Annual report 2025

Karolinska Institutet

KAROLINSKA UNIVERSITETSSJUKHUSET

Karolinska Comprehensive Cancer Center

Karolinska CCC in figures

2025

1,865 employees (FTE) in cancer care

~SEK 6.6 billion in cancer care

~ 76,000 patients

10,572 new cancer cases

464,000 outpatient contacts

18,800 inpatient admissions

> 230 beds

16,300 surgical interventions

45,000 radiotherapy sessions

53,000 medical treatment sessions

96.4% patient satisfaction for overall experience

64% (+6%) within the time limit for 31 standardised courses of care

472 ongoing studies

29% study inclusion

> 400 principal investigators

64 dissertations

~ 1,600 scientific publications

SEK 1.97 billion in grants for cancer research

ECI
Organisation of European Cancer Institute – EEIG

Firmly rooted in the present, we explore the future

Together with many national and international stakeholders, we work to improve the survival and quality of life for cancer patients through better research, education and healthcare prerequisites. Making a difference requires coordinated and concerted efforts on many different levels. By encouraging and supporting the development of new professional relationships, we are confident that we can build stronger and more collaborations.

2025 was the first year of our second 5-year accreditation period where we have welcomed constructive feedback from the OECI, our international Scientific Advisory Board, the new National Cancer Strategy and all our patient representatives, leading our strategies and long-term goals to been adjusted.

The fundamental focus on developing all dimensions of precision healthcare, patient involvement, translational research and data quality for better analysis and follow-up, of course continues. At the same time, we will need to broaden our focus on knowledge development within prevention and quality of life, which is now reflected in our objectives and activities.

The past years, and especially 2025, show that we are able to expand our commitment with increasing quality and impact, which is why I feel very confident about this new five-year period.

Some examples of improved quality: through active work on the pharmaceutical side, we have managed to slow down cost increases without reducing treatment options. A 10% increase in the number of patients included in clinical studies compared to the previous year is another example. A third example is our active participation in the development of the national CCC network, which through the new cancer strategy is now becoming part of the national collaborative group for the implementation of it. Groundbreaking results from a study to reduce the risk of recurrence in bowel cancer is another example of how new precision diagnostics are enabling an inexpensive older medicinal product to play a role in modern prophylactic treatment. We continue to drive innovative research and strengthen our position as a leading centre within the field of cancer, as evidenced by the more than 1,600 scientific papers published during the year.

This 2025 report reflects our integrated approach to healthcare, research and education. This means that the focus is on descriptions from the activities, and data presented as tables and graphs are at the end.

Photo: Malin Jochumsen

Patrik Rossi, Head of Theme Cancer, Chairperson of Board of Directors Karolinska CCC

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About Karolinska Comprehensive Cancer Centre

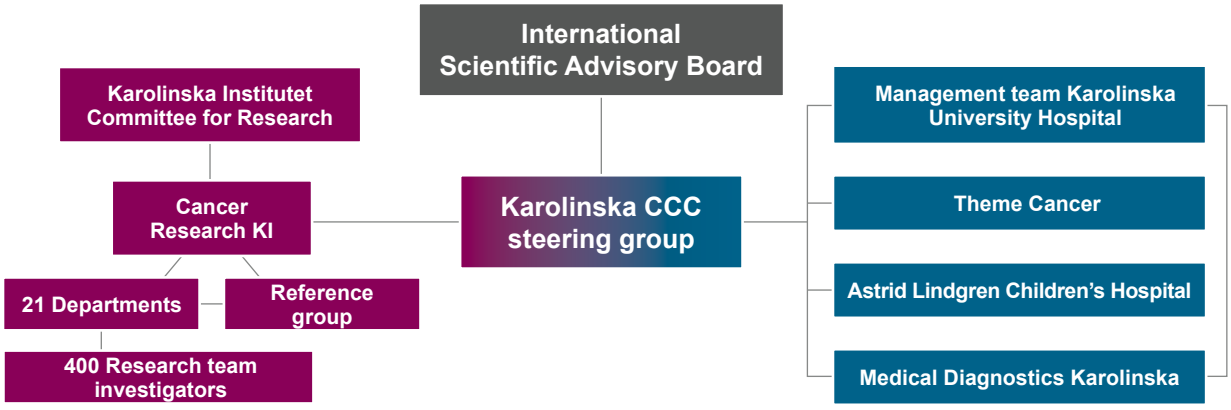
Karolinska CCC brings together excellence in highly specialised cancer care and cancer research. The centre is a joint initiative of Karolinska University Hospital and Karolinska Institutet. Karolinska CCC was the first in Sweden to be accredited by the Organisation of European Cancer Institutes (OECI). In 2025, our accreditation was renewed and is now valid until 2030. Being accredited means that care, research and education meet high quality standards of care, research and education.

Karolinska CCC is responsible for Karolinska University Hospital's overall cancer care and covers the entire spectrum of major tumour diagnoses. Activities include breast cancer, gynaecological cancer, urological tumours, gastrointestinal cancer, lung cancer, skin cancer, head and neck cancer, brain tumours, blood cancers, as well as rare and highly complex diagnoses such as sarcoma and paediatric cancer. The Centre also has missions within advanced treatment, such as cell therapy, high-precision radiotherapy and precision medicine and precision health.

In addition to clinical care, research and education are central to the mission. Karolinska CCC develops and implements new diagnostic methods, treatments and working methods in close collaboration with Karolinska Institutet where Cancer Research KI is the most important collaboration partner together with regional and national cancer structures such as SciLifeLab, Theranostics Trial Centre (TTC) and Karolinska ATMP centre(Advanced Therapy Medicinal Products) and Precision Medicine Centre Karolinska (PMCK). Karolinska CCC is also responsible for trainings and skills development within oncology for all professions in the healthcare chain. As an OECI-accredited centre, Karolinska CCC works systematically with quality follow-up, multidisciplinary processes, patient participation and continuous improvement work to ensure modern, equal and highly specialised cancer care.

The majority of care activities at Karolinska CCC are within Theme Cancer, from tumour surgery to medical treatment and radiotherapy. Patient flow Brain tumours is organisationally located within Theme Heart, Vascular and Neuro. Paediatric Oncology–Haematology is located at Theme Children–Astrid Lindgren Children's Hospital and the Medical Diagnostics Karolinska (MDK) function is responsible for diagnostics within radiology activities, radiation physics and nuclear medicine as well as laboratory medicine.

Figure 1: Organisation Karolinska CCC



Vision • Mission • Strategy

Vision

Reduce cancer incidence, mortality, and suffering through preventive measures, world-class healthcare, and groundbreaking research together with patients of all ages and their relations.

Mission

Karolinska CCC provides world-class cancer care with a focus on the patient and their loved ones. Groundbreaking research is fully integrated in our care and is used from prevention through understanding disease mechanisms to early detection, treatment, follow-up, and rehabilitation.

Karolinska CCC improves the quality of life for cancer patients and their relations through ongoing collaborations with relevant civil society stakeholders and skills development for healthcare professionals.

Karolinska CCC offers the most advanced and effective treatments at individual level. Parallel to this, we pursue research opportunities to find new and innovative ways to prevent, diagnose, and treat cancer to achieve the best possible health and quality of life.

Karolinska CCC is an international knowledge bank and a centre for education in and sharing best practices within cancer treatment, nursing, rehabilitation, and the associated health outcomes.

Karolinska CCC is a role model for other hospitals and institutions worldwide in terms of delivering high-quality healthcare and pursuing groundbreaking research within the field of cancer. Together with the perspective of representatives of patients and their loved ones.

Karolinska CCC pursues the development of world-class translational research to generate new knowledge and methods with integrated working methods involving healthcare, academia, and industry.

Photo: Sanne Jonsson and Erik Flyg

Strategic areas

1. Each person's unique circumstances and context form the basis for personalised prevention, diagnostics, therapy, healthcare, self-care, and rehabilitation.
2. Together with patients and their relations, we develop future prevention, diagnostics, therapy, care, self-care, and rehabilitation with a focus on improving health and quality of life.
3. We fully integrate research with healthcare while also allowing healthcare to serve as an important basis for research.
4. We build networks for multidisciplinary collaborations nationally and internationally to be at the forefront of prevention, cancer diagnostics, healthcare, research, and education.
5. Our activities are conducted with optimal skill sets in relation to patient needs by ensuring continuous training and skills development.

Annual report

Re-accreditation and strategic development

In the spring of 2025, Karolinska CCC received renewed accreditation within the OECI (Organization of European Cancer Institutes) framework. The certificate was officially awarded during the OECI Oncology Days in Athens, Greece. Having received the expert opinion, we are now working on an improvement plan to guide our work over the next five years.

To strengthen our strategic direction, in 2025 we established a new Scientific Advisory Board. The Board provides valuable input on priority areas, such as integrating clinical care with research and innovation, developing precision medicine, AI and data infrastructure, advanced therapy medicinal products (ATMPs, such as cell and gene therapies), and improving care for children, adolescents and young adults, radiotherapy and neuro-oncology.

In order for everyone to work together, a common direction that identifies priority focus areas has been developed and is valid for all ages. The strategy has been developed together with the Board of Directors of Karolinska CCC–in the work, several partners have had the opportunity to input; Cancer Research KI, SciLifeLab, representatives of preclinical, translational and clinical research, managers and employees within the hospital, as well as representatives of patients and their relations.

Comprehensive Cancer Centre Project Unit

The CCC PU project unit was formally established in January 2025 within Theme Cancer, marking an important step in strengthening Karolinska CCC's strategic role in regional, national and international projects. Over the past year, the unit has actively pursued its mission at several levels.

Locally, the work has focused on coordinating administrative and operational work within the cancer centre. Regionally, the unit has collaborated with regional cancer centres and contributed to the ongoing process of developing a regional network for comprehensive cancer care. Nation-

Photo: Edvard Abel

Ceremonial in Athens at the OECI Days 2025.

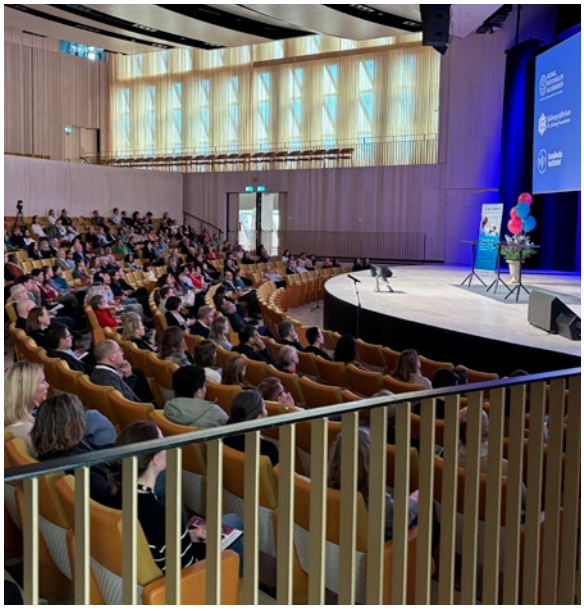
ally, the unit has been involved in the formation of SweCan–the national cancer collaboration arena, which will be officially launched in 2026. Participated in the development of the Swedish network of Comprehensive Cancer Centres and provided input to the updated national cancer strategy. Internationally, the unit has maintained a strong involvement in EU-funded projects within Cancer Mission and the EU Beating Cancer Plan. Through these projects, we are helping to ensure that patients in Sweden and Europe have access to better, more uniform and innovative cancer care. Read more about the EU projects we conduct on page 37 in the Appendix.

Karolinska CCC Day

Karolinska CCC Day brought together clinicians, researchers and patient representatives to strengthen cancer care through clinical studies, innovation and collaboration. The programme included sessions on the new National Cancer Strategy, translational research, advanced therapies and patient perspectives, along with poster exhibitions and networking opportunities.

The day also included the Sjöberg Prize lecture where Miriam Merad, Mount Sinai, USA, presented her research, and a forward-looking lecture by Professor Mef Nilbert on the work on the proposal for an updated cancer strategy in Sweden.

Photo: Ann-Britt Johansson



The Sjöberg Prize lecture attracted a lot of attention.

Two seminars on the future of cancer care in Almedalen 2025

In 2025, in collaboration with the Regional Cancer Centre, RCC, we had two seminars at the annual Almedalen Week in Visby, Gotland, on the Folkhälsodalen stage. The aim of both seminars was to spread more knowledge and influence the opportunities that an updated cancer strategy offers for cancer care and the resources required to achieve equal care throughout the country. Both seminars are recorded–please scan the QR codes below:

An updated cancer strategy–how can we make a difference together?

From Österlen to Vittangi–how do we achieve equal and excellent cancer care across the country?

Karolinska CCC–Patient and relations network

Karolinska CCC's Patient and Relations Network brings together the patient representatives who are active in the relevant patient flow management tables at Theme Cancer, Paediatric Oncology–Haematology, Brain Tumour patient flow and within Cancer Research KI's five working groups.
In 2025, the network consisted of 22 active participants. Anita Wanngren, member of the Karolinska CCC Board of Directors, is the chair of the network and was re-elected for another year, with Barbro Sjölander as vice-chair.

During the year, the network held five meetings and participated in several projects, working groups and workshops. Among the year's more important initiatives are work on the development of scorecards within Theme Cancer, participation in the Wise Clinical Choices and Healthy Lifestyles projects, and the development of the role of the contact nurse.

At this year's Cancer Research KI retreat, the patient representatives presented a poster on how the patient perspective can be integrated in the research process and in the implementation of clinical care.

Cancer Research Karolinska Institutet

Cancer Research KI (CRKI) is an umbrella organisation for the coordination and promotion of cancer research at Karolinska Institutet and constitutes the university-based academic part of Karolinska CCC. We bring together researchers, clinicians and partners to accelerate discoveries with the goal of improving cancer care through innovation, collaboration and education. ki.se/en/cancer-research-ki

Cancer Research KI's mission:

- **Promoting excellence within cancer research** across all scientific disciplines, from basic biology to clinical applications.
- **Strengthen interdisciplinary collaborations** between researchers, clinicians and industry to drive innovation.
- **Translating scientific discoveries into clinical practice** to improve cancer prevention, diagnosis and treatment.
- **Supporting the next generation of cancer researchers** through training, mentoring and funding.
- **Engaging with the community** to raise awareness and spread knowledge about cancer research and cancer care.

Cancer Research KI maps and supports cancer research throughout Karolinska CCC. Our research covers a wide range of areas, including:

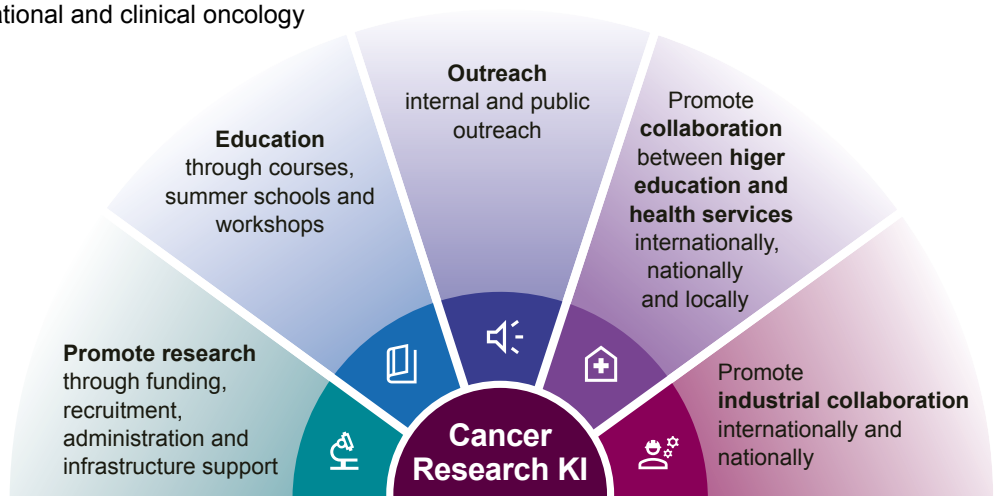
- Tumour biology and immunology
- Precision medicine and genomics
- Cancer prevention and epidemiology
- Translational and clinical oncology

We offer opportunities that help researchers connect, collaborate and share knowledge across institutions and disciplines. We have an interactive database of cancer research team investigators to facilitate collaborations.

ki.se/en/cancer-research-ki/research/cancer-research-ki-list-of-cancer-research-pis-in-all-areas

We work on CRKI's mission through our five working groups:

1. Research
2. Training
3. Outreach activities
4. Collaboration between academia and healthcare
5. Industrial cooperation



Strategic operational objectives for 2025–2026

The overall strategy for CRKI is the same as for the whole of Karolinska CCC and covers the period 2024–2030. In addition, the CRKI Executive Board decided in 2024 on the following strategic operational objectives for 2025–2026:

1. Maintaining the bulk of CRKI's activities and structure according to the current model, including work through working groups, retreats, workshops, collaborations and various calls for research funding.
2. Increasing initiatives for informal meetings and networking.
3. Strengthening efforts to improve data infrastructure and increase the use of biobanks for clinical and translational research.
4. Identifying the strongest research areas within CRKI. Mapping the impact of publications, number of research teams, translational collaborations between basic researchers and clinics, etc. Using this data to keep the CRKI website up to date, enable up-to-date annual reports and strengthen applications for further funding.
5. Evaluating further possibilities to support CRKI researchers during all stages of their research careers.
6. Increasing the involvement of patient representatives in all aspects of CRKI activities.
7. Establishing further strategic contacts with various cancer research funders, with the aim of creating joint overall initiatives in support of CRKI's activities.
8. Further strengthening our national and international networks, for example within Sweden, through various EU initiatives, Sweden–US cooperation, etc.

Funding opportunities

We offer **competitive grants** to support cancer researchers at all career stages. Our funding programs include:

- **Project grants** for innovative research
- **Project grants** for translational research collaborations
- **Travel and conference grants**
- **Support for young researchers and PhD students**

These initiatives aim to strengthen the research environment and promote scientific excellence.

Training and development

We support **training and skills development** within cancer research through:

- Specialised courses and workshops
- PhD and postdoctoral training programs

Our goal is to equip the next generation of scientists with the skills and knowledge needed to lead future breakthroughs.

Collaborations

We actively promote national and international collaborations to increase the impact of cancer research. Key initiatives include:

- **European projects:** ECHoS, EUnetCCC, CCI4EU and others
- **Industry partnerships** to accelerate innovation and technology transfer
- **Collaborative network** with hospitals, universities and research institutes
- **Events and networking**

We organise a wide range of **scientific events**, including:

- Seminars and lectures
- Annual retreats
- Workshops and networking events

These activities promote dialogue, knowledge sharing and collaboration within the cancer research community.

