

IARC Impact in practice series

The Norway experience



“Our IARC membership has enhanced the quality through its focus on standardized and harmonized cancer classification and recording worldwide.”
Representative of the Cancer Registry of Norway

Since becoming an IARC Participating State in 1987, Norway has used IARC membership to **raise the quality of its cancer data, strengthen the evidence behind national policy, and help shape the standards used worldwide**. Through IARC, Norwegian registries, cohorts and scientific expertise are connected to global platforms that support prevention, screening, early diagnosis and risk assessment. In return, Norway helps define the methods, classifications and benchmarks that make cancer data internationally comparable and policy-relevant.

Why IARC membership made the difference for Norway:

- **Scale with purpose:** Around **one in seven** Norwegian oncology publications is co-authored with IARC, placing Norway in major international collaborations that no country could build alone and giving Norwegian researchers access to global consortia and shared infrastructures.
- **Evidence that government uses:** In Norway, IARC evidence feeds directly into screening policy, cancer control planning, environmental and occupational risk assessment, and wider public-health guidance. IARC Monographs have also provided an important scientific foundation for the development of Norwegian screening programmes.
- **Better benchmarking, better decisions:** Through tools such as **NORDCAN, Cancer Incidence in Five Continents** and the **Global Cancer Observatory**, Norway can compare its cancer outcomes with those of neighbouring countries and the wider world using harmonised data. This helps policy-makers see where progress is being made, where gaps remain, and where investment is likely to have the greatest impact.
- **From surveillance to prevention:** Initiatives such as **PREVENT 2.0** help turn cancer surveillance into practical action by linking trends in cancer burden with lifestyle-related risk factors and policy options. This gives Norwegian authorities a stronger basis for prioritising prevention.
- **Stronger standards at home, stronger voice abroad:** A major benefit of membership is access to internationally harmonised approaches to cancer classification, registration and comparison. This strengthens the quality and credibility of Norwegian data at home, while ensuring Norwegian expertise contributes to the global standards that guide cancer control internationally.

Part I. Scientific leadership through international collaboration

→ Exceptional collaboration intensity and depth

Norway's partnership with IARC reflects a highly integrated and globally connected research collaboration that consistently positions Norwegian institutions within the core of large-scale international cancer epidemiology efforts.

Over the past decade, Norwegian researchers produced 4,678 oncology publications, of which **695 were co-authored with IARC**, an average of around **70 joint papers per year**, meaning roughly **one in seven** Norwegian oncology studies involves IARC collaboration¹. This level of sustained output places Norway among the most active and scientifically engaged Participating States relative to

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

Based on recent [GLOBOCAN estimates](#), cancer remains a major public health challenge in Norway, with around **40,300 new cases** and **13,400 deaths** each year. Incidence and mortality rates are high but broadly in line with other high-income Northern European countries, reflecting population ageing and continued exposure to modifiable risk factors such as tobacco, alcohol, excess body weight and UV radiation. Although survival has improved through strong health services and organised screening, cancer is one of the main causes of premature mortality in Norway, highlighting continued opportunities for prevention.

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

population size. The collaboration is distinguished not only by volume but by depth and international coordination. IARC-linked publications involve a **median of 35 institutions per paper**, compared with 4 institutions for Norwegian oncology publications without IARC participation. Overall, collaborations span **2,354 institutions across 179 countries**, placing Norwegian scientists at the centre of truly global research networks.

Web of Science Micro-topic analysis shows that Norway-IARC outputs are strongly concentrated in high-impact, data-intensive fields, led by:

- **Screening disparities and cancer prevention**
- **Genome-wide association studies (GWAS)**
- **Nutrition, obesity and metabolic risk**
- **Metabolomics and molecular epidemiology**
- **Ovarian, melanoma and other site-specific cancers**
- **Genetic testing and biomarker discovery**
- **Vitamin D, fatty acids, gut microbiota and metabolic syndrome**
- **Physical activity, thyroid, bladder and lymphoid cancers**

This pattern indicates a partnership focused on large cohorts, biobanks and pooled international datasets, where multinational coordination is essential to achieve statistical power and policy-relevant evidence. Norway's strengths in nationwide registries, imaging archives, long-term follow-up and high-quality biospecimen infrastructures make it a natural and highly valued contributor to these platforms.

