volume 130:** *1,1,1-Trichloroethane and Four Other Industrial Chemicals*
- **IARC Monographs Volume 135:** *Perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS)*
- **IARC Monographs Volume 138:** *Automotive gasoline and some oxygenated gasoline additives*
- **IARC Monographs Volume 139:** *Hepatitis D Virus, Human Cytomegalovirus, and Merkel Cell Polyomavirus*
- **IARC Handbooks of Cancer Prevention Volume 18:** *Cervical cancer screening and implementation strategies*
- **IARC Handbooks of Cancer Prevention Volume 20B:** *Alcohol Policies*
- **World Health Organization Classification of Tumours (Blue Books) 5th and 6th editions:** Editorial board and expert contributions supporting international standards for tumour pathology classification, diagnostic criteria, and reporting systems.

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

→ Evidence that informs national regulation and prevention policy

In Sweden, IARC assessments function as operational tools for risk assessment. An [Overton](#) analysis of Swedish public-sector documents (2005-2026) identified more than 180 documents citing IARC-led research, with the overwhelming majority originating from government agencies, demonstrating routine integration of IARC evaluations into national standards, guidance, and preventive action.

Citations are concentrated among authorities responsible for exposure control, prevention, and health system planning, including **Strålsäkerhetsmyndigheten**, **Folkhälsomyndigheten**, **Livsmedelsverket**, **Statens beredning för medicinsk och social utvärdering (SBU)**, and **Naturvårdsverket**. These bodies use IARC evidence to underpin concrete regulatory and preventive measures, for example:

- Radiation protection guidance and risk communication on mobile-phone and electromagnetic field exposures;
- Dietary and alcohol recommendations, and limits for food contaminants and carcinogenic substances;
- Environmental and air-pollution standards and chemical risk assessments;
- Health technology assessments and national recommendations for screening and early detection programmes

A concrete illustration is Sweden's participation in [COSMOS \(Cohort Study of Mobile Phone Use and Health\)](#), one of the world's largest prospective cohort studies investigating long-term mobile phone use and brain tumour risk. COSMOS follows more than **250,000 participants across several European countries**, collecting detailed mobile

Box #3: From carcinogen classification to youth protection: indoor tanning regulation

A concrete example of IARC's impact on national regulation is Sweden's **18+ age limit for indoor tanning (cosmetic sunbeds)**. Following a decade of evidence synthesis, [IARC classified UV-emitting tanning devices as carcinogenic to humans \(Group 1\)](#), based on strong evidence that sunbed use increases the risk of melanoma and other skin cancers, particularly when exposure begins at a young age.

In response to this classification, the **Nordic Radiation Safety Authorities**, including the Swedish Radiation Safety Authority (Strålsäkerhetsmyndigheten), issued [a joint statement advising against sunbed use and recommending an under-18 prohibition](#), explicitly citing IARC's assessment. Sweden subsequently introduced a national **18-year age limit** for sunbed use, aligning with other Nordic countries and combining age restrictions with technical requirements and radiation limits for tanning devices.

This pathway from independent carcinogen evaluation to coordinated Nordic recommendations and Swedish legislation illustrates how IARC's hazard classifications can **directly shape concrete regulatory measures**, strengthening skin cancer prevention and protecting young people from avoidable exposure to a known carcinogen.

phone usage histories and linking them to cancer registry data over many years to assess potential health effects. [Recent findings indicate that people with the highest lifetime hours of mobile phone use do not have a higher risk of developing brain tumours, including glioma, compared with lighter users](#), providing some of the **most robust prospective evidence to date** on this question.

Findings from COSMOS and related IARC evaluations are systematically cited by the **Swedish Radiation Safety Authority (Strålsäkerhetsmyndigheten)** in national risk assessments and technical guidance on electromagnetic field exposure. This authority is the largest Swedish citer of IARC research and routinely uses the evidence to inform **precautionary recommendations, public communication, and regulatory standards** related to mobile technologies and other non-ionizing radiation exposures.

→ A European multiplier for evidence-based cancer policy

Across the European Union, IARC acts as a **multiplier of national efforts**, turning scientific evidence into coordinated, practical action at scale. An Overton analysis (2005-2026) identified **over 500 EU policy and technical documents** citing IARC research, demonstrating that IARC evaluations are routinely used by EU institutions and agencies to inform legislation, guidance, and public health strategies.