Outreach activities and community engagement

Cancer Research KI is committed to **reaching out to the public** and raising awareness of cancer research. Our outreach activities include:

- Open lectures and workshops
- Collaborations with patient organisations
- Annual popular science event: A day for cancer research
- Upcoming interview series with cancer researchers, from basic scientists to clinicians

Many of these events are recorded and available to everyone via our KI Play channel play.ki.se. Please click on it and subscribe so you do not miss out on upcoming videos.

Steps to take us further– with the patient in focus

In this section, you will follow selected elements of the integrated collaboration through research, prevention, diagnosis, clinical research, treatment and nursing, as well as a story of three generations with hereditary cancer. Together, these sections provide a comprehensive picture of how we are driving progress and creating even more coherent and patient-focused cancer care and research.

Research

The year was filled with groundbreaking research, collaborations and outreach events within the Cancer Research KI framework.

Research funding

Mayo Clinic & KI Collaborative Cancer Research Grant–two new projects were awarded funding:

- **"Novel tumour-targeting approaches for therapeutic RNA delivery"** Samir El Andaloussi (KI) and Fabrice Lucien-Matteoni (Mayo Clinic).
- **"Prophylactic and Therapeutic Immunotherapies against Hepatitis C Virus and Hepatocellular Carcinoma"** Matti Sällberg (KI) and Michael Barry & Richard Vile (Mayo Clinic)

Blue Sky Research Grant 2025–six new projects were awarded funding:

- **Engineering synthetic vectors for next-generation glioblastoma immunotherapy** Sten Linnarsson, Department of Medical Biochemistry and Biophysics
- **Unravelling novel mechanisms of treatment resistance in chronic lymphocytic leukemia using single-cell spatial proteomics** Richard Rosenquist Brandell, Department of Molecular Medicine and Surgery
- **The Cancer Chronomap: Charting tumour cells' age across space to forecast therapy outcomes** Federico Pietrocola, Department of Cell and Molecular Biology
- **Unveiling Hidden Epigenetic Codes in Brain Cancer** Gonçalo Castelo-Branco, Department of Medical Biochemistry and Biophysics
- **Mapping State-Specific Metabolite–Protein Interactions to Reveal Cryptic Druggable Pockets in 3D Tumour Models** Amir Ata Saei, Department of Microbiology, Tumour and Cell Biology
- **Nutrient-stress–induced −1 ribosomal frameshifting as a translational switch in tumour organoids** Vicente Pelechano Garcia, Department of Microbiology, Tumour and Cell Biology

Open calls were announced with a deadline in spring 2026: Task Force Network Grant and Translational Seed Funding.

Cancer Core Europe (CCE)

CRKI is part of Cancer Core Europe (CCE), an association of seven prominent cancer centres in Europe. In October, CRKI participated in the organisation of the annual Summer School in Translational Cancer Research in Portugal. The Summer School is a unique programme where PhD students, post-docs and clinical researchers from all over the world can enjoy a week of cutting-edge lectures and workshops. The second round of the CCE TRYTRAC programme (Training Programme for Young Leaders within Translational Cancer Research) continues. In other news this year, the CCE has joined forces with Cancer Prevention Europe to drive cancer prevention forward. CCE's Basket of Baskets clinical study continues to include more patients in its treatment. CCE-DART is another CCE project that aims to refine and create new methods for future clinical studies. The Virtual Data Centre project is working

to create a centre and virtual platform to collect and share real-life data for translational studies.

International collaborations

- 6th Mayo Clinic & KI Joint Cancer Research Symposium 18 June
- Cancer Core Europe Summer School in Portugal 4–12 October
- Workshop on radiotherapy with NIO (National Institute of Oncology, Hungary) 12–13 May
- PCM workshop with NIO (National Institute of Oncology, Hungary) 24–28 March
- 7th Swedish Cancer Research Meeting in Malmö 22–23 May
- Three Q&A sessions, drop-in sessions with Cancer Research Horizons, UK 29 April, 2 September, 3 December

Cancer Research KI–retreats

XXII Cancer Research KI Retreat at Djurönäset on 22–23 September–Our annual two-day scientific meeting for all cancer researchers and PhD students affiliated with CRKI, with invited keynote speakers: Professor Robert Weinberg, Professor Michelle Monje and Professor Hans Clevers.

CRKI's 2nd PI Retreat 17–18 February– 80 principal investigators (PI's) conducting groundbreaking cancer research at Karolinska Institutet and Karolinska University Hospital met over two days to discuss their research.

Patient engagement

Two workshops for patients and patient organisations–one for female-related cancers on 10 April and a second on 23 October for male-related cancers. There were lively discussions with many interesting questions from engaged participants.

Outreach activities and training

The 4th edition of "A day for cancer research" on 12 November–led by Pamela Andersson Alselind and with interesting presentations from researchers at Karolinska Institutet. The recording is available here: ki.se/cancerforskning-ki/en-dag-for-cancerforskning/en-dag-for-cancerforskning-2025

Webinar: Clinical treatment studies 7 April (in collaboration with the Swedish Cancer Society)

Webinar: Navigating the regulatory landscape for ethics applications 7 March–on the most common questions and challenges researchers face when applying for ethics review

Collaboration between academia and industry–four seminars:

- *The power of AI in oncology and healthcare* 26 March, (in collaboration with KI Science Park)
- *Intellectual property* 13 April (in collaboration with External Engagement Office and KI Innovations)
- *Beyond the bench–from discovery to impact*, 3 September (in collaboration with KI Science Park)
- *Collaborations with the pharma industry: how to do it right,* 22 October (in collaboration with LIF–The Research-Based Pharmaceutical Companies)

Paediatric cancer research

Paediatric cancer research at Karolinska Institutet has, over the past 30 years, brought together researchers from different backgrounds around a clear goal: to improve care and increase survival in children with cancer.

In 2025, we have strengthened our clinical translational profile to achieve our goals. We have advertised a lectureship in nursing science and, together with Karolinska University Hospital, received EU support for a project on palliative care for children with cancer. Research into new medicines for paediatric cancers is a priority area that has led to several clinical studies run by our staff in recent years. The Swedish Childhood Cancer Registry is an important tool for research and we have strengthened our registry unit with new expertise.

Together with Karolinska University Hospital, we work to promote research, education and development at various levels to ensure that children with cancer receive the best possible care. This includes working strategically to ensure long-term knowledge transfer and skills development.

Prevention

Previvors receive lifelong support from the Centre for Personalised Cancer Prevention

"Previvors" is a term used within the cancer area. It describes a person who has not been affected by cancer, but who has a greatly increased hereditary risk. About 5–10% of all cancers are caused by congenital genetic changes that contribute to a hereditary increased risk of certain cancers. Examples of cancers where hereditary forms are most common are cancers of the breast, colon and prostate. The Centre for Personalised Cancer Prevention offers personalised cancer prevention throughout life for people with elevated cancer risk. It includes genetic counselling, risk assessment and various measures such as individualised controls and risk-reducing surgery of organs at risk.

The Centre for Personalised Cancer Prevention also acts as a centre of excellence in treatment-predictive genetic testing within precision medicine and targeted cancer therapy. Several professions work together to improve patient care and patients' genetic cancer risk is taken into account in treatment decisions.

> *We help previvors, not only with preventive treatments, but also to navigate different life choices that may reduce cancer risk and to 'risk track' in families. We also capture young adults who have had cancer as children – survivors – who may have an increased risk of also developing cancer when they are older.*

At the same time, it is possible to identify other at-risk individuals in the family and prevent them from developing cancer if a hereditary cancer risk is detected.

Svetlana Bajalica Lagercrantz is Professor of Cancer Genetics and Hereditary Cancer and Director of the Centre for Personalised Cancer Prevention.

Photo: Stefan Zimmerman

Photo: Pablo Martí Andrés

Living as we learn–physical activity at CRKI's retreat at Djurönäset.

The Hereditary Cancer Risk Syndromes topic area covers investigation and follow-up as well as prevention and treatment and concerns most tumour groups. It is an area of knowledge that is rapidly expanding as new cancer-related genes are identified. In addition, more and more congenital genetic abnormalities have become predictive of treatment and thus the need for increased knowledge among professionals treating cancer has increased. A coherent approach has created the conditions for effective improvement work both in terms of implementing new procedures and participating in research projects.

Traditionally, different professions in cancer care have specialised in different organs, but a hereditary diagnosis is general and not tumour-specific. In addition, many patients are healthy, i.e. far from all have a tumour diagnosis. The families being investigated do not have just one type of tumour but are at risk of several different types of tumours in different organs. Certain patients need rapid oncogenetic assessment upfront to ensure the right management from the start, for example to avoid patients having two operations.

A single unit managing both individualised prevention and personalised cancer treatment, within the framework of a “Centre for *Personalised Cancer Prevention*” (Centre for PCP), constitutes an important tool within cancer prevention at a Comprehensive Cancer Centre.

PLUS pilot project for lung cancer screening in Stockholm

Major international studies have shown that lung cancer screening saves lives. The PLUS study was conducted to provide an evidence base for how a national screening programme could be built and organised in Sweden.

37,000 surveys were sent out to identify high-risk individuals, i.e. people who are or have been heavy smokers. These high-risk individuals have then been invited for an X-ray examination. 1,000 surveys have been conducted. In order to do this, IT systems for submitting surveys, invitation systems and automatic response templates have been set up, and it has been possible to calculate the resources required, both in terms of staff and equipment.

The results of the study show that we can identify high-risk individuals and that they attend the X-ray examination at a very high rate (90%). We have diagnosed 13 individuals at an early stage of the disease who have been treated and probably cured. It is hoped that the PLUS study will provide a basis for the introduction of a national lung cancer screening program.

Patient story: Anita Wanngren, who has hereditary cancer

Three generations–a hereditary cancer story

My story begins in the 60s, when my grandmother died. She was 60 years old and I was five. She was my best friend and was in a hospital far away called Radiumhemmet. I did not understand what she died of. In the following years, when I asked questions, I was told that it was not something that was talked about. It felt like what my grandmother died of was something that could be contagious.

40 years later, my mother falls ill with breast cancer. When it was discovered, she had a tumour that was just over 10 centimetres. The cancer had also spread throughout her body. She was treated at Örebro Hospital, where we learned that a research study on heredity had just started. We are two sisters and a brother. My sister and I were invited to participate in this research project, but my sister did not want to participate and so I was not allowed to participate either. Our mother died, three years after falling ill.

It felt like what my grandmother died of was something that could be contagious.

The following year, when I had a regular routine mammogram, I was invited back to take new pictures and supplement with ultrasound. Then I get worried. It had only been six months since my mother died. I am 53 years old and feel confused, do I have cancer or not? After waiting a while, I am finally told that it is not cancer but something in my milk ducts. And then they let me go. I am incredibly relieved. Thankfully, it was not cancer!

Another six months go by and I discover a lump in my breast and something strange in my armpit. I go to the breast clinic and after a few hours I am told that it is a cancerous lump that has spread to my armpit. I was in total shock. I had that mammogram six months ago; how can I have cancer now? Afterwards, I asked for a second opinion on the original images, and they show a precancerous condition.

As I said, I was in shock and tried to get help to deal with my feelings. As a newcomer, I did not know who could help me. Then on a whim I called the parish church and got to talk to a priest. An amazingly well-educated person who listened to my death anxiety non-stop for three hours. After talking for those three hours, I was done talking and felt completely calm. I can say that had I not received that help; my cancer journey would have been very different.

After a week, I met the surgeon who would perform my surgery. I mentioned that my grandmother and my mother had breast cancer and that I therefore wanted to remove my entire breast. The surgeon said no. The evidence says that it is just as good to remove a piece of cake and not take the whole breast. Heredity aspects were not taken into account at that time.

I was in total shock. I had that mammogram six months ago; how can I have cancer now?

Heredity aspects were not taken into account at that time.

When I was receiving chemotherapy, I saw an oncologist at my doctor's appointments who detected that my mother and grandmother had both had breast cancer. I was sent for hereditary evaluation and was not surprised to learn that I carried an inherited breast cancer risk gene, BRCA2. There I was, holding a piece of paper that said I was a BRCA2 carrier. I was expected to share this information with my children and relatives, so that they in turn could go to their healthcare providers and get tested. It was challenging to try to find all the relatives. Fortunately, nowadays you can get help to contact relatives, which was not possible then.

As male carriers are advised to have extended prostate checks, my sons got tested. Thankfully, none of them were carriers. It felt like the ultimate win. I had not passed on BRCA2. Several other relatives were tested and the carriers found were offered extended tests. As a result, one cancer has now been detected early. That person has been treated and the cancer is gone. Which is all fantastic!

My belief is that this is just the beginning of a future where genes will play a much bigger role in preventing and treating cancer individually with better results than today.

Photo: Malin Jochumsen

Diagnostics

Establishment of endoscopy unit and robotic investment–increased focus on early colon cancer

During the year, extensive restructuring was carried out with the aim of strengthening Karolinska's role as a regional and national centre for advanced and organ-preserving colon surgery. This is due to the increased need for precision medicine, faster diagnostic workflows and expertise within endoscopic treatment of early tumours and relapse after radiotherapy.

As part of this, a dedicated endoscopy unit has now been established at Karolinska Solna. The unit will handle both diagnostic assessment endoscopies and therapeutic procedures such as endoscopic submucosal dissection (ESD) and full-thickness resection (FTR) for premalignant and early malignant lesions. It will also enable short lead times between Multi-Disciplinary Conference assessment and treatment and provide a platform for clinical studies on organ preservation therapy.

The establishment is in close collaboration with the endoscopy unit at Karolinska Huddinge, which already has a strong profile in interventional endoscopy, and it entails that the therapeutic colorectal endoscopy is now linked more closely to the surgical activities in Solna.

In parallel, a robotic early cancer surgery unit (SP-Robot) has been started at Karolinska Solna, focusing on early rectal tumours. This investment is in synchronous development with the endoscopy unit and is an important step towards establishing a national leading centre for minimally invasive and robot-assisted surgery in colon cancer. The combination of advanced technologies and early molecular diagnostics creates the conditions for more individualised, organ-preserving and research-driven care for patients with colorectal cancer.

National molecular tumour board for paediatric cancer patients

In 2025, an important next step in the introduction of precision medicine for paediatric cancer patients has been the focus in the development of a national Molecular Tumour Board (MTB).

Since May 2024, whole genome analysis has been performed for all children with newly diagnosed cancer in order to provide a more detailed diagnosis and to detect possible hereditary factors that may have an impact on treatment or follow-up after cancer treatment. The information from the whole genome analysis is complex and interpretation requires expertise from several specialties such as paediatric oncologists, pathologists and geneticists as well as knowledge of clinical studies of medicinal products. To ensure that every patient in Sweden has the opportunity to receive the right diagnosis, treatment or access to clinical studies or new medicinal products, we need to collaborate nationally in a so-called molecular tumour board. The expertise across Sweden contributes to treatment recommendations or proposals for a clinical study.

Since November 2025, all paediatric cancer centres in Sweden have the opportunity to report and discuss patient cases with geneticists, pathologists, paediatric oncologists and others, once a week.

From rapid assessment to personalised treatment in lung cancer

In 2025, we have continued to investigate more and more patients with lung cancer and we are also doing this faster and faster, with a majority of patients within the SVF (Standardised Care Pathways) lead times. We are research-focused with a close collaboration between healthcare and research where the large biobank project, PreD-DLung, continues with now about 850 patients included and with broad molecular profiling of tumour and blood samples.

In another project, Region Stockholm and our lung cancer activities have been awarded a grant from Medtech4Health and Vinnova to develop and validate the “True Dose kit”–an innovative solution for self-sampling and home-based medicine monitoring for lung cancer patients. The project aims to improve healthcare processes and enable more personalised treatment.

We have 32 open clinical studies in 2025 and several planned. These include targeted therapies, immunotherapy, radiotherapy and sampling studies. A study on lung cancer screening in Region Stockholm is now underway with over 1,000 people included. There are also ongoing studies on quality of life and frailty in the context of oncology treatments. We have regular contacts with patient representatives for discussions and information exchange including planning of clinical studies. Within our R&D group, we continue to have regular research and education days to inform about ongoing research and strengthen collaborations and improve outcomes for those affected by lung cancer.

Systematic improvement work in standardised care pathways for lung cancer

Within the framework of the standardised care pathway (SVF) of evaluation, diagnosis and management of intrathoracic tumours, of which lung cancer is the largest diagnostic group, a comprehensive analysis of each healthcare event has been carried out. This has enabled optimisation at several levels, both internally and externally, through information, motivation, negotiation and anchoring of more efficient processes. Resources have been allocated and optimised to the maximum. A dedicated flow coordinator has been appointed to ensure quality. Working methods have been changed in dialogue with staff, promoting a shared understanding of the change process.

Through parallel efforts at very many flow issues and after continuous dialogue with staff and collaboration partners, lead times for lung cancer patients have been significantly reduced, improving patient flow and quality of care. This work underlines the value of a systematic and collaborative approach to improving care for the public benefit.

In 2025, we have continued to evaluate more and more patients with lung cancer and we are also doing this faster with a majority of patients within SVF lead times.

Clinical research

A busy year for clinical studies–national initiatives and local developments

The year has been very intense in terms of focus on clinical studies in Sweden and from CKC–Centre for Clinical Cancer Studies–we have had the privilege to participate in several national projects. In the spring, a national collaborative project on phase 1 studies was launched where all phase 1 units in Sweden together with the research-based pharmaceutical companies (LIF) have developed a common strategy and presentation material to promote Sweden as a country for early clinical studies within cancer. We have also participated in the working group to develop a basis for Swetrial, a national partnership established by the Swedish government in 2025 to strengthen Sweden's role in clinical studies.

Furthermore, we have initiated several projects to strengthen the implementation capacity of clinical studies, such as the introduction of part-time clinical investigator positions, collaborative projects with the pharmaceutical industry and study visits to Rigshospitalet in Copenhagen. Our goal is to grow further and offer more cancer patients innovative treatment within clinical studies by 2026.

Photo: Fredric Möller Eklund

A legacy of innovation–and a future of opportunity

In 2025, Karolinska University Hospital marked 50 years since Sweden's first allogeneic stem cell transplant was performed at Huddinge Hospital in 1975. This pioneering effort laid the foundation for today's advanced cell and gene therapies. The activities have since evolved into CAST–the unit for cell therapy and allogeneic stem cell transplantation–which today is the country's only specialised environment for these treatments and internationally recognised for its expertise and quality.

CAST is internationally recognised for its expertise and quality.

Developments from the early studies of bone marrow transplantation have led to cutting-edge work on new therapies, including close collaboration with the research at the Karolinska Institutet. CAST is continuously working with testing and introducing new cell and gene therapies in clinical studies, often in partnership with Theme Cancer's phase 1 unit. This has created the conditions for treatment methods that are already changing the prognosis of patients with severe diseases.

