





DIRECTOR'S COMMENTS

Dear all,

In this edition of the CCBIO Newsletter, you can read about some of our continuing activities in CCBIO2.0: new funding, new projects, new publications, new meetings, new courses. This is a good sign of proliferative activity and engagement – combined with networking and education.

In this edition, you can also read about the bold initiative from Haukeland University Hospital – to become approved as a comprehensive cancer center (CCC). This would be a significant step forward and an important process. Several of the CCBIO PIs are involved – and the ambition is to include active collaboration with UiB.

Several recent publications are highlighted. Please also take a look at the calendar and upcoming events, like the 9th Scandinavian Symposium on Translational Pathology (ScanPath) and the Clinical Trials course.

If you have still not read the CCBIO in Brief 2024 – you can either download a copy or place and order for a printed copy. Take a look at the recent history and try to predict the future!

Many congratulations to Mette Skorstad, and good luck to Njål Lura!

Best regards, Lars A. Akslen, Director

Capturing cancer complexity and clinical challenges

"CCBIO in Brief"is now available





















CCBIO in Brief is more than an annual report; it is a 370-page book describing CCBIO's period as a Centre of Excellence in the Research Council of Norway's CoE scheme from 2013 to 2024. It is now available as PDF, or you can request the printed book.

It dives into all our activities, evaluates our research and achievements, and is a genuine trip down memory lane with lots of photos of the many people who have contributed to the CCBIO journey.

Notably, you will find CCBIO's lessons learned along the way. How did we become a Centre of Excellence? What challenges did we face, and how did we meet them? What has become the legacy of CCBIO?

Note that CCBIO is not a closed chapter – CCBIO has continued its core activities, maintaining what has become a strong cancer research center and network.

"This journey has been exciting and rewarding in so many ways – and it is motivating to bring our activities into the future as CCBIO 2.0," CCBIO Director Lars A. Akslen says.

You can download the CCBIO in Brief here in a PDF version. Allow 2–3 minutes to load, as CCBIO in Brief is a very large file.

If you prefer a printed copy of the book, you can request one by <u>filling this questionnaire</u>.

HUVAMER receives TMF funding for AML research



The HUVAMER project at Haukeland University Hospital, led by CCBIO PI Prof. Bjørn Tore Gjertsen, has been awarded funding from the Trond Mohn Research Foundation to advance treatment strategies for acute myeloid leukemia (AML).

The team will test two repurposed drug combinations:

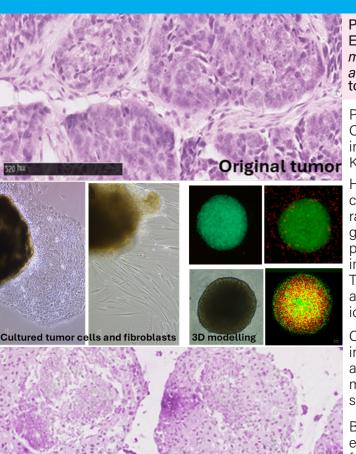
- Hydroxyurea + valproate
- 6-mercaptopurine + valproate

Hydroxyurea is already used to treat other blood disorders, valproate is used for epilepsy and as a mood stabilizer, and 6-mercaptopurine is used for other types of leukemia, but not yet for AML. These combinations may enable home-based treatment, which could be especially beneficial for older AML patients. The goal is to assess the safety and effectiveness of these combinations in patients with relapsed AML or high-risk myelodysplastic syndrome, who have no other treatment options.

The project also aims to identify biomarkers to support personalized therapy and better predict treatment response. In addition, the study looks at quality of life and physical activity among participants.

See more about the project (Norwegian only).

New TRANSCAN-3 project awarded



In vitro 3D tumor models

Prof. Daniela Costea (CCBIO/UiB) has received funding in a new ERA-NET TRANSCAN-3 project *Building an ex vivo complex tumour microenvironment platform for development of combination therapies and drug resistance studies in head neck cancer (BePREPARED)* together with partners.