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

Through IARC, Norwegian institutions are connected to the major research platforms that shape cancer policy and prevention across Europe and beyond. This gives Norway access to larger datasets, shared methods and global expertise, while ensuring that Norwegian priorities and high-quality national data help influence the international evidence base. Examples from the past decade (2016-2026) include:

- **Nordic cancer intelligence platforms:** Norway works with IARC and Nordic partners through **NORDCAN 2.0 (the Nordic cancer statistics database)** and **PREVENT 2.0 (a platform integrating cancer prevention indicators into Nordic cancer surveillance)**, which combine long-term registry data with information on risk factors and prevention policies. These tools help governments compare cancer trends across the Nordic region, identify where outcomes are improving or lagging, and support decisions on screening and primary prevention.

Box #2: Lung cancer and melanoma: from better prediction to better care

Norway's partnership with IARC shows how world-class registries, biobanks and long-term follow-up can be turned into more **targeted prevention, earlier detection and better patient management**.

In lung cancer, IARC and Norwegian researchers are developing **blood-based biomarkers of metastatic disease** that could identify aggressive tumours before clinical diagnosis. By combining gene expression, DNA methylation and microRNA data with long-term registry follow-up, this work aims to spot which patients are most at risk earlier, helping guide screening, speed up intervention and improve treatment decisions while reducing unnecessary investigations for lower-risk groups.

In melanoma, Norway's exceptionally rich registry archives are being used with IARC to improve **risk stratification and follow-up**. By analysing tumour thickness, ulceration, pigmentary traits, nevi and ultraviolet exposure, the project is refining the cut-points used to assess prognosis and revealing which patients face higher long-term risk. This can directly strengthen national prevention and follow-up guidelines, support more targeted sun-safety messages and make patient counselling more precise.

Norwegian researchers also contribute to IARC-linked studies on aggressive lung neuroendocrine tumours, combining advanced molecular analysis with laboratory models to identify pathways that could support earlier interception and more personalised treatment.

“IARC membership has strengthened our international collaboration through inclusion in consortiums where our participation helps shape our national but also international research priorities and ensures Norwegian perspectives are represented in global cancer control efforts.”

Representative – Cancer Registry of Norway

- **Flagship international cohort platforms:** Through IARC, Norway contributes to major long-term cohort infrastructures that no country could build alone. This includes **EPIC (the European Prospective Investigation into Cancer and Nutrition)**, IARC's flagship European cohort, to which Norway contributes through the **Norwegian Women and Cancer Study (NOWAC)**, helping generate evidence on diet, obesity, alcohol and other preventable causes of cancer.

- **Agricultural occupational and radiation health consortia:** Norway also participates in **AGRICOH (the Agricultural Cohort Consortium)**, a major international platform expanding evidence on cancer risks and prevention in agricultural populations. Norwegian data

also contribute to IARC-led studies on **parental occupational exposures, childhood cancers, paediatric computed tomography imaging and mobile-phone-related radiation**, helping inform safer occupational, environmental and radiation health policies (see part II).

- **Biomarker and early-detection research:** Norway's long-running collaboration with IARC also includes biomarker and infection-related cancer research using the **Janus Serum Bank Cohort**, one of the country's distinctive population-based research resources. This strengthens Norway's role in developing earlier and more precise approaches to cancer detection and risk stratification.
- **Screening, inequalities and survivorship:** Norwegian experts also contribute to IARC-led initiatives on screening quality, human papillomavirus prevention, cancer inequalities and survivorship. Through projects such as **SILICA (How do social inequality and gender impact the relationship between lifestyle and cancer?)** and **DISCERN (Discovering the causes of three poorly understood cancers in Europe)** Norway helps examine how **income, education, occupation, place, gender and lifestyle** shape cancer risk and outcomes, while HPV-related projects, including work on **HPV16-E6 serology**, support earlier detection of oropharyngeal and anal cancers in very high-risk groups.