The success of the unit is based on long-term teamwork, international certification and a culture driving innovation. The expertise of the staff and the close collaboration between the hospital and Karolinska Institutet are highlighted as crucial factors in translating research into clinical benefit. The work of CAST continues to drive the development of future cell therapies both nationally and internationally.

Clinical studies improving skin cancer treatment

Melanoma most commonly occurs in the skin but can also occur in the eyes or mucous membranes. Each of these tumours has its own characteristics and different treatment options for localized and disseminated tumours. The multidisciplinary work of dermatologists, oncologists, surgeons, pathologists, nurses and other professionals such as ophthalmologists and radiologists is crucial to provide the best possible care.

Several development projects and clinical studies are underway, including skin cancer diagnostics, follow-up and treatments, both in the early and late stages of the disease. We are conducting several national studies jointly with the Swedish Melanoma Study Group (SMSG), such as the TRIM study (follow-up stage II-III melanoma, with or without CT) with the interim analysis published this year in Lancet Oncology, and the NEO-MEL study on neoadjuvant immunotherapy where a first report was published this year in European Journal of Cancer.

A study initiated by Karolinska has also been published, which showed that the effect of a lower dose of an immunotherapy product (ipilimumab) gave both fewer side effects and better effect than the approved dosage for metastatic melanoma, where more patients had to discontinue due to severe side effects.

Studies like these are important to optimise care so that we provide effective treatments that patients can complete without severe side effects. There have also been studies published that have provided important lessons about different subgroups of our patients, such as those with brain metastases, rare subtypes of melanoma and Merkel cell carcinoma.

National node for clinical paediatric cancer studies

Studies with medicinal products, or clinical studies, are crucial to improve survival and reduce side effects in paediatric cancer. At CKB HOPE–Centre for Clinical Paediatric Studies, studies are conducted for all paediatric cancer diagnoses and patients are accepted from all over the country.

Clinical research is a central part of paediatric oncology, with most children participating in international treatment studies. However, studies with medicinal products are difficult to run in routine care, despite being necessary for children to access new, potentially more effective treatments.

CKB HOPE was established to enable the most severely ill children to participate in such studies and eventually receive better treatments. These activities are resource-intensive and are made possible by support from the Swedish Childhood Cancer Fund and external donations, including from the Nelson Malm Foundation “Entrepreneurs for Good”.

Photo: Jens Dahlborg

Treatment

The ALASCCA study–a new era for postoperative treatment of colorectal cancer

The ALASCCA study (Adjuvant Low-Dose ASA in Colorectal Cancer), led by Professor Anna Martling at the Colorectal Section (within the medical unit Pelvic Cancer), has recently been published in The New England Journal of Medicine (2025) and represents a breakthrough in adjuvant treatment of colorectal cancer. The study is the first biomarker-driven, randomised, placebo-controlled study to investigate the effect of low-dose acetylsalicylic acid (ASA) as add-on therapy after surgery.

About 3,500 patients with localised colorectal cancer from the Nordic countries were included. Tumour tissue was analysed for genetic alterations in the PI3K signalling pathway (for example, somatic alterations in PIK3CA, PIK3R1 or PTEN). Patients with such changes were randomised to ASA 160 mg daily or placebo for three years. The results showed a clear risk reduction: the risk of relapse was more than halved in patients with PI3K altered tumours receiving ASA (hazard ratio 0.45). The effect was observed in both classical PIK3CA mutations and other PI3K alterations.

The side-effect profile was generally good, but a slightly increased frequency of bleeding complications was registered. The study thus shows that a well-known and inexpensive medicine, given to selected patients based on the genetics of the tumour, can significantly improve relapse-free survival–a clear example of precision medicine in everyday clinical practice.

Based on the ALASCCA results, it is now recommended that PAD results with reflex testing for PI3K mutationbe checked at the postoperative return visit. If a PI3K alteration is detected, and if there are no contraindications, treatment with Trombyl 160 mg x 1 for three years may be considered. Treatment should start within 8 weeks (12 weeks at the latest) after surgery or completion of primary treatment. As the indication is not yet formally approved, the use of off-label and the cancer diagnosis should not be indicated on the prescription.

The ALASCCA study could therefore represent a major change in the way patients with colorectal cancer are followed and treated post-operatively. It introduces a simple, cost-effective and individualised approach that has the potential to improve the prognosis of thousands of patients each year worldwide.

The ALASCCA study could be a game changer in how colorectal cancer patients are followed and treated post-operatively.

Patient-centred prioritisation of return visits in Haematology outpatient services

For several years, our outpatient services had an extensive waiting list for return visits, with booked appointments gradually being postponed. This increased patient anxiety and limited the ability to prioritise based on current care needs. A structured review of the waiting list was carried out as part of the project. A designated nurse contacted patients with lymphoma of and chronic lymphocytic leukaemia of low-grade malignancy to assess their current condition, any changes and current care needs. Based on these assessments, the need and timing of return visits was determined.

Patients needing earlier follow-up were offered faster appointments, while return visits for patients with stable disease could be scheduled further ahead without compromising patient safety. Some issues could be dealt with directly via telephone contact, reducing the need for physical visits.

This working method has resulted in an updated and demand-driven waiting list, improved prioritisation and a more efficient use of resources, with the right patients being seen at the right time.

Work on improving healthy lifestyles in cancer

In Sweden, around 30% of all cancer cases (around 16,000/year) are linked to unhealthy lifestyles. With the right knowledge and support, patients can reduce their risk of cancer onset or relapse, while quality of life and treatment outcomes can be improved. Patient associations call for better support on lifestyle issues related to cancer.

With the right knowledge and support, patients can reduce their risk of disease or cancer relapse, while improving quality of life and treatment outcomes.

In 2025, Theme Cancer initiated improvement work to integrate lifestyle habits as a natural part of the patient meeting. A steering group has been established with patient representation from the start, which has provided important perspectives to reconcile patients' needs with the possibilities of care. The work conducted so far includes:

- Mapping the needs of patients and staff (surveys)
- Availability of knowledge support and research (creation of a website on the intranet)
- Training in prescribing physical activity (FaR)
- Information sessions on lifestyle and health in cancer.

approx. 30%
of all cancer cases in Sweden are linked to unhealthy lifestyles.

Information sessions on lifestyle and health in cancer

In the autumn of 2025, regular information sessions on lifestyle and health in cancer started, open to patients, relations and staff. Lecturers include dieticians, physiotherapists, contact nurses and psychosocial nurses. The meetings are held in person, 2.5 hours, once a month in both Huddinge and Solna.

The evaluation shows that the majority of participants are very satisfied and describe the meetings as inspiring and rooted in reality. They appreciate fact-based lectures, relevant topics, appropriate length, the opportunity to ask questions to experts and information on where to turn for further support. The majority state that they will benefit from the knowledge in the future and wish they had received the information earlier in connection with diagnosis. We have also received valuable suggestions for improvement.

In 2026, Theme Cancer will continue to invite people to meetings–now also digitally to increase accessibility, for example for people sensitive to infection or those who have problems with getting to the hospital.

Photo: Jens Dahlborg

Liver transplantation opens new possibilities for metastatic colorectal cancer

Liver transplantation for colorectal liver metastases is a new treatment option that has been implemented in clinical practice at Karolinska University Hospital since 2025. The indication is based on results from an international randomised study that showed improved survival for carefully selected patients (the TransMet study by Adam et al 2024).

Patients with colorectal cancer that has metastasised to the liver may benefit from liver transplantation when resection of the metastases is not possible, for example because of their number or location. Patients are carefully selected based on the spread of the tumour and how it responded to previous treatment. The results of the study showed longer survival compared to oncology treatment alone. The method requires close cooperation between oncologists, surgeons and the transplant unit. There are also high requirements for post-transplant follow-up, as the risk of relapse remains high.

In conclusion, the new indication represents an important step forward for a limited group of patients. It brings new hope to a situation where curative treatment has previously been lacking.

Photo: Sanne Jonsson

Increased patient participation after organisational change

Theme Cancer introduced a bipartite organisation in January 2023, where three nursing areas (OO1, OO2 and OO3) were established. The change meant that nursing staff from two to three medical units (ME) were brought together within the respective nursing area.

Before the reorganisation, patient forums were linked to the ME structure. In connection to the transition to the new organisation, a communication and structural challenge regarding patient and relation involvement was identified, especially in the interaction between OO1 and the patient representatives and patient forums previously belonging to the ME level.

In 2025, the OO1 management has held regular and structured dialogue meetings with patient associations, resulting in several significant and valued initiatives. Involving patient representatives closer to the operational level of care has made it possible to incorporate the experiences of patients and their relations into the development and delivery of care design, with the aim of improving the quality of care and strengthening the person-centred working methods.

An ongoing improvement project was launched in collaboration between OO1 nursing managers and the patient association PALEMA, with the aim of identifying patients' support needs and highlighting the importance of Min Vårdplan (My Care Plan) for patients, relations and caregivers.

In summary, 2025 has been characterised by active, targeted and structured work to strengthen patient and relations involvement within OO1. The work is considered to have laid a solid foundation for further development and stronger collaborations in the coming years.

In summary, 2025 has been characterised by active, targeted and structured work to strengthen the involvement of patients and relations within OO1.

Photo: Fredric Möller Eklund

Home treatment within the Haematology Department

Within the haematology activities in Huddinge and Solna, systematic work has been carried out to move parts of the care from the hospital environment to treatment at home. The aim is to provide safe, secure and more personalised care that can be better integrated into the patients' daily lives.

The patients receive structured education about their disease and treatment, and practical support to administer their medicines safely at home. They are also given clear information on when to contact the healthcare system and where to go in case of concerns, deterioration or new symptoms.

This working method has made it possible to shift more than 2,800 day care visits and 53 cases of around the clock care from hospital-based care to planned treatment at home in a short time. The interventions have mainly involved treatment with immunoglobulins, but also other advanced medicines that previously required hospital visits.

The care unit remains available through telephone and digital care contacts, ensuring continuity and accessibility. Overall, the working methods mean that patients can spend more time at home while care is delivered in a safe, structured and resource-efficient way.

Strengthening quality and multidisciplinary collaboration in head and neck cancers

In 2025, there has been an explicit focus on strengthening the quality of flap surgery through multidisciplinary meetings. Collaboration with the frailty clinic has been established with the aim of optimising patients preoperatively, obtaining geriatric support postoperatively and identifying cases where alternative treatment is more appropriate than flap surgery. In research, we have a close collaboration between KI and K. The project on circulating HPV DNA (c-HPV) in oropharyngeal cancer continues, where the goal is to enable individualised therapy, earlier detection of relapse and more effective follow-up. From our large retrospective cohort, it has been shown that patients with HPV16-positive oropharyngeal cancer are younger than those with other high-risk HPV and that diagnosis of HPV-DNA in fine needle aspiration has shown potential to differentiate benign cysts from malignancy. This is further analysed within the framework of a Nordic collaboration with Rigshospitalet in Copenhagen.

In parallel, studies on laryngeal, lip and salivary gland cancers. Two laryngeal cancer studies have been completed and submitted for publication, focusing on the prognostic significance of tumour volume and risk factors for fistula formation. At Bioclincium, experimental research continues

where new targeted therapies and combinations are tested on head and neck cancer cell lines in advanced models, with the aim of identifying future treatment strategies.

Collaboration and innovation strengthen uro-oncology cancer care

Several new treatment options have been approved in 2025, such as Gemzar/Cisplatin/Nivolumab, Erdatifnib and Enfortumab vedotin/Pembrolizumab. These treatment regimens have been rapidly integrated into clinical practice. The introduction of Erdatifinib has led to fibroblast growth factor receptor (FGFR) testing, which allows treatment to be tailored based on the patient's genetic profile. These advances are in line with developments within precision medicine, where treatments are becoming more targeted and effective by being tailored to individual genetic factors.

The Section of Urological Oncology conducts extensive work with studies with medical products related to urological tumours. This allows patients to have early access to the latest treatments. To improve patient flow and efficiency around study patients, dedicated study clinics have been introduced, facilitating the management of patients participating in studies. The section's sampling studies are also important to eventually support treatment choices and tumour evaluations, which can improve care and outcomes for patients.

The results of the Keynote-905/EV-303 study, with Anders Ullén as last author, are a testament to the quality of research conducted within the section and through our seamlessly integrated collaboration with the Centre for Clinical Cancer Studies (CKC). The study was selected for presentation at one of the so-called Presidential Symposia during the ESMO conference in Berlin last October. The results show that perioperative treatment with the ADC drug enfortumab vedotin in combination with the immunotherapy pem-brolizumab is highly effective in patients with muscle-invasive localised bladder cancer that cannot be treated with neoadjuvant conventional chemotherapy.

For this patient group, there are currently no preoperative treatment options, the prognosis is poor and the medical need for new therapies is very high. The combination of enfortumab vedotin and pembrolizumab dramatically improved pathologic complete response (57.1% vs. 8.6%) and both event-free and overall survival in a clinically relevant way compared to surgery alone. The treatment strategy is now expected to become the new standard in the world (Presidential Symposium at the ESMO Congress 2025, Berlin, 17–21 October, LBA2).

In the spring of 2025, a decision was made in the region where Karolinska University Hospital has been designated as one of three prostate cancer centres in Stockholm. Together with the Urology Section, nursing staff and patient representatives, intensive work is underway to improve our current prostate cancer flow and create a high-quality prostate cancer centre.

Collaboration for better care in long-term inpatient care

In the autumn of 2025, work begun on designing a team round, where more professions are included, such as contact nurses, dieticians, physiotherapists, geriatricians and doctors. In the long term, the idea is to evaluate the checklist with a new survey. Inpatient pelvic surgery patients undergo surgery for colon or gynaecological cancer. The average length of stay is six days, but longer stays do occur. Often due to post-operative complications, with complex nursing and medical needs, requiring action from several professions.

After conducting a survey of patients hospitalised for >10 days, a checklist was developed for these patients. The checklist also applies to patients with complex care needs <10 days. Examples of issues are that the patient should be assigned to a nurse/assistant nurse in charge of the patient, receive recurrent information and that the patient should have a nursing round with clinical nurse managers.

The checklist is available in our medical record system Take Careas an activity plan. By 2025, 40–50 patients have been assigned to the activity plan with the help of the clinical nurse manager.

Translating Wise Clinical Choices (KKV) into everyday clinical practice

Reports show that around 20–30% of healthcare activities do not provide any value to patients. This is called low-value care. Choosing Wisely is an international movement that aims to increase the dialogue on unnecessary care and help identify and remove activities that do not provide patient benefit. KKV is working to introduce this movement into Swedish healthcare. The Swedish Society of Oncology (SOF) was one of the first specialty societies to identify measures that should be questioned.

In 2025, the overall activities with inter-professional, multi-disciplinary and patient representative work continued to implement SOF recommendations and spread knowledge about low-value care and KKV. A working group with broad representation was established. Workplace meeting materials were developed and sent to all first line managers. The work was divided into two parts: so-called 'low-hanging fruit', i.e. simpler measures that could be removed in the short term, and measures that require a longer-term change in working methods and culture.

The work carried out so far has led to increased knowledge, the removal of some simple measures with no patient benefit, reduced waste of resources and increased inter-professional collaboration.

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Major improvements in oesophageal and gastric cancer care

The aim of the standardised care pathway (SVF) for oesophageal or gastric cancers is to get patients diagnosed and started on treatment as soon as possible, as this can improve the outcomes of cancer treatment and reduce anxiety for those affected.

Just a few years ago, we managed to give about 30% of patients their treatment within the approved time. Today, the figure is over 80%, which is clearly the best in the country.

Just a few years ago, we managed to give about 30% of patients their treatment within the approved time. Today, the figure is over 80%, which is clearly the best in the country. This means that more patients get a faster response and treatment can start earlier. This reduces both anxiety and waiting time for patients and allows for better care outcomes. The big improvement is due to the fact that in oesophagus/stomach we work systematically with a focus on results and a lot of cooperation between different parts of care to make the SVF work.

In conclusion, this is a result that makes a real difference and shows that determined work leads to faster and better cancer treatment.

International knowledge exchange opening up new radiotherapy strategies

In April 2025, a 1.5-day workshop was organised in Stockholm under a twinning city agreement with the National Institute of Oncology (NIO) in Budapest. The workshop covered both clinical practice and research within radiotherapy, including ongoing preclinical projects, and provided an opportunity for broad discussion and exchange of experience.

NIO has extensive experience in using brachytherapy as radiotherapy after breast-conserving surgery. This raised interest in the possibility of offering, in selected cases, a second breast-conserving surgery in case of relapse, followed by a new radiotherapy. Repeat irradiation of a previously treated area can be challenging and requires that radiotherapy be limited to as small an area as possible. Following the workshop, further discussions have been initiated between oncologists, breast surgeons and medical physicists at Karolinska Hospital. A first digital meeting with the NIO is planned, and opportunities for further cooperation, including possible study visits, have been identified.

Turning 18 is a milestone: How we support young people in healthcare

Teenagers who have received their cancer treatment through Theme Children will, when they turn 18, move on to adult care within Theme Cancer, which means different routines and more responsibility for their illness. During the year, we have organised two workshops with around 30 staff from all patient flows where children are transferred to adult care. The aim is to create a common understanding of the importance of systematically working towards a safe transition. Participants quickly realised that close collaboration between the units is crucial to find better solutions to ease the transition from paediatric to adult care for patients, parents and staff. This also resulted in many ideas, and that all flows developed a guideline for how to collaborate in the future and that the transition nurse, who is at the Follow-up Clinic for adults after paediatric cancer, will be responsible for bringing together representatives from all flows at least once a year to continue what we have now started. Several of the flows, with representatives from both paediatric and adult care, will also participate in an improvement course through the RCC in 2026, to further work on improvement proposals within this area.

Photo: Ylva Hermansson

Nursing

From strategy to action: Nursing development 2025

In 2025, Theme Cancer has been driving extensive strategic nursing work in line with the hospital's nursing strategy and the national cancer plan. The work has been organised through the Strategic Nursing Forum (STOF) and complementary forums for heads of operations (VC OO/VEC) and nursing managers (OVA).

Four committees have been established, focusing on clinical care, research, quality and education and skills development. These committees have worked independently on priority activities, including:

- Development of clinical guidelines and knowledge support
- Introduction of digital diagnosis-specific PROM/PREM*(Patient-Reported Outcome Measures* and *Patient-Reported Experience Measures)*, where PROM measures the patient's own perception of health status and outcome of care, while PREM measures the patient's experience of the care process
- Visibility and support for nursing research and increasing the proportion of clinical PhD students
- Skills development through induction training, mentoring programmes and skills cards for nurses
- Formalising nurse fellowships and hospital-university networking

The Forum structure has ensured continuous feedback, decision-making and communication on strategic issues, patient safety and skills provision. The work has been characterised by collaboration, innovation and clear leadership to strengthen excellent nursing within Theme Cancer.