Partners in the projects are from Charité Berlin, Regina Elena National Cancer Institute in Rome, and Université catholique de Louvain in Brussels. The project is coordinated by Prof. Ingeborg Tinhofer-Keilholz (Charité, Berlin).

Head and neck squamous cell carcinoma (HNSCC) remains a major clinical challenge, with 5-year survival rates as low as 50%, recurrence rates of up to 60%, very limited treatment options and no biomarker-guided treatment options. BePREPARED will develop next-generation patient-derived organoid (PDO) models that include immune and non-immune stromal components of the tumour microenvironment (TME). These advanced models will allow the consortium to test novel drug and radiotherapy combinations, study mechanisms of resistance, and identify new biomarkers to better guide therapy.

Costea's group will contribute with their long-standing expertise in tumour-stroma interactions, particularly by integrating cancer-associated fibroblasts into PDO models. This will ensure that the models better mimic patient tumours and capture how stromal cells shape therapy response.

Beyond research, BePREPARED will also provide training and scientific exchange opportunities, and will share protocols as an open resource for the wider research community, in line with the 3R principles of reducing animal use in research.

This new award highlights CCBIO's strong international collaborations and its role in advancing innovative translational cancer research.

Haukeland University Hospital on the path to CCC accreditation



Haukeland University Hospital has initiated an extensive process to achieve accreditation as a Comprehensive Cancer Center (CCC) through the Organisation of European Cancer Institutes (OECI). In this work, we find several CCBIO PIs in central roles.

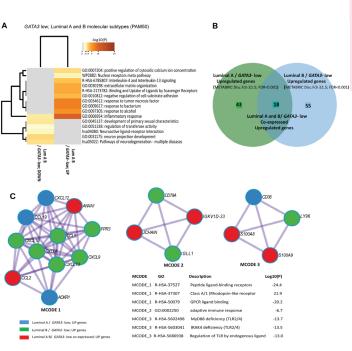
This international recognition sets the standard for hospitals providing integrated, highly specialized cancer care. A key requirement for CCC accreditation is strong integration of research and clinical activity. This includes maintaining a broad portfolio of high-impact translational and clinical research, as well as increasing the number of open clinical trials. **Oddbjørn Straume** is leading the CCC Steering Committee.

To meet the ambitions, a Research Committee for Haukeland CCC has been established. The committee is chaired by **Professor Line Bjørge** and includes 13 members, representing Haukeland University Hospital, the University of Bergen, and a patient representative from the Norwegian Cancer Society. Notably, **Elisabeth Wik** represents the Laboratory Clinic, while **Bjørn Tore Gjertsen** represents the University of Bergen. **Lars A. Akslen** is member of the Reference Group.

Formed in spring 2025, the council is dedicated to strengthening cancer research across the entire spectrum—from basic discoveries to patient-centered innovation. Its overarching goal is to establish Haukeland CCC as a national hub of excellence in specialized cancer care and research, fostering innovation in treatment, research, and education.

Read more about the CCC plans here.

New insights into breast cancer biology



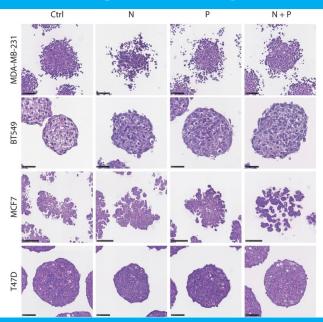
A brand-new publication from one of CCBIO's research groups, Breast Cancer of the Young - Bergen (BCY-B), explores the role of the transcription factor GATA3 in breast cancer. PhD candidate Anna K. M. Sæle et al. found that low levels of GATA3 are associated with more aggressive tumors and poorer survival.