IARC both generates the evidence and translates it into action. IARC both generates the evidence and translates it into action. Through large research infrastructures such as [EPIC \(the European Prospective Investigation into Cancer and Nutrition\)](#) (see Section I), it produces long-term, high-quality data on risk factors and outcomes relevant to Europe. This is complemented by Europe-wide analyses that directly shape policy choices and guidance, for example, [work showing that recent increases in prostate cancer incidence in Europe are likely driven by PSA testing patterns](#) (with implications for screening approaches), [comparative burden estimates for Europe](#) (millions of new cancer cases and deaths annually), and [major studies mapping socioeconomic inequalities in cancer mortality](#) to inform targeted cancer control.

IARC also produces actionable modelling, showing that [scaling up tobacco control could prevent one in four lung cancer cases in Europe](#) (about **1.65 million fewer cases over 20 years**), and supports implementation through initiatives such as EU-funded implementation research such as [EU Joint Action on the implementation of cancer screening programmes \(EUCanScreen\)](#), which sets common standards for screening delivery and quality assurance and [EUROHELICAN, assessing the feasibility of population-based H. pylori test-and-treat strategies for gastric cancer prevention](#). In parallel, IARC remains a core technical partner in efforts to improve the quality, comparability and timeliness of cancer registry data and to refine indicators used in the [European Cancer Information System \(ECIS\)](#) and the [European Cancer Inequalities Registry \(ECIR\)](#).

Together, this body of evidence feeds into one of IARC's flagship initiatives, the [European Code Against Cancer \(ECAC\)](#), which converts evidence into clear, practical prevention recommendations for governments and citizens across Europe. IARC also strengthens Europe's prevention ecosystem by convening and supporting major collaborative platforms, such as [Cancer Mission Europe](#) and [Cancer Prevention Europe](#) (including its Learning Centre), that accelerate translation of evidence into capacity building and practice across Member States.

By combining independent evidence, harmonised methods, and implementation support, IARC enables Participating States to **benchmark performance, share best practices, and adopt proven prevention strategies faster and more efficiently** than acting alone. For Sweden, this collaboration provides not only access to data and expertise, but a seat at the table where **European and global cancer control standards are defined**.

→ Partnerships beyond projects: collaboration shaping national action

IARC's impact in Sweden extends beyond formal projects and funded programmes. Long-standing scientific relationships, informal exchanges, and sustained collaboration between IARC experts and Swedish researchers have helped translate research directly into national practice. In the area of lung cancer, years of joint work on aetiology, risk assessment, and screening methodology informed the design of **Sweden's first lung cancer screening pilot**. Although nationally led and not formally implemented as an IARC project, the programme draws on shared analytical approaches, risk modelling tools, and evaluation strategies developed through collaboration with IARC scientists. This example shows how **trusted partnerships and continuous expert**



“Even when we're not formally involved, the collaborations have clearly influenced how projects get off the ground : the exchange of ideas and methods still shapes what they do.”

Dr Mattias Johansson
IARC Liaison Officer
for Sweden

exchange, even without contracts or dedicated funding, can shape real-world programme design and policy decisions, accelerating the adoption of evidence-based prevention at national level.

Part III. Building capacity for lasting impact

→ Training as a multiplier for capacity



“IARC functions as a portal through which Swedish trainees learn how to initiate and manage large international collaborations, it’s really where you become comfortable working at that scale.”

Dr Mattias Johansson
IARC Liaison Officer
for Sweden

Training and knowledge exchange are central to the Sweden–IARC partnership. Since 1968, **13 researchers from Sweden have received competitive IARC fellowships**, and during the MTS 2021–2025 cycle **three additional trainees** undertook placements at IARC.

Sweden’s engagement also extends to senior-level exchange. In 2016, **Professor Pär Stattin** from [Uppsala University](#) and [Umeå University](#) received the **IARC Senior Visiting Scientist Award**, spending 12 months at IARC’s Cancer Surveillance Section collaborating on global prostate cancer incidence and mortality research. This illustrates how Swedish expertise contributes not only to national capacity-building, but also to IARC’s own scientific leadership.

This engagement is part of IARC’s wider capacity-building ecosystem, which includes the IARC Research Training and Fellowship Programme, the IARC Learning Programme (including the Summer School), 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.



“IARC membership has helped strengthening national and regional expertise by training personnel that could later be recruited (back) to the Swedish scientific establishment.”

Prof Gisselsson Nord
Lund University

Institutional collaboration has also deepened. A **Memorandum of Understanding with the Swedish Cancer Society (Cancerfonden)** signed in early 2026 formalises long-term cooperation and supports strategic alignment between Swedish research priorities and IARC’s global agenda.