In 2025, Theme Cancer at Karolinska has conducted extensive strategic nursing work in line with the hospital's nursing strategy and the national cancer plan.

Management-level R&D forum– long-term commitment to nursing research and development

In 2025, the R&D Forum within Nursing Area 1 was established at management level with the aim of further strengthening research and development within the nursing area. The Forum will create strategic conditions for research by anchoring R&D issues in management, thereby enabling broader and long-term support for staff who want to develop within research and take the next step in their professional career.

The R&D Forum serves as a unifying platform for experience sharing, strategic planning and collaboration. The forum includes the head of operations, heads of nursing, nursing managers, graduate nurses, PhD students and AKA responsible for student issues. Together, they create a strong and interdisciplinary structure that promotes knowledge development, guidance and a long-term sustainable research and development environment within Nursing Area 1.

Photo: Malin Jochumsen

Awards

Sofia Dovborg named Contact Nurse of the Year in the Stockholm-Gotland healthcare region

Since 2017, Sofia has been a dedicated contact nurse for patients treated for acute lymphoblastic leukaemia (ALL) and lymphoma. She was named Contact Nurse of the Year 2025 in the Stockholm-Gotland healthcare region–an award that she sees as a recognition of the work of the entire team.

I am touched to have been nominated and very happy to receive the award. But it is a team effort with several professions and committed colleagues who together contribute to ensure that patients are satisfied with our treatment and care.

The patient population with ALL has a wide age range, and young adults are not uncommon. The duration of treatment is often long and demanding, which makes the permanent care contact invaluable–both for patients and their relations. One of the reasons for the award is Sofia's central role in the creation of the multidisciplinary ALL group.

Photo: Sofie Höglund

It is a support during a complex treatment that can last over two years. With nurses in the ALL team, we can quickly 'translate' and communicate doctors' plans for treatments because we have daily contact with patients. I get to know them and their relations really well.

Balazs Acs is awarded for the project "Quantitative Pathology with Artificial Intelligence to Improve Diagnostics and Prognostication in Breast Cancer"

The European Society for Medical Oncology-(ESMO) awarded Balazs Acs, Associate Professor and Specialist in Pathology at the Medical Unit of Clinical Pathology and Cancer Diagnostics, the ESMO Digital and Computational Pathology Fellowship 2025.

Balazs Ac's research contributes to the development of precision medicine diagnostics using AI within pathology.

Being awarded the ESMO Digital and Computational Pathology Fellowship is a great honour and recognition of the importance of integrating AI into pathology.

"Being awarded the ESMO Digital and Computational Pathology Fellowship is a great honour and recognition of the importance of integrating AI into pathology. For me, it is an opportunity to contribute to the development of 'next generation pathology', where digital and AI-based solutions enhance the precision and efficiency of diagnostics. The award also provides the opportunity to deepen international collaborations and drive innovation within precision medicine," says Balazs Acs.

Photo: Niklas Elmehed

Nurse Felicia Hume receives the Daisy Award 2025

This year's recipient, Felicia Hume, works at the Psycho-oncology Clinic at Karolinska University Hospital. Among other things, people say about her work: "She succeeds like few others in conveying a warmth that lasts".

The Daisy Award has since 2019 been presented for excellent nursing care, something that Theme Cancer is the only organisation in Sweden to nominate. Nominations are made anonymously by patients, relations or colleagues. A committee of nurses and other professionals then evaluates the nominations and checks that they meet the criteria to reflect the Theme Cancer vision.

Felicia received four nominations; here is one of them: *"I hope the doctors and nurses at the Oncology Clinic have saved my life. But I know Felicia did it. She has helped me live through two incredibly difficult years of treatments, examinations, bad news and good news. Without her help, I do not know where I would be today. For the rest of my life, I will be grateful for her wisdom, thoughtfulness, help and support. She succeeds like few others in conveying a warmth that lasts and display thorough skills in her profession and specialty.*

She deserves all the awards in the world!"

> *She succeeds like few others in conveying a warmth that lasts.*

Photo: Carina Dahlén

"Thanks to Felicia's guidance and support, I have gradually moved from being absorbed with anxiety over my illness to slowly opening up to the world around me," one of the nominations state.

Susanne Fryklin received the Sustainability Award as Passionate Person of the Year

Justification

"Susanne has for many years, with great commitment, driven the environmental work within healthcare administration–an area that is often overlooked in sustainability discussions, but which has great potential to create dissemination and impact."

Susanne Fryklin received the award for her environmental work within the hospital's healthcare administration. Among other things, she focuses on teaching her colleagues about digital cleaning and how to reduce paper consumption.

Digital cleaning and reduced paper consumption

Digital cleaning concerns clearing your computer and mobile phone of old apps, documents and files. Because all digital documents consume energy when they are stored, even if they are never used. Regularly deleting digital files on your devices will help you save energy.

It feels great to receive the award. It came as a pleasant surprise. I have been working on environmental issues within healthcare administration since the 1990s, so it is great that my work is being recognised.

Emails also have a significant climate impact. Each time an email is sent, especially if it contains large attachments, energy resources are used to store and transfer data between servers and devices. This energy consumption contributes to carbon emissions.

Photo: Henrik Möller

Niklas Björkström, this year's recipient of the Eric K. Fernström Prize

The prize is awarded to a young researcher of outstanding merit who has not reached the age of 45 by 31 December of the year relevant to the prize. The recipient is chosen by nomination.

Niklas receives the award for his significant research on natural killer cells (NK cells) in humans. He works at the Department of Medicine, Huddinge (MedH), Karolinska Institutet.

He has discovered new ways in which NK cells develop and specialise in humans. He has also shown that these cells may have properties similar to the adaptive immune system.

This research has changed the way we think about NK cells, which were previously considered to be only congenital immune cells. The results are important for the development of treatments against infections and cancer. His discoveries are now being tested in clinical studies with cancer treatment.

Photo: Erik Flyg

Peter Strang receives government award for his research in palliative medicine

Professor Emeritus Peter Strang at the Department of Oncology-Pathology ki.se/onkpat at Karolinska Institutet has been awarded the government medal “Illis quorum meruere labores”. The Latin name of the medal means “To those whose deeds make them deserving of it”. He is receiving the award for his outstanding achievements and his many years of research within palliative medicine, where he has particularly highlighted the importance of existential perspectives for good care.

Established by King Gustav III in 1785, the medal has been awarded by the government since 1975 to individuals whose deeds are considered particularly deserving of national recognition. Peter Strang is one of eight recipients of the 2025 award, which was presented at a ceremony in Sagerska Huset in the autumn of 2025.

From the justification (from the government press release):

“For his outstanding efforts and research within palliative medicine, where he particularly emphasised the importance of existential perspectives for good care, and for his significant efforts in making knowledge about loneliness and its major impact on human health widely available.”

“I am surprised and honoured,” says Peter Strang. My research has often focused on issues such as existential loneliness and the role of end-of-life care. It makes sense that the government is now highlighting these perspectives.

Photo: Yanan Li

New professors and associate professors within cancer research Karolinska Institutet 2025

PROFESSORS

Linda Björkhem-Bergman
Theodoros Foukakis
Jonas Fuxe
Sören Lehman
Johan Lundberg
Vicente Pelechano Garcia

ADJUNCT PROFESSORS

Åsa Carlsson Tedgren
Ernesto Sparrelid

ASSOCIATE PROFESSORS

Sara Arroyo Muhr
Lisa Arvidsson
Erland Axelsson
Laura Baranello
Liza Bergström
Gefei Chen
Amanda Cleeve
Åsa Craftman
Maria Genander
Christel Hedman
Paweł Kozielewicz
Taras Kreslavskiy
Johan Lindberg
Sidinh Luc
Nicole Marquardt
Michael Mints
Cecilia Radkiewicz
Susanna Ranta
Helene Rundqvist
Leonie Saft
Giola Santoni
Eliane Sardh
Tomas Schiffer
David Tamborero
Georgios Tsakonas
Antonios Tzorzakakis
Tove Wästerlid
Petter Woll
Ioannis Zerdes

Appendix

Board of Directors (BoD)

During the year, the BoD has gained two new representatives, Simon Ekman, Head of Theme Cancer, and Magnus Nilsson, Head of R&D for Theme Cancer. Jonas Bergh ended his assignment during the year and Stephan Mileke has ended his assignment as Head of R&D and is now representing the ATMP centre. The Steering Group held 11 meetings and addressed a wide range of strategic issues.

Patrik Rossi
Head of Theme, Theme Cancer, Karolinska University Hospital. Chairperson BoD Karolinska CCC.

Magnus Nilsson
Professor of Surgery, Karolinska Institutet, Head of R&D Theme Cancer, Karolinska University Hospital.

Mathias Axelsson
Functional Manager, Medical Diagnostics Karolinska, Karolinska University Hospital.

Päivi Östling
Scientific Director of Precision Medicine, SciLifeLab, Senior Researcher, Karolinska Institutet.

Pernilla Grillner
Head of Operations at Highly Specialized Paediatrics 1 (including Paediatric Oncology and Paediatric Haematology) at Astrid Lindgren Children's Hospital. Researcher, Karolinska Institutet.

Elias Arnér
Professor of Biochemistry. Chairperson of Cancer Research KI (CRKI), Karolinska Institutet.

Yvonne Wengström
Professor of Nursing, Karolinska Institutet. Nursing Manager, Theme Cancer, Karolinska University Hospital.

Stephan Mielke
Professor of Haematology and Cell Therapy, Karolinska Institutet. Head of Operations, CAST. Theme Cancer, Karolinska University Hospital.

Janne Lehtiö
Professor of Proteomics, Karolinska Institutet. Director of R&D, SciLifeLab.

Anita Wanngren
Representative of patients and their loved ones.

Co-opted members

Carl Johan Sundberg
Professor of Molecular and Applied Occupational Physiology at the Department of Physiology and Pharmacology and Dean of Karolinska Institutet Nord.

Simon Ekman
Professor of Oncology, Karolinska Institutet, Theme Prefect Theme Cancer, Karolinska University Hospital.

Eva Jolly
Responsible for Operations, Karolinska CCC, Theme Cancer, Karolinska University Hospital.

Ann-Britt Johansson
Coordinator, Karolinska CCC, Theme Cancer, Karolinska University Hospital.

Liselotte Bäckdahl
Coordinator, Cancer Research KI (CRKI), Karolinska Institutet.

Scientific Advisory Board–SAB

A joint international scientific advisory board for Cancer Research KI and Karolinska Comprehensive Cancer Centre (Karolinska CCC) was established during the year. Karolinska CCC's BoD has aimed to include advisors with broad expertise within clinical, basic and nursing related cancer research, covering a diverse range of disciplines within cancer. This joint SAB will be able to advise on issues such as the long-term strategic development of research, education, care and prevention within the field of cancer for both Cancer Research KI and Karolinska CCC.

Members

- Prof. Nancy Berliner, Brigham and Women's Hospital, Harvard Medical School–USA
- Dr. Suzette Delaloge, Gustave Roussy–France
- Prof. Julian Downward, Francis Crick Institute–Storbritannien
- Dr. Laura Esserman, University of California San Francisco–USA
- Prof. Åslaug Helland, Oslo University Hospital, Oslo Comprehensive Cancer Centre–Norway
- Prof. Ulrike Köhl, Fraunhofer Institute for Cell Therapy and Immunology–Germany
- Prof. Christina Peters, St. Anna Children's Hospital–Austria
- Prof. Andreas Rosenwald, University of Würzburg–Germany
- Prof. Heinz-Peter Schlemmer, German Cancer Research Centre (DKFZ), Heidelberg–Germany
- Chairperson Prof. Kjetil Taskén, University of Oslo, Oslo University Hospital–Norway
- Prof. Mary Wells, Imperial College London–Great Britain
- Prof. Lodewyk Wessels, Netherlands Cancer Institute (NKI)–Netherlands

The Patient and Relations Network at Karolinska CCC

Karolinska CCC's Patient and Relations Network (PNN) contributes with a patient perspective on overall issues within healthcare and research. By focusing on the system level instead of individual cases, the network provides experience-based knowledge that supports the development of the cancer area within Karolinska CCC.

To take advantage of the collective experience of the designated patient and relations representatives, the network meets four times a year. The 22 members represent activities within Theme Cancer, Paediatric Oncology and Paediatric Haematology, Brain Tumour Patient Flow and five working groups within Cancer Research KI. The terms of office follow those of the relevant activities, which also appoint their patient and relations representatives themselves.

Patient representatives participate in the development of relevant documents within Karolinska CCC, such as strategic plans, operational plans and research strategies. The Karolinska CCC Board of Directors (BoD) can provide suggestions on issues, missions and objectives for the network to work on. The Chair of the PNN is a patient representative on the BoD, ensuring that the network's perspective is taken into account in overall strategic discussions.

During the year, the network held five meetings and discussed a number of issues of importance for supporting and developing cancer activities at Karolinska CCC.

Members

- Anita Wanngren, Chairperson of the network and representative in the BoD Karolinska CCC
- Barbro Sjölander, Vice Chair
- Lars Arnberg
- Eva Backman
- Ingela Berglund
- Stephanie Bonn
- Eskil Degsell
- Fredrik Döberl
- Ewa Ellis
- Lise-Lott Eriksson
- Mats Frisk
- Izabela Grape
- Erik Holmberg
- Pelle Johansson
- Karin Liljelund
- Karin Mellström
- Roelinde Middelveld
- Peder Skarstedt
- Marie Tilly
- Sophie Werkö
- Gunnar Örbom

EU-funded projects

EUnetCCC–European Network of Comprehensive Cancer Centres

During the first year, Karolinska CCC has actively participated in several activities as co-responsible for Work Package 8 (WP8)–Networking activities. Work has focused on promoting secondary use of data and clinical studies, and on initiating pilot projects such as a paediatric cancer data project and a clinical study unit exchange program. In addition, the team has led the development of frameworks and tools to support cross-network activities. The year ended with the EUnetCCC Annual Meeting in Paris, which marked an important milestone and saw the presentation of the first “White Paper” to guide the future work of EUnetCCC.

ECHoS–Establishing Cancer Mission Hubs: Networks and Synergies

Karolinska CCC has had a leading role in the ECHoS project as responsible for Work Package 6 (WP6), focusing on communication, dissemination and citizen engagement. In 2025, we organised the first European Cancer Mission Fair in Warsaw, marking the launch of the first national Cancer Mission Hub and showcasing good examples of patient and citizen engagement. In addition, we organised the ECHoS Town Hall in Brussels, which brought together policy makers, researchers and stakeholders to strengthen cooperation and accelerate the implementation of the EU Cancer Mission and the Europe Beating Cancer Plan. The project is planned to be completed in spring 2026.

Joint Action Personalised Cancer Medicine

Karolinska CCC is responsible for Work Package 12 (WP12), which will address ethical, legal and equity aspects of implementing personalised cancer medicine in Europe. Work planned for the coming years includes the development of strategies and tools for cross-border collaboration, data sharing and harmonisation, as well as the development of practical resources to support patient-centred working methods. The project was launched in late 2025 and planning activities are ongoing.

Hope4Kids–Holistic Oncological Palliative care 4 Europe’s Kids

Karolinska CCC is co-responsible for Work Package 6 (WP6), which will develop harmonised international guidelines for palliative care within paediatric oncology. These areas are symptom management, care planning, shared decision-making, psychosocial support, bereavement support and care models, as well as the development of a standardised template for personalised care plans. The project was launched at the end of 2025 and we are responsible for developing guidelines in two areas and the work is carried out as a PhD project.

JANE 2–Joint Action Networks of Expertise

Karolinska CCC participates in Work Package 5 (WP5), focusing on complex cancers with poor prognosis, such as pancreatic and lung cancer. Karolinska leads communication and dissemination activities, including mapping key stakeholder groups, sharing updates and results, and supporting information dissemination through various channels. In addition, several expert oncologists from the activities contribute to different parts of the project.

CCI4EU–Comprehensive Cancer Infrastructures for the European Union

Karolinska CCC is co-responsible for Work Package 2 (WP2), which defines criteria for comprehensive cancer infrastructures using the CCI Maturity Model. In 2025, we contributed to the second assessment of CCI maturity in Europe and played an active role in capacity-building activities, including leading a Deep Dive session, hosting an observer visit, and participating in thematic conferences and digital workshops. The project is planned to be completed in spring 2026.

eCAN+–Enhancing Digital Capabilities of Cancer Centres in Europe

Karolinska CCC participates in Work Package 6 (WP6), which focuses on collaboration on clinical decision-making within diagnostics, treatment and care between cancer centres. Launched in 2025, the project aims to strengthen digital healthcare solutions, promote telemedicine and enable secure data sharing to support integrated cancer care in Europe.

SHIELD–Strategies for Health Interventions to Eliminate Infection-related Cancer

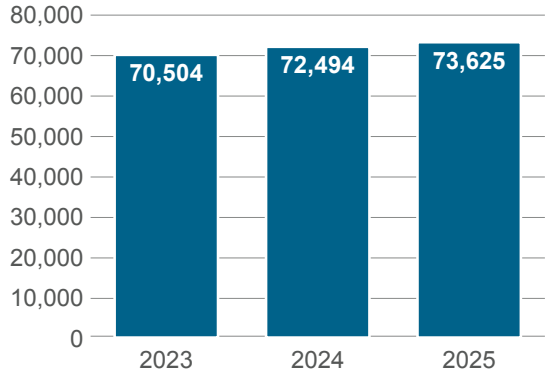
SHIELD aims to reduce infection-related cancers in Europe by scaling up prevention measures, testing and treatment for HPV, hepatitis and other infections through coordinated strategies and cross-sectoral collaboration.

The Healthcare Production Adult

This section presents healthcare production data for the year. The figures show the development over 3 years and include key quantitative measures such as the number of admissions and treatments. The statistics also include benign activities within the organisation.

Statistics for paediatric haematology and paediatric oncology are reported separately.

Figure 1. Number of unique patients, 2023–2025.