Importantly, the findings extend beyond traditional hormone receptor pathways, showing that GATA3 may influence the tumor microenvironment – including immune activity and metabolism – independent of estrogen receptor status. Tumors with low GATA3 showed signs of T-cell activation and increased expression of immune checkpoint markers – features that could be relevant for the effect of immunotherapy. Also, low GATA3 was linked to metabolic alterations and drug signatures suggesting repurposing of statins as relevant treatment.

These insights suggest that GATA3 could serve as a valuable biomarker to help identify patient subgroups who might benefit from therapies targeting immunometabolic in breast cancer.

Read the publication in *The Journal of Pathology: Clinical Research*, "Reduced GATA3 expression associates with immuno-metabolic alterations and aggressive features in breast cancer."

Stress signals may influence breast cancer progression



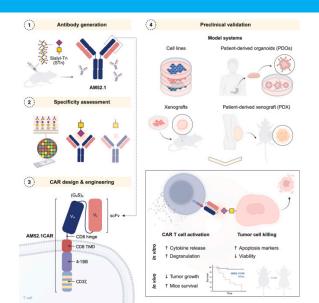
A new CCBIO study published in Frontiers in Neuroscience explores how stress-related adrenergic signals affect breast cancer cells. Manuel Carrasco et al. used 3D spheroid models to study the impact of noradrenaline—a key stress hormone—on different breast cancer subtypes. This project is part of the Cancer Neuroscience Program in the Akslen group.

The group's findings reveal heterogeneity in adrenergic receptor signaling across basal-like and luminal-like breast cancer cell lines, and also within the basal-like subgroup. This diversity underscores the complexity of adrenergic signaling in breast cancer and highlights the advantages of 3D culture systems.

These results provide valuable insights into the subtype-specific patterns of response to adrenergic signaling that contribute to tumor progression and may inform future studies including evaluation of therapeutic strategies.

Read the publication: "Adrenergic signals influence proteomic responses in breast cancer cells."

Expanding CAR therapy to solid tumors

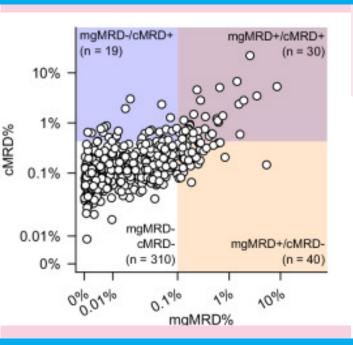


A new collaboration study introduces a novel approach to chimeric antigen receptor (CAR) T cell therapy targeting the sialyl-Tn (STn) antigen, a glycan broadly expressed across multiple solid tumors.. The team, incl. CCBIO investigators Pascal Gelebart, Emmet Mc Cormack, Line Bjørge, and Dana Costea, demonstrates that monoclonal antibodies AM51.1 and AM52.1 specifically bind STn in both engineered and naturally occurring cancer cells.

When incorporated into CAR T cells, these antibodies enabled potent and selective tumor cell killing *in vitro* and in patient-derived organoids. The therapy showed minimal off-target effects and robust cytokine release, indicating strong immune activation. This pan-carcinoma strategy could overcome current limitations in solid tumor CAR T therapy, offering a promising path toward broader clinical applications.

Read the publication in *Cell Reports Medicine*: Pan-carcinoma sialyl-Tn-targeting expands CAR therapy to solid tumors

Automated MRD assessment in AML validated in HOVON-SAKK-132 trial



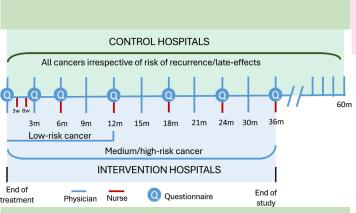
A recent collaboration study by Mocking et al. and including CCBIO PI Bjørn Tore Gjertsen validates a computational pipeline for measurable residual disease (MRD) assessment in acute myeloid leukemia (AML), offering a fast (~3s) and reproducible alternative to manual gating.