→ Shaping the global cancer research agenda and standards

Norwegian 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 \(MTS\)](#), Norway 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, Norway 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.

“Norwegian researchers have been included in the IARC monograph evaluations which has been both educational for the researchers and the research field, and instrumental for national prevention policies and guidelines.”
Representative - Cancer Registry of Norway

Norway 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, 9 Norwegian experts have contributed to the IARC's flagship evaluations, including:

- **IARC Monographs Volume 127:** *Some aromatic amines and related compounds*
- **IARC Monographs Volume 130:** *1,1,1-Trichloroethane and Four Other Industrial Chemicals*
- **IARC Monographs Volume 131:** *Cobalt, antimony compounds, and weapons-grade tungsten alloy*
- **IARC Monographs Volume 135:** *Perfluorooctanoic acid (PFOA) and perfluorooctanesulfonic acid (PFOS)*
- **IARC Monographs Volume 137:** *Hydrochlorothiazide, Voriconazole, and Tacrolimus*
- **IARC Monographs Volume 138:** *Automotive gasoline and some oxygenated gasoline additives*
- **World Health Organization Classification of Tumours (Blue Books) 5th and 6th editions:** Editorial and expert contributions supporting tumour classification standards and international diagnostic reporting systems

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

→ Evidence that informs national regulation and prevention policy

In Norway, IARC assessments function as working tools for public authorities, feeding directly into risk assessments, screening guidance and national cancer strategies. An [Overton](#) analysis of Norwegian public-sector documents (2015-2026) shows **more than 120 reports and guidelines** citing IARC evidence over the past two decades, with the overwhelming majority produced by government bodies. Most citations come from the **Norwegian Institute of Public Health**, followed by the **Norwegian Scientific Committee for Food and Environment**, the **Norwegian Directorate for Health and Social Affairs**, the **Cancer Registry of Norway** (through *Cancer in Norway* and clinical quality registries), and other public institutions such as Oslo municipality and the Norwegian Institute for Air Research.

“IARC membership has guided the direction of our cancer research, and our strategy for cancer control, including the screening programs in Norway.”

Representative - Cancer Registry of Norway

Across this corpus, IARC evidence underpins concrete regulatory and preventive actions. Examples include:

- **Screening policy and programme quality:** IARC evaluations and implementation studies are cited in manuals and assessments for the Mammography Programme, decisions on age extension and the use of tomosynthesis, as well as in documents on HPV testing and the strategy for eliminating cervical cancer as a public-health problem.

- **Cancer surveillance and benchmarking:** *Cancer in Norway* reports and the annual reports of the melanoma and childhood cancer quality registries draw on IARC indicators and comparative analyses to track incidence, survival and regional inequalities, linked to Nordic and international platforms such as NORDCAN and SURVMARK-2.
- **Exposure and risk assessment:** major risk assessments on **radiofrequency electromagnetic fields** (see next section), air pollution, grilled food, alcohol and infectious diseases reference IARC hazard classifications and epidemiological reviews when quantifying cancer risks and recommending protective measures.

➔ **Radiation and medical imaging: turning Norwegian data into practical guidance**

Through IARC, Norway's high-quality registry and clinical data help answer difficult questions about radiation risks in ways that are directly useful for public authorities and health services.

- **Mobile phones and brain cancer:** In a major IARC-led analysis of Nordic men, Norwegian cancer registry data helped show that the sharp rise in mobile phone use between 1979 and 2016 was **not matched by a corresponding rise in glioma incidence**. For policy-makers, this provides strong independent evidence to support balanced public communication and proportionate radiation-protection guidance.
- **Safer CT imaging for children:** Norway also contributes to IARC-led multinational studies on **paediatric computed tomography (CT)**, linking scan histories, organ doses, biomarkers and later cancer outcomes.

This research helps define how to keep radiation doses **as low as possible while preserving diagnostic quality**, and feeds into European recommendations on safer imaging for children.