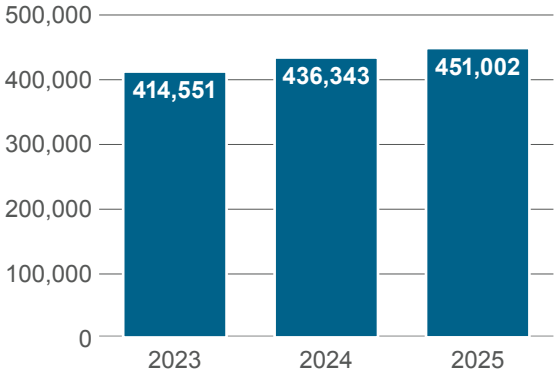


Population	2023	2024	2025
Number of unique patients	70,504	72,494	73,625
Of which out-of-county patients	5,172	5,494	5,633
Of which patients abroad	469	473	418
Number of new visits to doctors	21,420	20,936	21,348
Number of newly diagnosed cancer patients (includes paediatric cancer)	10,696	10,337	10,572

Population

- Number of unique patients who had a physical care contact or remote contact in outpatient or inpatient care at activities within Karolinska CCC, regardless of cancer diagnosis or benign diagnosis.
- Number of new visits to doctors–Number of physical outpatient contacts recorded as new visits to doctors.
- Number of newly diagnosed cancer cases–Estimated number of patients with a new cancer diagnosis, where the patient has not previously been treated for cancer at the current tumour area within Karolinska CCC. The diagnosis has been reported in at least one medical contact and at least one physical visit.

Figure 2. Number of outpatient contacts, 2023–2025.

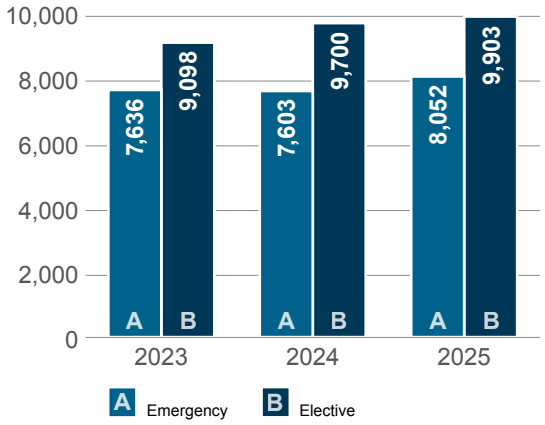


Outpatient care	2023	2024	2025
Number of outpatient contacts	414,551	436,343	451,002
Of which outpatient visits	155,828	155,956	157,983
Of which outpatient care	127,458	129,080	130,624
Of which remote contacts	131,262	151,305	162,308

Outpatient care

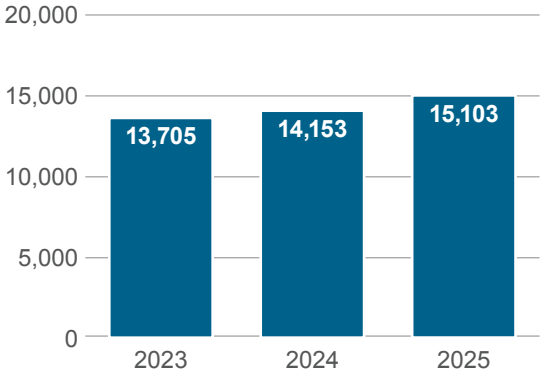
- Number of outpatient contacts–Number of physical care contacts or remote contacts with activities within Karolinska CCC, regardless of cancer diagnosis or benign diagnosis.
- Outpatient visits–Number of physical visits to an outpatient clinic by a doctor, nurse or other staff category.
- Outpatient care–Number of physical visits recorded as outpatient care. Includes e.g., medical treatment, radiotherapy, outpatient surgery, endoscopic examinations, blood transfusions.
- Remote contacts–Number of remote care contacts with or about the patient. Includes e.g., multidisciplinary conferences, video contacts and telephone contacts.

Figure 3. Number of inpatient admissions, 2023–2025, split between acute and elective inpatient care.



Inpatient care	2023	2024	2025
Number of inpatient admissions	16,734	17,303	17,955
Available inpatient beds	215	207	221
Average length of stay (days)	4.63	4.46	4.60

Figure 4. Number of surgical interventions, 2023–2025.



Treatment	2023	2024	2025
Number of surgical interventions	13,705	14,153	15,103
Of which outpatient surgery	4,573	4,772	5,531
Outpatient surgery (%)	33.4%	33.7%	36.6%
Of which robot-assisted interventions	1,357	1,501	1,609
Radiosurgery	431	398	476

Inpatient care

- Number of inpatient admissions–Admission and discharge of patients within a ward at Karolinska CCC, regardless of cancer diagnosis or benign diagnosis.
- Available beds–Estimated average number of available inpatient beds
- Average length of stay–Estimated average length of stay in days from admission to discharge of a patient.

Surgical treatment

- Number of surgical interventions–Number of interventions recorded in the surgical planning system, regardless of cancer diagnosis or benign diagnosis. This also includes some care that is not classified as surgical treatment, such as access insertion, brachytherapy, endoscopic examinations and bone marrow aspiration.

Figure 5. Number of chemotherapy and radiotherapy care contacts, 2023–2025.

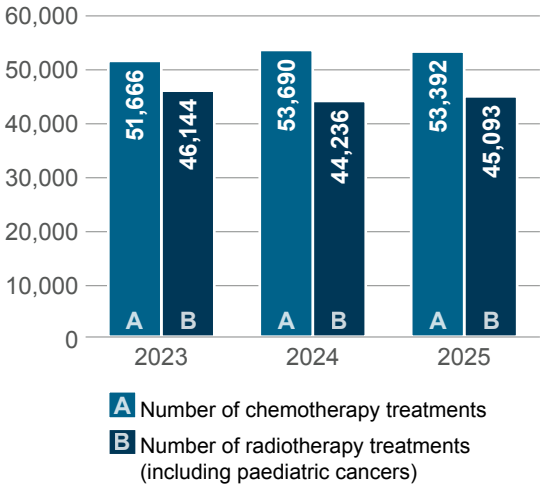


Figure 6. New insertions of immune checkpoint inhibitors, 2021–2025.

The graph shows that the largest introduction of ICH occurred around 2022, when several new indications were introduced for several tumour groups. Since then, the increase has slowed down, and ICH is now used in most tumour groups. In 2025, further indications have been added, including for combination therapy with chemotherapy and ICH within gynaecological cancer.

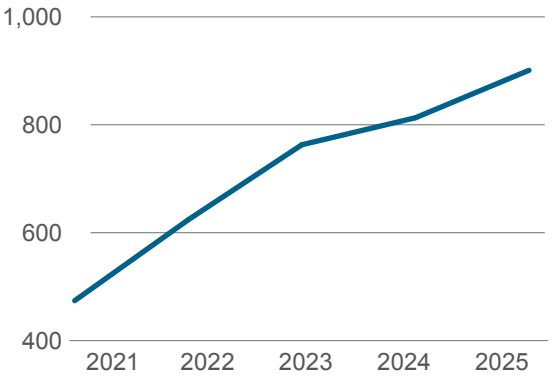


Table 1. A Radio- and chemotherapy treatment.

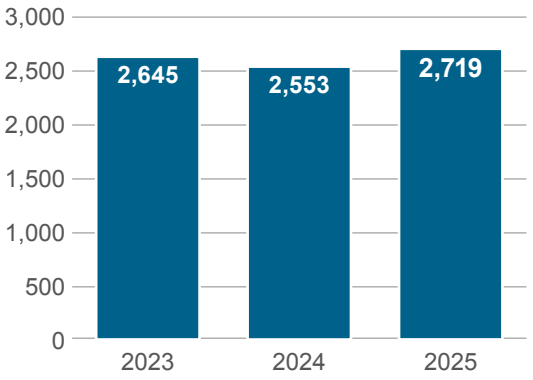
Radio- and chemotherapy treatment		2023	2024	2025
Radiotherapy (including paediatric cancer)	Number of treatment sessions	46,144	44,236	45,093
	Number of unique patients	4,040	3,888	4,024
Chemotherapy	Number of treatment sessions	51,666	53,690	53,392
	Number of unique patients	6,631	6,840	6,949
	Number of patients with ICH	763	813	901
	Percentage of patients with ICH	20%	20%	22%

Oncology and haematology treatment

- Number of radiotherapy treatment sessions–Treatment contacts with main diagnosis indicated Z510 Radiotherapy treatment.
- Number of chemotherapy treatments – Health care contacts with indicated main/additional diagnosis Z511 Chemotherapy treatment for tumour.
- Proportion of patients with immune checkpoint inhibitors (ICH)–Estimated proportion of patients administered ICH substances in the delivery system.
- New insertion of ICH–Estimated number of patients administered ICH for the first time.

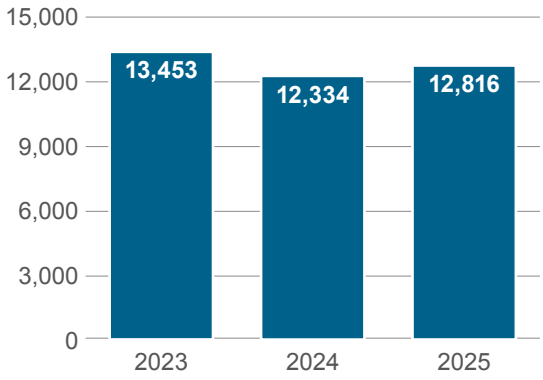
The Healthcare Production Child

Figure 7. Number of unique patients, 2023–2025.



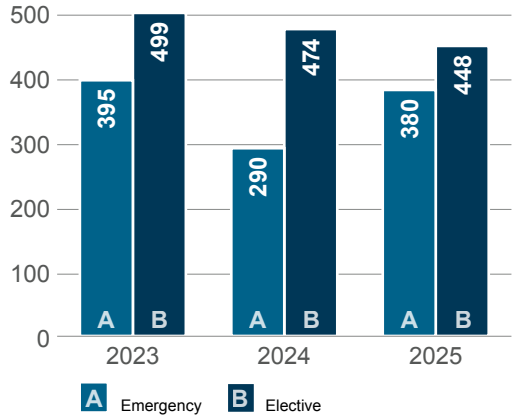
Population	2023	2024	2025
Number of unique patients	2,645	2,553	2,719
Of which out-of-county patients	452	417	450
Of which patients abroad	40	31	38
Number of new visits	332	298	215

Figure 8. Number of outpatient contacts, 2023–2025.



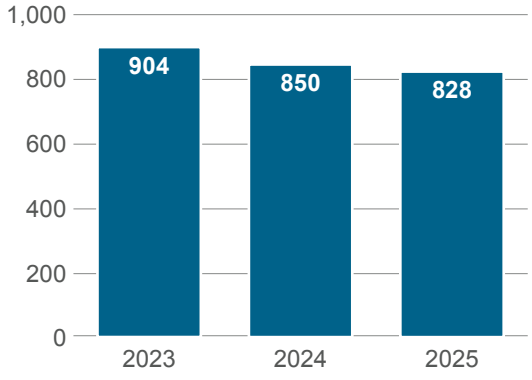
Outpatient care	2023	2024	2025
Number of outpatient contacts	13,453	12,334	12,816
Percentage indirect	26%	29%	31%

Figure 9. Number of inpatient admissions, 2023–2025 divided between acute and elective inpatient care.



Inpatient care	2023	2024	2025
Number of inpatient admissions	894	764	828
Available inpatient beds	12.4	13.3	13.1

Figure 10. Number of surgical interventions, 2023–2025.



Treatment	2023	2024	2025
Number of surgical interventions	904	850	828
Of which outpatient surgery	434	465	396
Number of unique patients with chemotherapy treatment	142	134	140

Accessibility and quality

Figure 11. 5-year relative survival (%) for patients diagnosed in the Stockholm-Gotland healthcare region.

Survival data are taken from the Regional Tumour Registry (RTR) and refer to relative 5-year survival. Survival statistics should be interpreted with caution within certain diagnostic groups, where limited patient numbers and wide variation in the degree of malignancy have a major impact on survival outcomes.

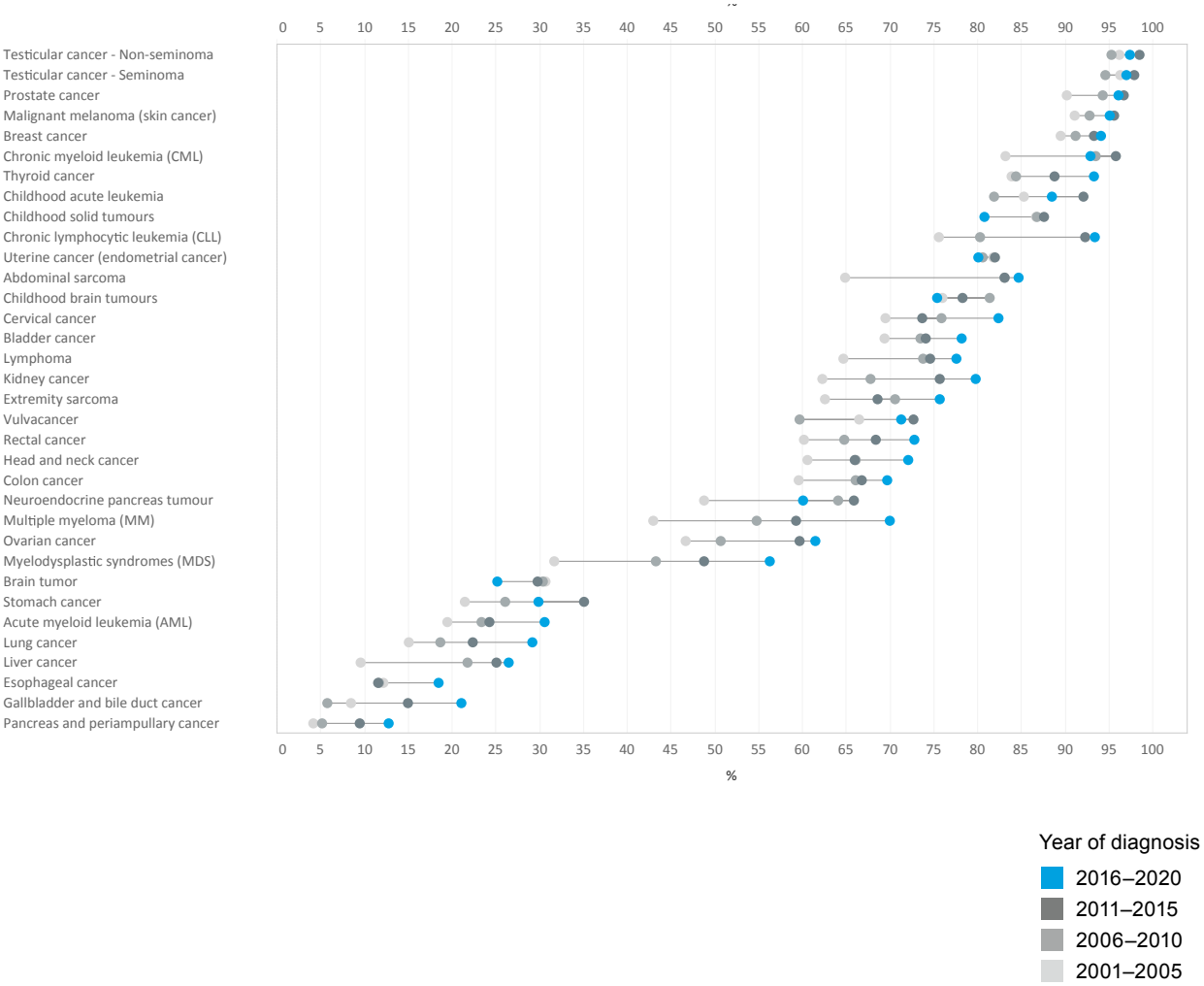
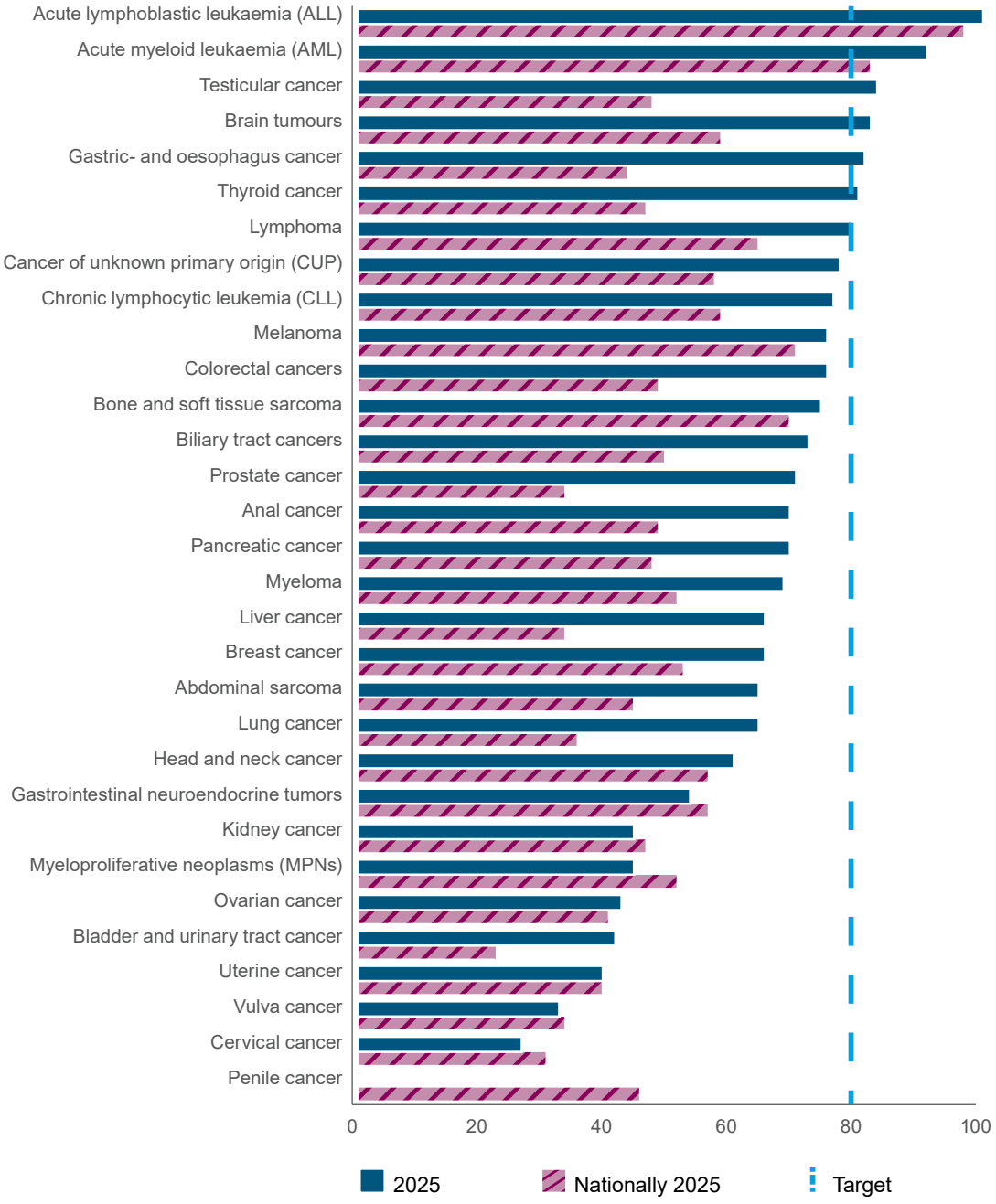


Figure 12. SVF target achievement per care pathway.