Using flow cytometry data from 399 patients in the HOVON-SAKK-132 trial, the algorithm identified leukemic cells via interpretable machine learning and statistical modeling. Computational MRD (cMRD) showed strong prognostic value for overall and relapse-free survival, outperforming manual MRD (mgMRD) in relapse prediction.

The study highlights cMRD's potential to streamline AML diagnostics, reduce inter-operator variability, and improve clinical decision-making. While further multi-center validation is needed, the pipeline's minimal training requirements and transparent design make it promising for broader implementation.

Read the publication in *Leukemia*: <u>Computational measurable</u> residual disease assessment in acute myeloid leukemia: a retrospective validation in the HOVON-SAKK-132 trial

Empowerment and quality of life in gynecological cancer



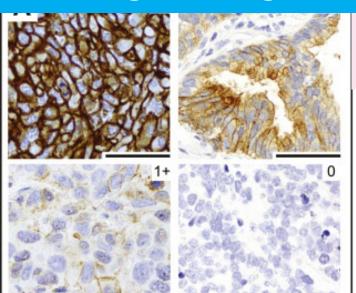
A multicenter Norwegian study, the LETSGO trial which included CCBIO PI Line Bjørge, explored whether a personalized, nurseled follow-up model could enhance empowerment and quality of life (QoL) in gynecological cancer survivors.

Across 12 hospitals and involving 741 participants, the study compared standard physician-led care with an intervention combining nurse-led coaching, lifestyle education, and app support. While no significant improvement was found in the primary outcome (self-monitoring and insight), those in the intervention group experienced better health-directed activity, emotional well-being, social functioning, and physical functioning.

These findings suggest that while empowerment in terms of selfmonitoring may remain unchanged, structured survivorship care can enhance overall quality of life. This shows promise for improving support and outcomes in gynecological cancer follow-up.

Read the publication in *Cancer*: Empowerment and quality of life in gynecological cancer survivors: Outcomes from a multicenter quasi-experimental cohort study from Norway (the LETSGO trial)

Promising ADC targets identified in cervical cancer study



In a recent collaboration study, Ulvang et al. incl. CCBIO researchers Oda Fløtre Kvile, Hege F Berg, Camilla Krakstad and Mari Kyllesø Halle, investigated ADC target expression in primary and metastatic CC to identify potential ADC responders.

Notably, the ADC targets tissue factor and TROP2 were highly expressed in primary and metastatic CC. The prevalence of high NECTIN4 expression was modest in primary tumors but increased significantly in recurrent disease.

These findings support the initiation of clinical trials to evaluate safety and efficacy profiles of ADCs targeting tissue factor, TROP2 and NECTIN4 in CC.

Read the publication in Translational Oncology: <u>Co-expression</u> of tissue factor, TROP2, and NECTIN4 in primary and matched metastatic cervical cancer lesions

Research stay in Heidelberg, Germany



Last year, one of CCBIO's members got the opportunity to have a 2-year fellowship combining research and clinical practice in gynecological oncology in Heidelberg, Germany.

Cecilie Fredvik Torkildsen is a senior consultant, PhD, at the Women's Clinic at Stavanger University Hospital (SUS) and an associate professor at UiB/CCBIO. After one year, Torkildsen reports of a great experience in Heidelberg.

Cecilie is associated with Line Bjørge's research group at UiB/CCBIO, named INOvA. She will be continuing her research within the group on a project on immunoprofiling of patients with high-grade serous ovarian cancer. Although her position primarily focuses on advanced cancer surgical training, she has established a research collaboration between Heidelberg and Professor Oliver Zivanovic and CCBIO. She participates in weekly and monthly study meetings together with four other Fellows at the Women's clinic, Heidelberg. She finds it inspiring to hear about their projects and techniques. The ongoing project is to establish a control cohort for validation in addition to establish a neoadjuvant patient cohort for immunophenotyping. Her project is supported by a career scholarship from UiB/SUS, The Kolbjørn Brambani Cancer Research Grant, Folke Hermansens Foundation and Trond Mohn Research Foundation.