- **Better exposure assessment:** Norwegian data also support IARC-linked work on **radiofrequency exposure from 4G networks and mobile telephony**, improving the exposure models used in international risk assessments and strengthening the evidence base for future guidance.

Together, these collaborations show the practical value of IARC membership: Norway is not only contributing data, but helping generate the independent evidence used to guide **risk communication, clinical practice and radiation-protection standards** in Europe and beyond.

➔ **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. Through large research infrastructures such as **EPIC (the European Prospective Investigation into Cancer and Nutrition)**, one of the world's largest cohort studies, following more than half a million Europeans, IARC provides the robust epidemiological evidence linking diet, obesity, alcohol, tobacco, and other exposures to cancer risk. This evidence is complemented by Europe-wide analyses that directly shape policy choices and guidance, for example, work showing that

Box #3: Nordic cancer intelligence for policy and planning

“NORDCAN enables reliable Nordic comparisons which is essential for identifying where Norway is lagging behind or improving, and for guiding policy makers in strategy planning and investments for cancer control.”

Representative of the Cancer Registry of Norway

A major strength of Norway's partnership with IARC is that the **Cancer Registry of Norway is not only a research asset, but a policy asset**. As one of the world's oldest and most complete population-based cancer registries, it gives Norway a uniquely strong basis for understanding who gets cancer, who survives, where inequalities persist, and whether policies are working.

Through IARC, these national data feed into **NORDCAN 2.0**, the shared Nordic cancer intelligence platform developed with the Association of the Nordic Cancer Registries and the Nordic Cancer Union. By providing harmonised statistics across the Nordic region over more than 70 years, NORDCAN allows Norway to compare its performance with neighbouring countries using like-for-like data on incidence, mortality, prevalence and survival.

This matters for policy. NORDCAN helps decision-makers benchmark outcomes, track inequalities, and assess the real-world effects of screening, treatment and prevention strategies over time. It turns national registry data into a trusted regional evidence base for cancer planning and health-system improvement.

Building on this foundation, **PREVENT 2.0** moves from measurement to action. By linking cancer trends with information on tobacco, alcohol, obesity and social conditions, it gives Norwegian and Nordic authorities a practical tool to test policy options, monitor progress and target interventions where they can achieve the greatest reduction in cancer burden and inequalities.

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.



“The IARC membership has contributed to connect Norway to new European and global cancer networks. This has facilitated new partnerships, expert exchanges, and collaborations that extend beyond specific projects.”

Representative - Cancer Registry of Norway

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](#). Norway contributes data and expertise to EU-level efforts to map and address cancer inequalities, including [IARC-Erasmus MC projects supporting the European Cancer Inequalities Registry \(EU CanIneq\)](#) and the development of IARC factsheets on socioeconomic inequalities in cancer mortality. These platforms use harmonised indicators to compare cancer outcomes by socioeconomic status and region, providing Norwegian authorities with independent benchmarks and practical tools to target resources

where the cancer burden is highest. 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 further supports implementation through coordinated European initiatives such as the [Innovative Partnership for Action Against Cancer \(iPAAC\)](#), which brings Member States together to strengthen evidence-based cancer prevention policies and capacity building. 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 Norway, this collaboration provides not only access to world-class data and expertise, but also a voice in the European discussions where future cancer-control standards are defined and refined.

Part III. Building capacity for lasting impact

→ Training as a gateway to international science

Training and knowledge exchange are an important part of the Norway–IARC partnership, helping ensure that international methods and expertise strengthen day-to-day practice in Norwegian institutions. The value of this collaboration lies not only in formal fellowships, but in the continuous transfer of skills, standards and tools that support cancer research, registration and prevention. Through IARC, Norwegian scientists gain access to global research communities, expert exchanges and advanced methodological approaches in areas such as cancer epidemiology, screening evaluation and registry-based studies. This gives Norwegian teams opportunities to work with shared international methods and datasets that would be difficult to develop within a single national setting.

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.