Comparison of percentage goal achievement per care pathway between Karolinska CCC and Nationally in 2025 for patients included in standardised care pathways (SVF). Karolinska CCC achieved a target fulfilment of 64%, which is an increase of 6 percentage points compared to the previous year. The bars show the proportion of patients who were assessed and started their treatment within the specified lead time limit. The figures come from Karolinska CCC's internal data and there may be differences with the national follow-up.



Quality accounts Theme Cancer

Patient satisfaction

The aim of the survey is to obtain more information about the patients' experience of the healthcare; treatment from healthcare staff, participation in decisions to the desired extent and whether the information provided has been sufficient. The survey is sent to patients the day after their outpatient appointment or the day after they are discharged from an inpatient ward. We have reduced the frequency of mailings, hence the lower number of respondents.

The results of the patient satisfaction survey show a clear positive trend, with targets in all areas being met and in several cases exceeded in recent years. Particularly prominent is the area of Information, where patients express very high satisfaction with stable results of 95% for three consecutive years. The areas Approach and Participation are also consistently above the target levels, indicating a well-functioning communication and a care relationship that is perceived as safe and supportive.

Further improvement efforts should focus on maintaining these good results and systematically analysing and using the open-ended comments in the survey to identify further areas for development.

Together with several patient representatives, we are also working on a PREM specific to cancer care. The aim is to complement the current instrument with additional questions and create more space for free text responses, to better capture the needs and experiences of our patients.

You can follow our results here: www.karolinska.se/vard/tema/tema-cancer/resultat-tema-cancer/

Table 2. Quality Accounts Theme Cancer–Patient Satisfaction.

Patient satisfaction	2023	2024	2025	Target
Approach	88%	88%	89%	87%
Participation	87%	87%	88%	85%
Information	95%	95%	95%	90%
Number of respondents	27,788	24,857	15,754	

Min Vårdplan (My Care Plan)

Min Vårdplan is a tool that enables patient participation and influence throughout the care process. The aim is that all patients diagnosed with cancer will be offered a Min Vårdplan. In recent years, we have tracked how many patients have received a Min Vårdplan in Tableau, where we register via KVÅ codes when contact nurses have created a Min Vårdplan for a patient. We can see that more and more patients in Theme Cancer are receiving a Min Vårdplan.

The data tracked in Tableau includes all patients diagnosed with cancer, including patients not treated within the operation, which means that the target rate cannot reach 100%. The results continue to show differences between diagnoses, although these have decreased slightly in 2025.

Workshops and training for all contact nurses have been conducted and development work continues on an ongoing basis. The aim is to ensure more consistent working methods and personalised support to the patient throughout the care process.

Table 3. Quality accounts Theme Cancer–Min Vårdplan.

MVP	2023	2024	2025	Target
Percentage of patients with Min Vårdplan +-30d	40%	49%	51%	Improved results
Percentage of patients with Min Vårdplan	57%	65%	66%	Improved results
Number of unique patients	8,660	9,473	9,120	

PROM (Patient reported outcome measures)

We mainly use two different forms for patient-reported outcome measures.

The **symptom control** form is used during periods when patients are receiving intravenous oncology treatment to assess potential side effects. Two days before the next treatment, the patient completes the form via the app *Alltid Öppet*.

The nurse then assesses the reported responses in combination with the current lab results before ordering the next course of treatment. If the results and lab values indicate that the patient is tolerating the treatment, the patient is notified and the treatment is implemented as planned. Other measures are taken if there are many side effects or deteriorating lab values.

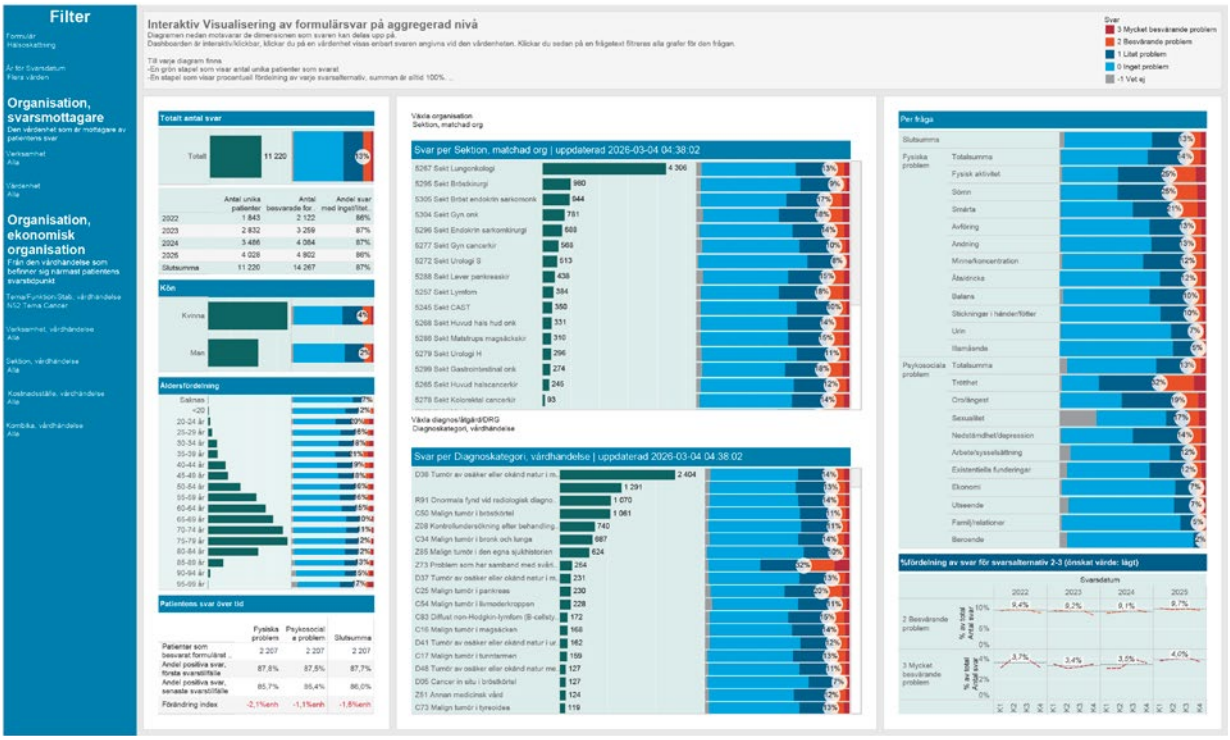
In 2026, development work is planned to integrate this symptom-based information with data from the *Cytodos* system. The aim is to enable analysis at an aggregated level, which may provide new insights into the relationships between treatment and symptoms. This would create better conditions to further individualise and optimise treatment for each patient.

Hälsoskattningen (the health assessment) is a self-assessment questionnaire covering common areas of concern for cancer patients before, during and after treatment. Patients rate their symptoms on a scale from “no problems” to “very troublesome problems”. The form is used to support the mapping, needs assessment and discussion of the patient’s needs after treatment has ended.

To date, over 14,500 health assessments have been completed. The answers form the basis for the rehabilitation assessment carried out by the contact nurse together with the patient and enable an individualised rehabilitation plan.

In 2025, the development work has focused on enabling diagnosis-specific analyses and on increasing the use of the results in activities. This has led to operations-specific improvement initiatives within several areas, including head and neck surgery and CAST.

As part of the further development, improved visualisation of patients’ individual responses over time, closely linked to the patient’s medical records, is planned for the future.



Nursing–Nutrition, pressure ulcers, falls and pain

Assessing patients' risk of malnutrition, pressure ulcers and falls is an important step in working with patient safety. Since 2021, these indicators have been measured continuously. We see an increase in the number of risk assessed patients for all these measures; this is most likely due to the work with the real-time visualisation board at the departmental start-up meeting.

Nutrition

The purpose of the follow-up is to ensure early detection of malnutrition risk. The number of patients assessed at risk of malnutrition will increase slightly in 2025, even if we do not reach the target level. Malnutrition is a risk factor for about half of the patients receiving care at Theme Cancer.

For 2026, a priority area for development is to ensure that the inter-thematic nutrition group is adequately resourced and mandated to effectively drive improvement work. In 2025, attendance at the group's meetings was low, prompting the need for a relaunch in the coming year.

The work ahead needs to include developed training initiatives focusing on strengthening staff knowledge of the importance of early identification of malnutrition risk and early intervention. There is also a need to develop practical tools and clearer guidelines for documentation and risk assessment, to create a more uniform and quality-assured nutrition process.

Table 4. Quality accounts Theme Cancer–Nutrition.

Malnutrition	2023	2024	2025	Target
Complete nutritional assessment	78%	78%	79%	80%
Percentage of patients with risk factors	51%	49%	56%	–
Percentage of patients at risk with prescribed measures	77%	75%	79%	> 70%
Number of patients	13,688	13,542	14,538	

Pressure ulcers

The aim of the follow-up is to prevent and reduce the incidence of pressure ulcers. The results for pressure ulcer prevention are generally positive, with particularly good results for risk assessment and the incidence of acquired pressure ulcers. To further improve quality, focus can be placed on ensuring that more at-risk patients are prescribed individualised interventions, which can help to further reduce the incidence of pressure ulcers.

Table 5. Quality accounts Theme Cancer–Pressure Ulcers.

Pressure ulcers	2023	2024	2025	Target
Percentage of patients assessed at risk of pressure ulcers upon admission	88%	91%	92%	80%
Percentage of patients with acquired pressure ulcers, categories 2–4	0.60%	0.50%	0.50%	< 3%
Percentage of patients at risk with prescribed measures	65%	68%	67%	60%
Number of patients	13,956	14,693	14,859	

Falls

The purpose of follow-up is to identify patients at risk of falling during their care period at an early stage and to take preventive measures. The measurement shows that the number of risk assessments has increased compared to the previous year, and that the number of patients with an identified risk of falls who are prescribed preventive measures has decreased compared to the previous year, but remains above the target level.

Results for fall prevention continue to be positive. The risk assessment is stable at a high level and targets are met by a good margin. Encouragingly, there was also a 3% increase in the proportion of fall prevention measures prescribed compared to the previous year. This suggests a stronger focus on early and targeted interventions with identified fall risks.

To further strengthen the development going forward, continued follow-up, feedback and skills building on fall prevention measures may be of value, especially with a focus on ensuring rapid and consistent implementation in clinical work.

Table 6. Quality accounts Theme Cancer–Falls.

Falls	2023	2024	2025	Target
Percentage of patients assessed at risk of falling upon admission	88%	90%	91%	70%
Percentage of patients at risk of falling with fall prevention measures prescribed within 24h	69%	67%	70%	65%
Number of respondents	13,688	14,393	14,557	

Pain assessment

Twice a year, medical record reviews are carried out within all activities to evaluate the pain management of patients. The aim of the review is to assess how many patients have reported pain; how many have had their pain assessed using a pain assessment tool and what treatment they have received.

This year's measurements show almost identical results compared to last year:

- 68% of patients reported pain during care.
- Pain intensity, assessed by VAS or NRS, was documented in 54% of cases.
- The most common causes of pain were postoperative pain or acute pain from other causes, similar to previous results.
- 94% of patients with pain received pharmacological treatment.

The review continues to highlight the need for improvements in the documentation of pain intensity, which is a key prerequisite for systematic and individualised pain management. Increased use of pain assessment instruments is an important part of this.

In 2025, several nursing activities have initiated improvement work focusing on increased knowledge, strengthened documentation practices and clearer structures for pain assessment. In particular, healthcare units working with patients with upper abdominal cancer will implement targeted actions to improve skills and documentation around pain. The work is based on a holistic approach according to the biopsychosocial model and *Fundamentals of Care*, with a focus on postoperative pain. This includes training efforts and the introduction of multidimensional pain assessment tools. The aim is to strengthen the patient experience and ensure more structured and high-quality pain management processes.

Healthcare-related infections (VRI)

The follow-up of healthcare-associated infections (VRI) again this year shows high outcomes, which is largely related to the complexity and vulnerability of the patient group. The results are consistent with previous years' measurements.

The 2024 medical records review showed widespread erroneous recordings, with VRI often recorded as community-acquired infections. This pattern persists in 2025 and affects data quality.

New this year are improved erroneous capabilities in Tableau, which allow to follow the reason for prescription of antibiotics in more detail. Work is now focusing on reducing erroneous recording and increasing understanding of why measurement is important.

In 2026, priority will be given to training in correct registration, continued medical records review and in-depth analysis of common types of infection and risk factors to strengthen the quality of improvement work.

Basic hygiene and dress code

This measurement is an observational study that all units carry out every month.

The work on basic hygiene and dress codes has resulted in both improved results and stable compliance in critical areas. The increase in observations underlines a strong prioritisation of these issues within the activities. The remaining challenge is to continue to improve compliance with disinfection practices; we are almost there in terms of dress code.

Table 7. Quality Accounts Theme Cancer–Basic hygiene practices.

Basic hygiene practices	2023	2024	2025	Target
Disinfection before and after, gloves and protective clothing used correctly	75%	78%	92% *	Improved results
Outfit, rings, nails, and hair used correctly	92%	92%	98%	Improved results
Number of observations	2,875	3,467	3,280	

*New reporting method in 2025.

Patient safety work

The work in this area has gradually developed and the operations have identified and continued to work on a number of priority activities based on their needs. The role of patient safety work has become clearer, and cooperation between OO and ME has strengthened as structures and roles have become more established. To continue the positive trend, an increased number of incident analyses would further contribute to a more learning and proactive working method.

As part of the National Board of Health and Welfare's national action plan for patient safety, Karolinska has developed its own action plan and a self-assessment tool to support heads of operations in structuring and following up patient safety work. The tool helps to highlight the current situation and areas for development and provides support for translating activities into daily operations.

This work is followed up in patient safety dialogues with the hospital's chief physicians, where the operational priority and results of the activities are discussed. The recurring process of self-assessment will continue in the coming year and aims to further strengthen and anchoring patient safety work as a natural part of the quality work within Theme Cancer.

Research clinical studies

Figure 13. Number of inclusions, 2023–2025.

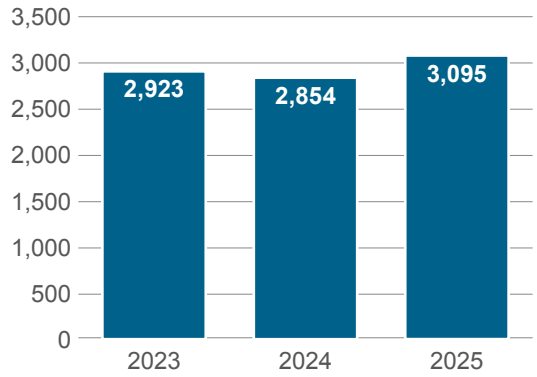


Figure 14. Percentage (%) of new cancer patients enrolled in studies, 2023–2025.

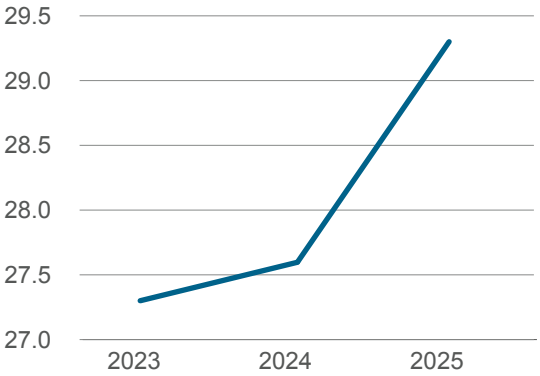


Table 8. Studies open for inclusion.

	In total	Breast, endocrine tumours and sarcomas	Pelvic cancer	CAST	Phase 1 unit	Haema-tology	Head-Neck-Lung-Skin	Radio-therapy	Upper abdomen
Studies started	**71**	12	9	2	11	7	8	3	19
Ongoing studies	**419**	48	74	24	29	76	63	11	96
Studies open for inclusion	**217**	22	39	8	22	24	38	8	56
Percentage (%) of academic studies	**68%**	73%	77%	63%	14%	54%	74%	100%	79%

Research clinical studies within paediatric cancer

Table 9. Number of studies per diagnostic area within paediatric cancer (December 2025).

	In total	Solid tumours	CNS	Haematopoietic stem cell trans-plantation	Haema-tology	Leukaemia, lymphoma, histiocytosis	Cross-diagnosis
Number of ongoing studies	**65**	9	12	4	2	21	17
Of which started during the year	**7**	0	1	1	5	0	0
Of which open for inclusion	**57**	9	9	4	1	19	15

Table 10. Number of studies per study phase within paediatric cancer (December 2025).

	In total	Phase I/II/III	Phase III/IV	None stated
Number of ongoing studies	**65**	21	15	29
Of which started during the year	**7**	4	2	1
Of which open for inclusion	**57**	18	13	26

Table 11. Number of academic and industry-sponsored studies within paediatric cancer (December 2025).

	In total	Academic studies	Industry-sponsored studies
Number of ongoing studies	**65**	58	7
Of which started during the year	**8**	7	1
Of which open for inclusion	**57**	53	4

Research–Cancer Research KI

Figure 15. Principal investigators per institution.

Cancer Research KI's database of research team investigators affiliated with the organisation continued to grow in 2025 and now includes 406 research teams with cancer researchers, active at all 21 departments at Karolinska Institutet. The largest number of research team investigators within cancer research is found at the Departments of Oncology-Pathology and Medicine, Huddinge.