Programs available for coming events



ScanPath – the Scandinavian Symposium on Translational Pathology

ScanPath will this year be hosted by CCBIO in Norway, at Solstrand, October 29–30, 2025. This Nordic annual meeting, established in 2016 by CCBIO (Akslen and Östman), aims to promote basic and translational tissue studies, and collaborations, using well annotated human cancer cohorts and cutting-edge technology. It fosters networking between academia and industry and provides a platform for young scientists to present their work alongside renowned researchers. See this years' prefinal program on this page.

We are experiencing a great interest in the symposium and it is rapidly getting fully booked. There is now no lodging on October 28 (before the symposium), but still available rooms on October 29. If you want to arrive early, you'll therefore need to find someone to share room with.

We will keep the <u>registration link</u> open till we are fully booked. If you find the link closed, check with geir.loken@uib.no



Course: CCBIONEUR911 Clinical Trials, January 14–16

Are you involved in clinical research or planning to be? The CCBIONEUR911 course 2026 offers a unique opportunity to deepen your understanding of clinical trial methodology, ethics, and implementation. Over three intensive days, you'll gain practical insights from leading experts in cancer and neurological research. The course includes certification in Good Clinical Practice (GCP-R3), essential for anyone working with clinical trials. Whether you're new to clinical trials or looking to update your knowledge, this course is designed to support your development.

When: January 14-16, 2026

Where: Campus Haukeland University Hospital

Program is available on this page and more info on this page **Deadline/reg.**: January 5. Register in Studentweb for UiB students (2 ECTS), and in an non-ECTS form for other participants.

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Recent doctoral defense



Mette Skorstad defended June 6, 2025 her doctoral work at the University of Bergen with the thesis "Follow-up care of gynecological cancer survivors."

Skorstad's research addresses growing number the women living with gynecological cancer, primary tailored follow-up care after more treatment. Current follow-up routines are not evidence-based and often overlook patients' individual challenges. Skorstad contributed to the development of LETSGO, a structured follow-up model designed to improve selfmanagement and quality of life. In LETSGO, nurses replace physicians in every second consultation, focusing on patient education, symptom monitoring, psychosocial support, and physical activity. Participants also use a mobile app for symptom tracking and self-assessment. Skorstad's work included interviews with pilot participants and a national multicenter intervention study involving 741 patients. After 12 months, patients in the LETSGO group reported better health-related activity, lower emotional distress, and improved social and physical quality of life compared to standard care. Her findings highlight the importance of individualized, holistic follow-up to support cancer survivors in their recovery.

Supervisors have been Professor Ingvild Vistad (UiO, main supervisor), Professor Sveinung Berntsen (UiA), and Professor Line Bjørge (UiB).

See the dissertation in NVA.

Coming doctoral defense



Njål Lura defends October 24, 2025 his doctoral work at the University of Bergen with the thesis "MRI Precision imaging for individualized treatment in uterine cervical cancer".

Cervical cancer affects around 300 women annually in Norway. Before treatment, most undergo pelvic MRI, which provides crucial information about disease extent and staging—essential for choosing the right therapy. MRI findings can also help assess the risk of recurrence. This dissertation includes three sub-studies exploring how key MRI findings support accurate staging and introduce new imaging markers.

The first study showed that radiologists largely agreed on key MRI criteria used in FIGO staging, such as tumor size and spread. This supports MRI as a reliable tool for treatment planning. The second study found that tumor size on MRI strongly predicts survival. Tumors over 4 cm were linked to higher recurrence risk, and measurements were consistent across radiologists. The third study used diffusion-weighted MRI to assess tumor aggressiveness. When combined with traditional staging, it improved risk classification and treatment precision.

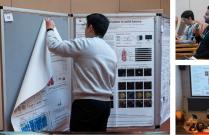
Overall, the findings show that MRI enables more precise diagnostics and safer treatment pathways in cervical cancer. It helps identify high-risk patients early, avoid overtreatment in low-risk cases, and support timely, individualized treatment decisions.