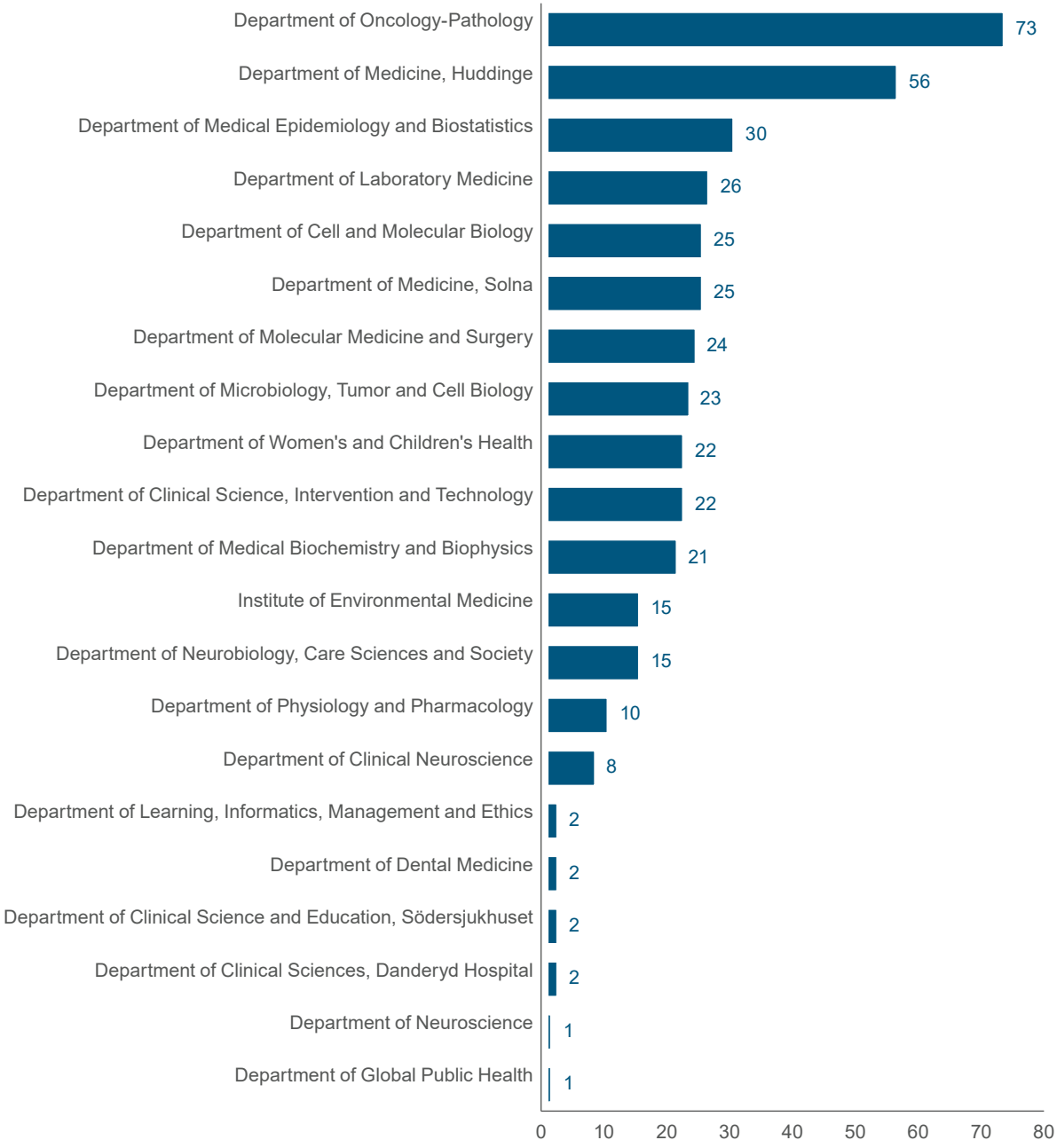
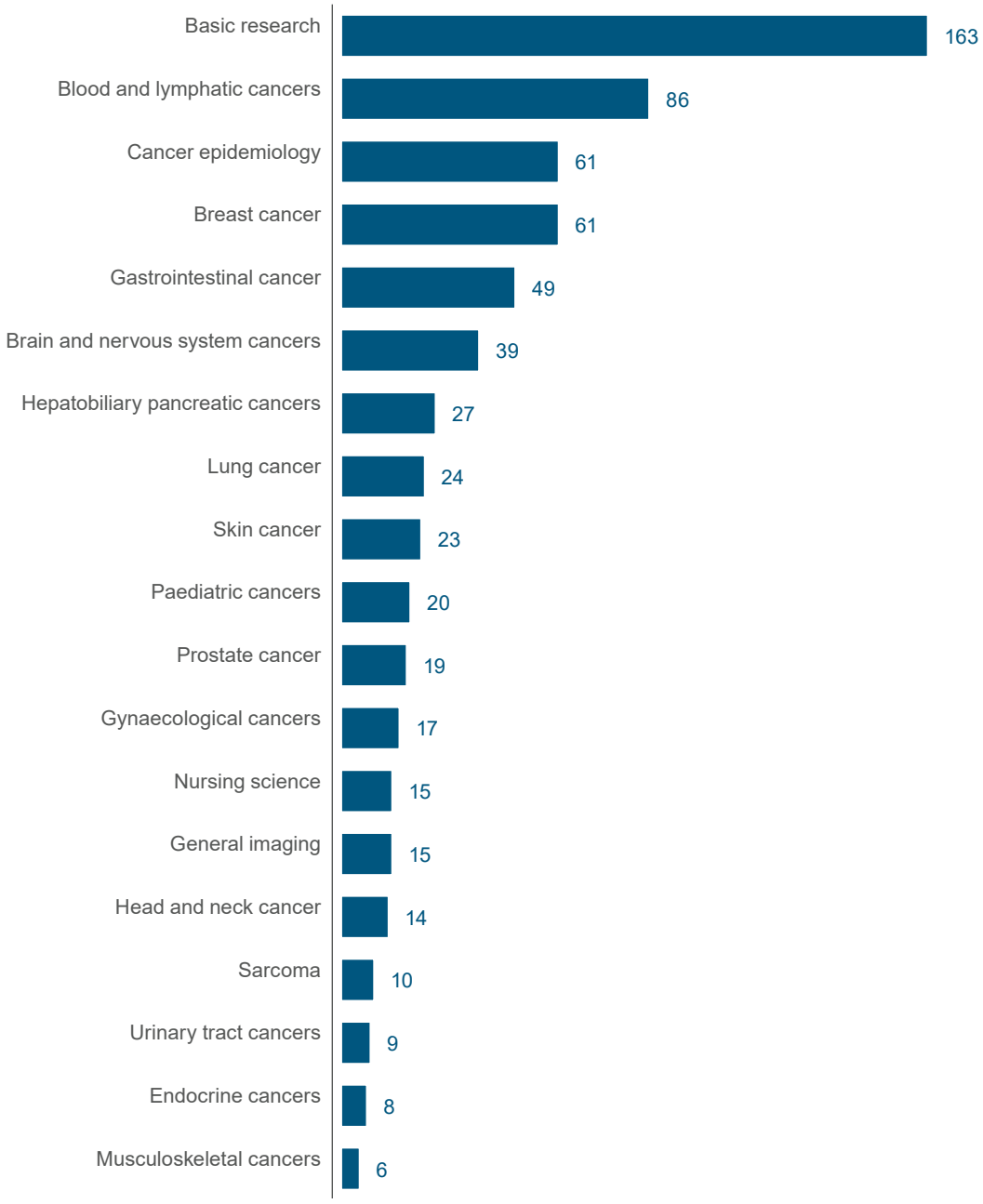


Figure 16. Principal investigators per area.

Karolinska Institutet conducts cancer research within a broad spectrum of basic research as well as within research on specific tumour types. The largest research area in terms of the number of research team investigators is basic research, but haematology, breast cancer and cancer epidemiology are also important research fields with many active groups.



Research funding for cancer research at Karolinska Institutet

Figure 17. Proportion of grants for cancer research.

In 2025, research team investigators within cancer research at Karolinska Institutet were awarded a total of SEK 1,970 million in research grants from foundations, government funds, universities and private donations. This corresponds to approximately 35 percent of all research grants at KI.

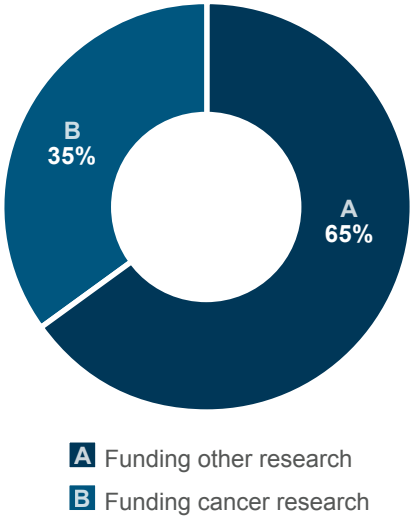


Figure 18. Swedish Cancer Society distribution of grants (%) by institution.

A closer analysis of two key cancer-focused funders, the Swedish Cancer Society and the Swedish Childhood Cancer Fund, shows that in 2025, Karolinska Institutet received 49 percent of the Swedish Cancer Society's total distributions in Sweden, corresponding to SEK 446 million. The Swedish Childhood Cancer Fund awarded KI SEK 34 million, which represents 29 percent of the fund's total budget that year.

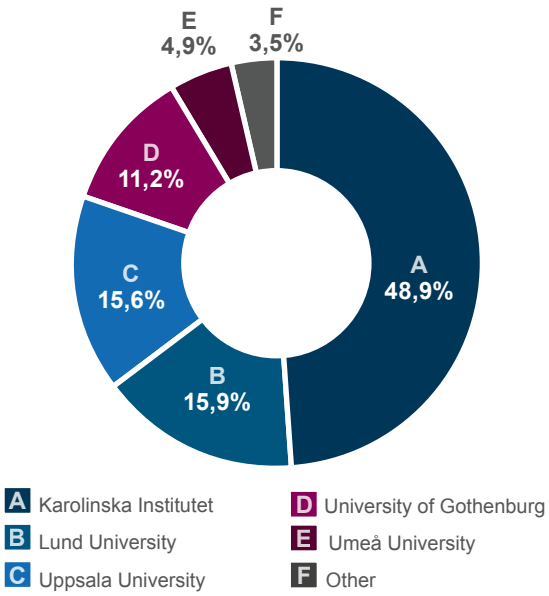


Figure 19. Grants in relation to time and residence.

An analysis over a multi-year period showed an increase in the proportion of grants from the Swedish Cancer Society going to KI in 2025 compared to 2024, while the allocation from the Swedish Childhood Cancer Fund showed a decrease. Over five years, Karolinska's share of the Swedish Cancer Society's distributions has remained stable between 40 and 50 percent, while the Swedish Childhood Cancer Fund's distribution has varied between 30 and 50 percent.

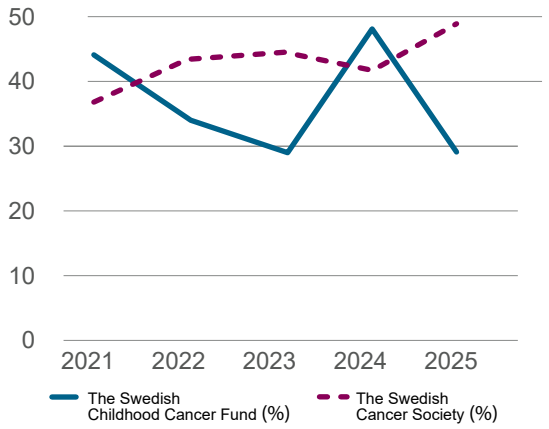
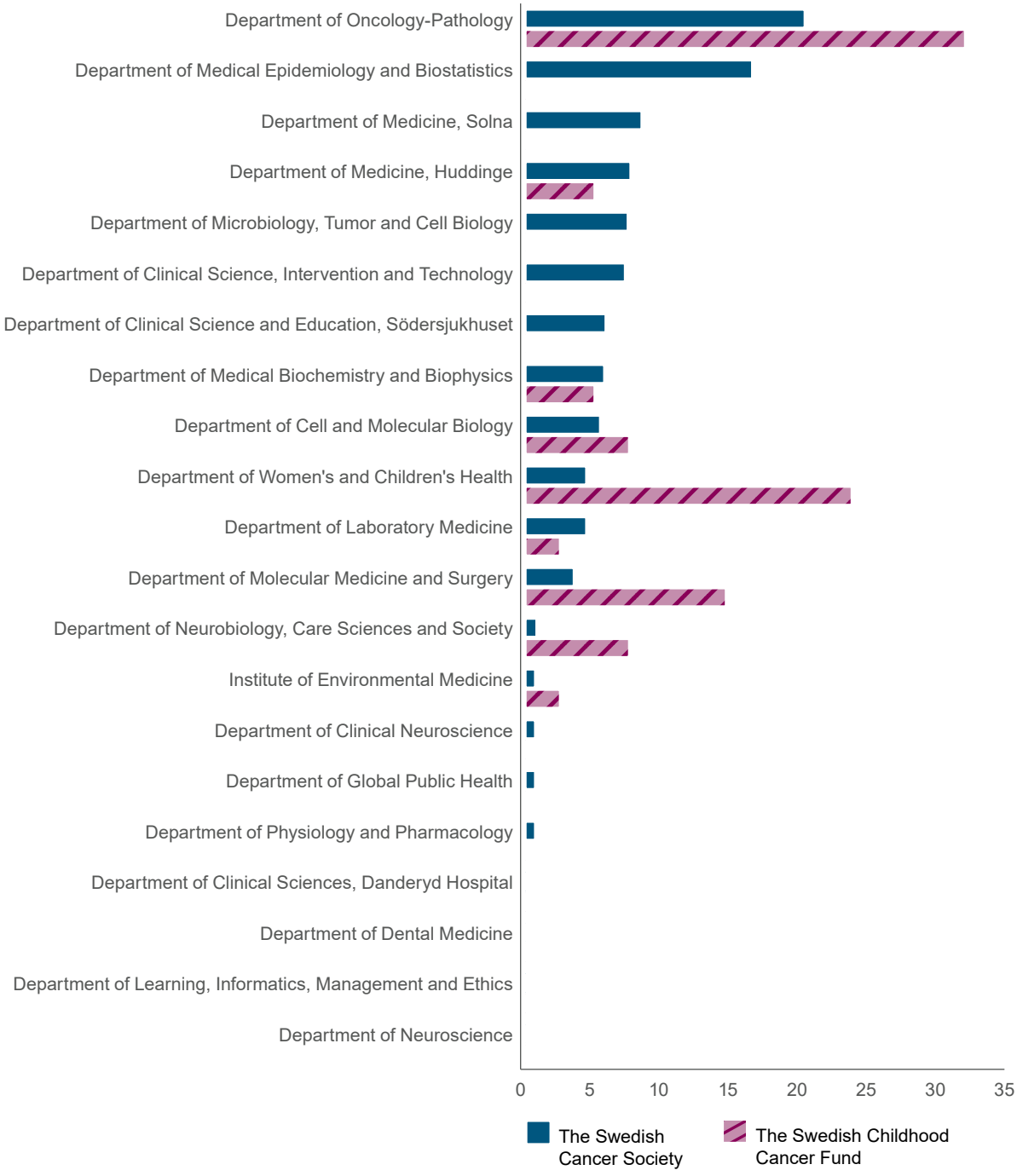


Figure 20. Distribution of research grants.

The distribution of grants from the Swedish Cancer Society and the Children's Cancer Fund across the various departments within KI for 2025 shows that the largest share was awarded to researchers at the Department of Oncology-Pathology. This pattern is also found for the Swedish Childhood Cancer Fund, where the same institution received the largest share of the grants.



Bibliometric analyses–publication data for Karolinska Institutet cancer researchers

To further evaluate cancer research at Karolinska Institutet, the publication of scientific articles authored by KI cancer researchers was analysed. The publication analysis covers a three-year period to allow for a stable estimation of developments. However, at the time of the analysis (in February 2026), the Web of Science database lacks a full indexation of publications from 2025, as each publication needs to be verified by the author before being registered. This means that the number of publications for 2025 analysed is only about half of all publications from 2025 as the registration is delayed by about six months. But you can look at the online database PubMed (National Library of Medicine) as a benchmark. There were, from Karolinska, 1,626 scientific articles published within the cancer area in 2025, for both national and international peer-review publications.

For 2023–2024, a stable number of publications in international journals has been observed, with almost 1,200 per year. When analysing publications where KI researchers within the field of cancer are first, second or last authors in highly ranked journals, an increase in the number of articles is evident both in terms of impact factor above 10 and within the range 5–10.

Table 12. Bibliometric analyses–publication data for Karolinska Institutet cancer researchers.

Year	2023	2024	2025*
Number of peer-reviewed publications			
At national level:	456	407	172
International:	1,192	1,184	397
Impact factor Cumulative:	14,690.6	16,091.6	5,792.5
Publications with impact factor > 10			
first/second/last author:	160	209	58
Co-authors:	252	226	88
Publications with impact factor between 5 and 10			
first/second/last author:	204	207	84
Co-authors:	214	234	96
Number of publications “Cancer” “Karolinska Institutet”:	1,604	1,588	1,626

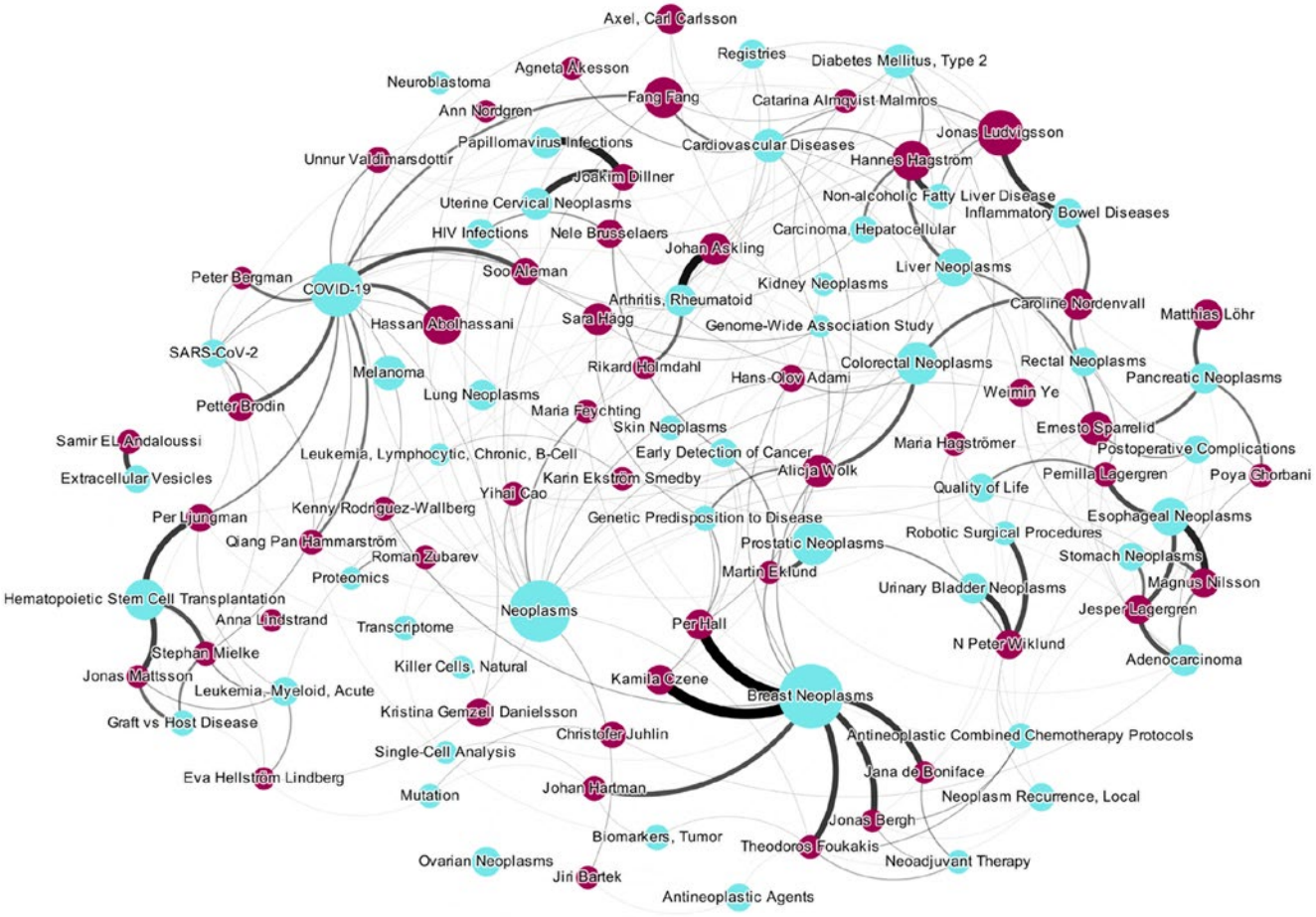
* data are not including the whole year.

Research publications within specific cancer areas 2023–2025

To investigate publication patterns within specific cancer areas, publications were analysed using MeSH terms representing different tumour types and research fields. Only terms with 29–233 publications were included, totalling 50 terms.

The analysis includes 51 authors with 28–117 publications each. The node area in the network visualisation is proportional to the number of publications; links between authors and terms are shown starting with a shared publication.

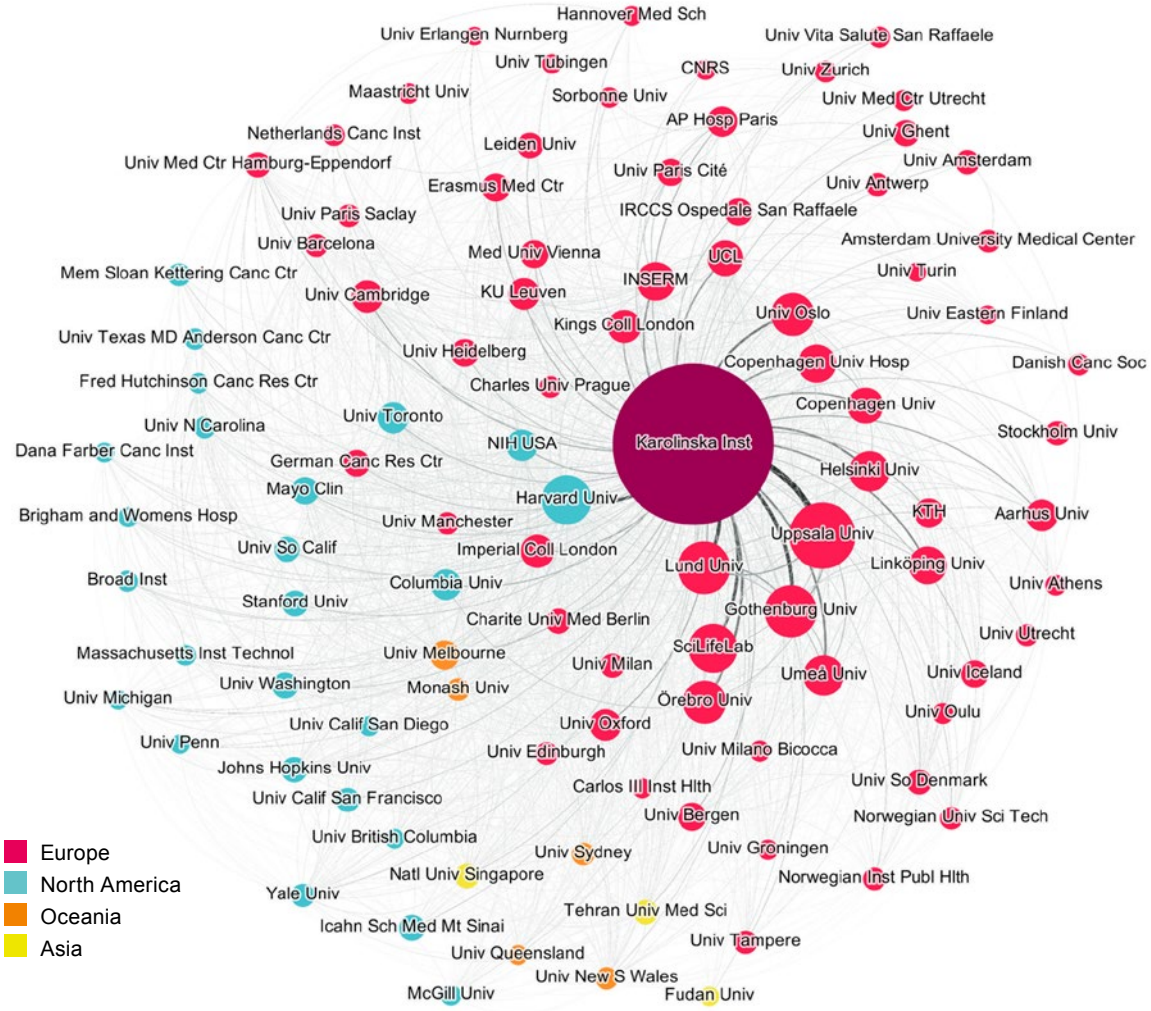
Figure 21. 102 authors are included in the analysis. The node area is proportional to the number of publications, ranging from 22 to 132 publications. Links are visible between authors who have at least one (1) co-publication.



Co-publications between KI cancer researchers and external organisations 2023–2025

A significant part of cancer research at KI is conducted in collaboration with external universities and organisations. The analysis of co-publications covers collaborations with 100 organisations associated with KI's cancer researchers during the period 2023–2025. The node area is proportional to the number of publications and varies from 59 to 4,303 publications (Karolinska Institutet). The visualisation includes organisations with at least 16 joint publications.

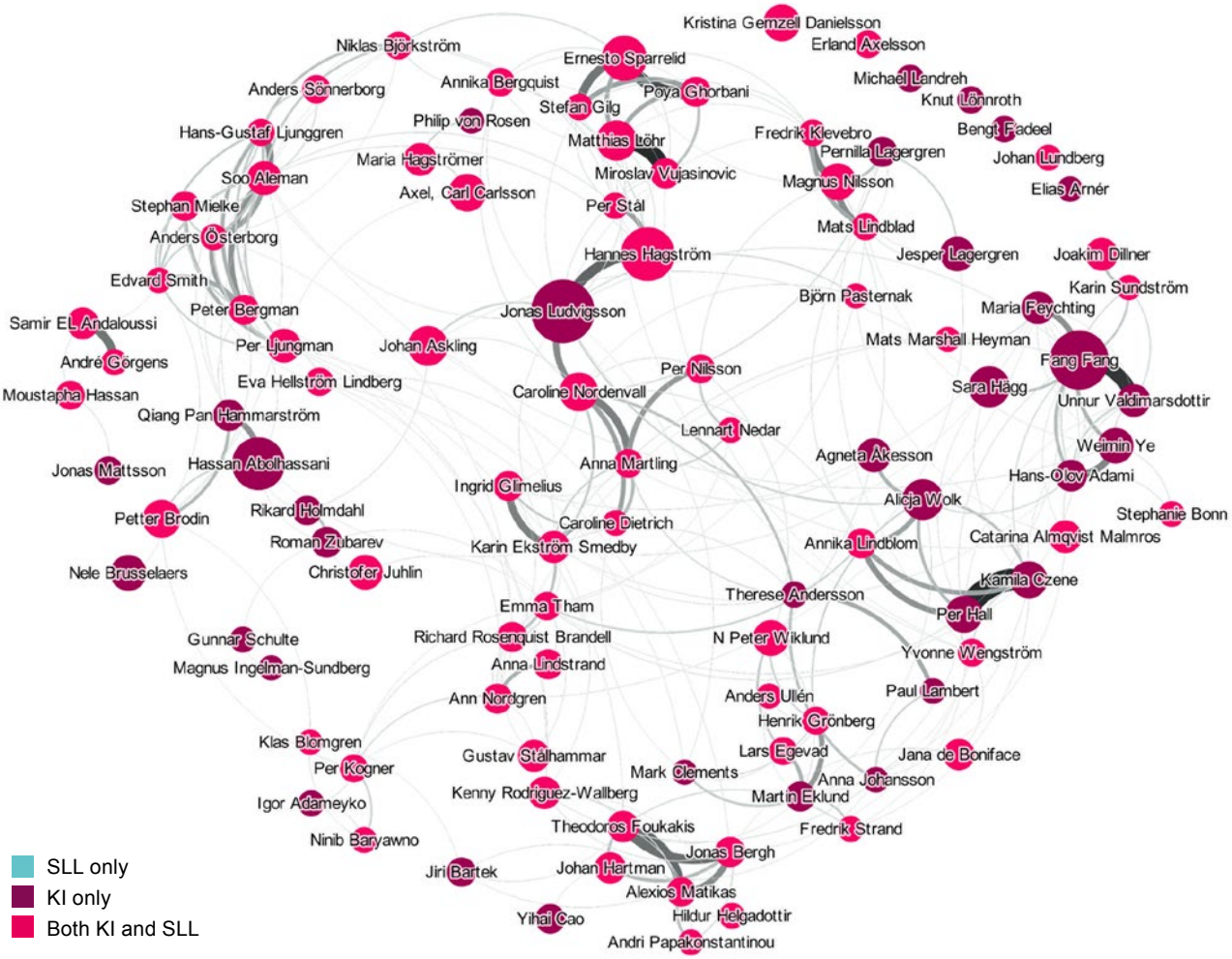
Figure 22. 102 authors are included in the analysis. The node area is proportional to the number of publications, ranging from 22 to 132 publications. Links are visible between authors who have at least one (1) co-publication.



Theme Cancer and Cancer Research KI author network – includes authors with at least 22 publications 2023–2025

To study publication activity at the research team level, the number of publications per research team investigator and their co-publications within Karolinska's cancer research network were analysed. To enable a clear visualisation, only research team investigators with at least 22 publications from the period 2023–2025 were included, which includes the 102 most published cancer researchers.

Figure 23. 102 authors are included in the analysis. The node area is proportional to the number of publications, ranging from 22 to 132 publications. Links are visible between authors who have at least one (1) co-publication.



Courses and training in oncology

During the year, education and postgraduate training within oncology have been conducted with high activity. New students have graduated and the graduate schools have attracted a large number of PhD students and offered a wide range of courses.

New classes of students have graduated from oncology programs. In the medical programme there is both a compulsory course in oncology and 2 elective courses. There is a special programme to become a specialist nurse in oncology as well as stand-alone courses.

The course for resident physicians and physicians, who had already graduated: modern oncology treatment runs every two years so it was suspended this year.

The NatiOn Graduate School was initiated in 2010 and has since then continuously trained mainly clinically active PhD students in clinical and translational cancer research. In 2025, NatiOn had 22 active PhD students.

Karolinska Institutet also organises a training program, FoTO, within tumour biology and oncology, which offers annual courses in basic tumour biology, new technologies and advanced courses focusing on individual cancer types. It has a translational profile that attracts both preclinical and clinical students. In 2025, FoTO had 120 PhD students registered. The programme offered 8 courses within tumour biology and oncology during VT 25 and 7 courses during HT25.

Courses in oncology

COURSES IN THE MEDICAL PROGRAMME	PARTICIPANTS
Clinical Medicine–specialisation in surgery compulsory course (Oncology 1.5/27 credits)	125
ELECTIVE COURSES	
Advanced Nursing–Palliative Medicine and Oncology (7.5 credits)	28
Advanced Course in Multidisciplinary Cancer Treatment (7.5 credits)	21
SPECIALIST NURSING PROGRAMME–ONCOLOGY CARE 2025	
Cancer diseases and nursing in the treatment of cancer diseases Moment 1 and 2 (15 credits)	26
Profession, patient safety and methods for developing nursing within the field of cancer (7.5 credits)	24
Cancer Prevention and Health Education (7.5 credits)	20
Degree Project in Nursing–Oncology Care (15 credits)	21
ELECTIVE AND FREE-STANDING COURSES	
The Contact Nurse in Healthcare (7.5 credits)	39
Palliative Care (7.5 credits)	6

Sustainability programme

The Karolinska University Hospital has a joint Sustainability Programme for 2023–2027 with goals within three areas: financial sustainability, social sustainability including work environment and environmental sustainability.

Environmental sustainability: protective aprons and sharps containers

Figure 24. 2024 Protective aprons.

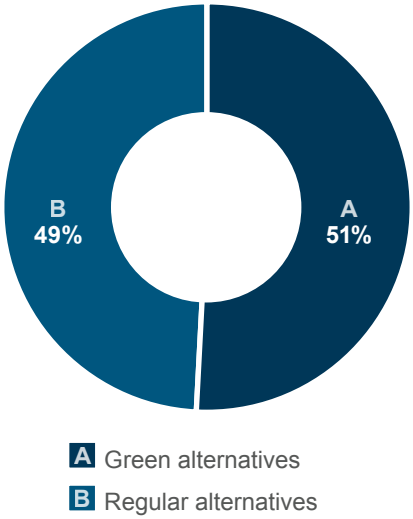


Figure 25. 2025 Protective aprons.

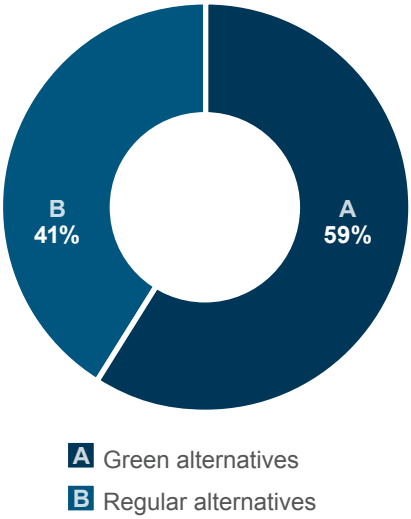


Figure 26. 2024 Sharps containers.

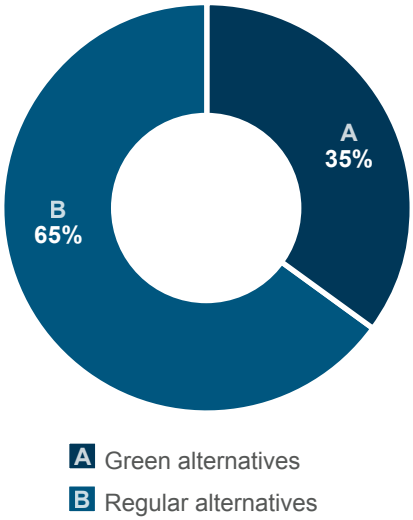
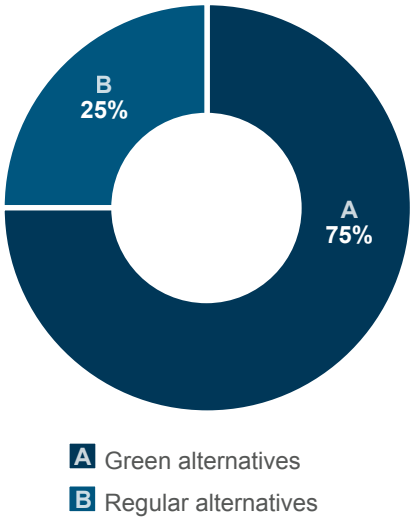


Figure 27. 2025 Sharps containers.



Publications selected by the operations in 2025

A

Abedi, E., Ewing, M., Nemlander, E., … Rosenblad, A. (2025). A machine learning tool for identifying metastatic colorectal cancer in primary care. *Scandinavian journal of primary health care,* 43(3), 585–593.

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B

Bartholdson, C., Pilström, A., Pergert, P., … Olsson, M. (2025). Research gaps in nursing status and interventions–A deductive qualitative analysis of healthcare professionals' perspectives from Swedish childhood cancer care. *European journal of oncology nursing : the official journal of European Oncology Nursing Society, 78,* 102972.

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C

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Emin, S., Rossi, E., Hedman, M.,… Onjukka, E. (2025). Performance of multivendor autosegmentation models for thoracic organs at risk trained on a single dataset. *Physica Medica, 137,* 105089.

D–E

Embaie, B. T., Sarkar, H., Alchahin, A. M., ,… Baryawno, N. (2025). Comparative Single-Cell Transcriptomics of Human Neuroblastoma and Preclinical Models Reveals Conservation of an Adrenergic Cell State. *Cancer research, 85*(6), 1015–1034.

Emin, S., Rossi, E., Hedman, M., … Onjukka, E. (2025). Performance of multi-vendor auto-segmentation models for thoracic organs at risk trained on a single dataset. *Physica medica : PM : an international journal devoted to the applications of physics to medicine and biology : official journal of the Italian Association of Biomedical Physics (AIFB), 137,* 105089.

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F–G

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Heymach, J. V., Ruiter, G., Ahn, M. J., … Zugazagoitia, J.; Beamion LUNG 1 Investigators. (2025). Zongertinib in previously treated HER2 mutant non-small cell lung cancer. *The New England Journal of Medicine, 392*(23), 2321–2333.

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J–L

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M–O

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R–T

Sharma, N., Rájová, J., Mermelekas, G., … Eriksson, H. (2025). In-depth patient-specific analysis of tumour heterogeneity in melanoma brain metastasis: Insights from spatial transcriptomics and multi-region bulk sequencing. *Translational Oncology, 59,* 102468.

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V–W

Valdman, A., Marsk, R., Karimi, M., … Nilsson, P. J. (2024). Surgical outcomes following total neoadjuvant therapy in rectal cancer with short-course radiotherapy using protons or photons: initial safety data from the PRORECT randomized trial. *The British journal of surgery, 111*(9), znae241.

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Selected books of the year

In 2025, Karolinska CCC staff participated in the completion of three important book projects that contribute to the dissemination of clinical and scientific knowledge within haematology, coagulation medicine and stem cell transplantation.

Blombäck's *Essential Guide to Blood Coagulation* (new edition). Editors: Jovan Antovic and Maria Magnusson

Blodets sjukdomar (comprehensive update). Editors: Gunnar Juliusson and Gösta Gahrton

Tusentals räddade liv under 50 år–Stamcellstransplantation i Sverige (new book). Editors: Hans Hägglund and Gösta Gahrton

Photo: Stefan Zimmerman

Cover photos: Jens Dahlborg.
Production and design: Blomquist Communication AB, blomquist.se.
Print: Ljungbergs Tryckeri i Klippan AB.
Editorial staff: Ann-Britt Johansson, Annika Östman, Liselotte Bäckdahl, Frans Karlsson, Louise Svanström, Embla Tinglöv.

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