Supervisors have been Professor Ingfrid S. Haldorsen, Professor Camilla Krakstad, and Dr. Kathrine Woie.

See the press release, or find the dissertation in NVA.

Coming CCBIO events







Make sure to save the dates in your calendar, and register when applicable. You can see all planned CCBIO events in the <u>CCBIO web calendar</u>.

- October 21–23, CCBIO906 Cancer Genomics course.
- October 29–30, the 9th Scandinavian Symposium on Translational Pathology (ScanPath). This year, ScanPath will be hosted by CCBIO, at Solstrand outside of Bergen!
- November 13, CCBIO Seminar, speaker Vincenzo Ciminale. Time: 14:30–15:30
- November 27, CCBIO Seminar, speaker TBA. Time: 14:30–15:30
- December 11, CCBIO Junior Scientist Symposium
- December 11, CCBIO Seminar, speaker TBA. Time: 14:30-15:30
- January 15–16, 2026, <u>CCBIONEUR911, Clinical Trials course</u>.
- May 10-11, 2026, <u>Pre-Symposium to CCBIO's 14th Annual Symposium</u>,
 Solstrand
- May 12–13, 2026, <u>CCBIO's 14th Annual Symposium</u>, Solstrand

Other relevant coming events

Events from collaboration partners and other relevant events.



- October 17–21, <u>ESMO Congress 2025</u>, Berlin, Germany
- October 21, <u>Forskningsdagen ved Det medisinske fakultet 2025</u>, UiB, Bergen
- October 30, <u>BBB Seminar, speaker Marcel Kwiatkowski</u>, Bergen
- November 3–5, <u>BIO-Europe® 2025</u>, Vienna, Austria
- November 5, <u>Nasjonal konferanse om kvinnehelseforsking</u>, DRIV, Bergen.
- November 11, <u>Soft Funding Strategy Workshop</u>, Oslo Cancer Cluster
- November 12–14, ESMO AI & Digital Oncology, Berlin, Germany
- November 24–25, <u>43rd World Cancer Conference</u>, "Early Detection and Screening: Advancements in Cancer Diagnosis", Barcelona, Spain.
- November 28, <u>Taking advantage of existing research data</u>, the UiB University Library, webinar via Zom
- January 22, <u>Cancer Crosslinks 2026</u>, Oslo Cancer Cluster
- June 4–6, 8th EuSARC Annual Symposium, Oslo Cancer Cluster



Publications

You can find the CCBIO publications on this pubmed link. Apart from the ones on pages 4-5, see other recent below.

- Matthew A Powell t al. incl Line Bjørge. A plain language summary publication of patients' survival with endometrial cancer treated with dostarlimab plus carboplatin-paclitaxel. Ther Adv Med Oncol. 2025 Oct 9;17:17588359251342241. doi: 10.1177/17588359251342241. eCollection 2025. PMID: 41084729. Review.
- Sara Söderqvist et al., incl Carina Strell. An injury-associated lobular microniche is associated with the classical tumor cell phenotype in pancreatic cancer. Nat Commun. 2025 Sep 26;16(1):8307. doi: 10.1038/s41467-025-63864-7. PMID: 41006303.
- Riikka Pietiläet al. incl Carina Strell. A comprehensive molecular atlas of the mesenchymal cell types in the mouse liver. EMBO Rep. 2025 Sep 15. doi: 10.1038/s44319-025-00580-9. Online ahead of print. PMID: 40954217.
- Stefan Hinz et al., incl. Sturla M Grøndal and James Lorens. MechanoAge, a machine learning platform to identify individuals susceptible to breast cancer based on mechanical properties of single cells. bioRxiv [Preprint]. 2025 Aug 12:2025.08.08.668946. doi: 10.1101/2025.08.08.668946. PMID: 40832316. Preprint.

- Krohn J, Vinnem LIH, Jansson RW, Straume O. Fundus hypopigmentation and choroidal thinning associated with tebentafusp therapy: report of a case and literature review. BMC Ophthalmol. 2025 Aug 15;25(1):464. doi: 10.1186/s12886-025-04274-7. PMID: 40817046. Review.
- Moshina N, Falk RS, Botteri E, Larsen M, Akslen LA, Ursin G, Cairns JA, Hofvind S. Long-term quality of life and quality adjusted life years after breast cancer: Impact of detection mode, tumor characteristics and treatment. J Cancer Policy. 2025 Sep;45:100631. doi: 10.1016/j.jcpo.2025.100631. Epub 2025 Aug 5. PMID: 40774379.
- Oskouei S, Pedersen A, Valla M, Dale VG, Wahl SGF, Haugum MD, Langø T, Ramnefjell MP, Akslen LA, Kiss G, Sorger H. OKEN: A Supervised Evolutionary Optimizable <u>Dimensionality Reduction Framework for Whole Slide Image</u> Classification. *Bioengineering (Basel)*. 2025 Jul 4;12(7):733. doi: 10.3390/bioengineering12070733. PMID: 40722425.
- Kenneth Sooi et al., incl Line Bjørge. A phase 1b, multicentre, dose escalation, safety and pharmacokinetics study of tilvestamab (BGB149) in relapsed, platinum-resistant, highgrade serous ovarian cancer (PROC) patients. Br J Cancer. 2025 Oct;133(6):896-908. doi: 10.1038/s41416-025-03090-6.

Recent CCBIO in the media

Recent media appearances by CCBIO PIs and group members. For all media hits, see CCBIO's web pages.

- 07.10.25, Bergens Tidende, "Hege (45) blir ikkje kvitt kreften. Eg såg mørkt på det ei stund." Oddbjørn Straume.
- 02.10.25, Nasdag, "Mendus announces updated clinical strategy and operational focus." Bjørn Tore Gjertsen.
- 18.09.25, Tannlegetidende, "Arsmøte i den Skandinaviske forening for oral patologi og oral medisin (SFOPOM)." Anne Christine Johannessen, Daniela E. Costea.
- 17.09.25, Helse Bergen, "<u>Trond Mohn forskningsstiftelse støttar kreftforsking ved Haukeland: Skal gi nytt håp til pasientar med alvorleg kreft.</u>" Bjørn Tore Gjertsen.
- 24.06.25, Forskningspolitikk, "Samfunnsmakt, samfunnsansvar og forskning." Anne Blanchard.
- 13.06.25. Health Talk, "Håper å kunne forutsi hvordan KML-pasienter responderer på behandling etter kun én time," Stein-Erik Gullaksen.
- 12.06.25, Health Talk, "KML-pasienter fikk færre bivirkninger og raskere effekt kan bli ny førstelinjebehandling,", Stein-Erik Gullaksen, Bjørn Tore Gjertsen.
- 11.06.25, Khrono, "19 forskere får til sammen 191 millioner kroner fra Fripro-ordningen," Harsh Dongre.
- 10.06.25, Health Talk, "Nordmenn presenterer blodkreftforskning på europeisk kongress," Bjørn Tore Gjertsen, Stein-Erik Gullaksen.
- 27.05.25, Sykepleien, "Faktisk.no: Jo, forskning viser at cellegift øker sjansen for å overleve kreftsykdom," O. Straume.

Programs and Research Teams

Mechanisms of Tumor Microenvironment Interactions:

- Donald Gullberg Karl-Henning Kalland Emmet McCormack

Exploration and Validation of Cancer Biomarkers:

- Lars A. Akslen Jim Lorens
- Camilla Krakstad
- Daniela Costea Elisabeth Wik Carina Strell
- Agnete Engelsen

Clinical Applications and Trial Studies:

- Bjørn Tore Gjertsen
- Oddbjørn Straume Line Bjørge

Health Ethics, Prioritization and Economics: Roger Strand

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