MATRIX
NORWEGIAN CENTRE FOR
CLINICAL CANCER RESEARCH

Centre for
Clinical Treatment
Research

Annual Report 2024

MATRIX has an overall ambition *to help patients* with hard-to-treat cancers to live longer and with *better quality* of life

MATRIX Co-Funders:
The Research Council of Norway
The Norwegian Cancer Society

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INTRODUCTION

Greetings *from* the Director

Åslaug Helland
Director, MATRIX

Dear friends, colleagues, and supporters of MATRIX,
It is a great pleasure to welcome you to the 2024 MATRIX Annual Report that covers main activities from the past year and key features of what we do.

Highlights from 2024 include a national gathering at Sola outside Stavanger, activities related to patient and public involvement, organization of a symposium on public service innovation and the first industry agreement for our new clinical trial MATRIX-RARE. Furthermore, external funding for important new research projects was secured in 2024, and MATRIX-affiliated key researchers received several awards.

MATRIX has gathered experts from all over Norway to work together within several areas of cancer care, from developing next-generation diagnostics, increase the number of available clinical trials to developing and implementing new, digital solutions for patient-centred care. I take this opportunity to thank all clinicians, researchers, students and staff across our 17 partner institutions for their enthusiasm, dedication, hard work and the collaborative spirit over the past year.

The involvement of fifteen partner hospitals and the establishment and running of new master-level courses focusing on clinical trials at OsloMet as well as up-coming mentoring and teaching activities connected to the UiO Growth House and the School of Health Innovation, all contribute to a gradual competence building across Norway.

Furthermore, the clinical trial engine support function offers hands-on support to academic investigators around Norway. The aim is to lower the hurdles for initiating and conducting clinical trials, and thus, contribute to initiation of more decentralized clinical trials in the coming years.

We hope to strengthen collaborations and joint efforts further to allow MATRIX to reach its overall ambition to help patients with hard-to-treat cancers to live longer and improve their quality of life.

In 2025, we especially look forward to welcoming our Scientific Advisory Board to their first on-site visit.

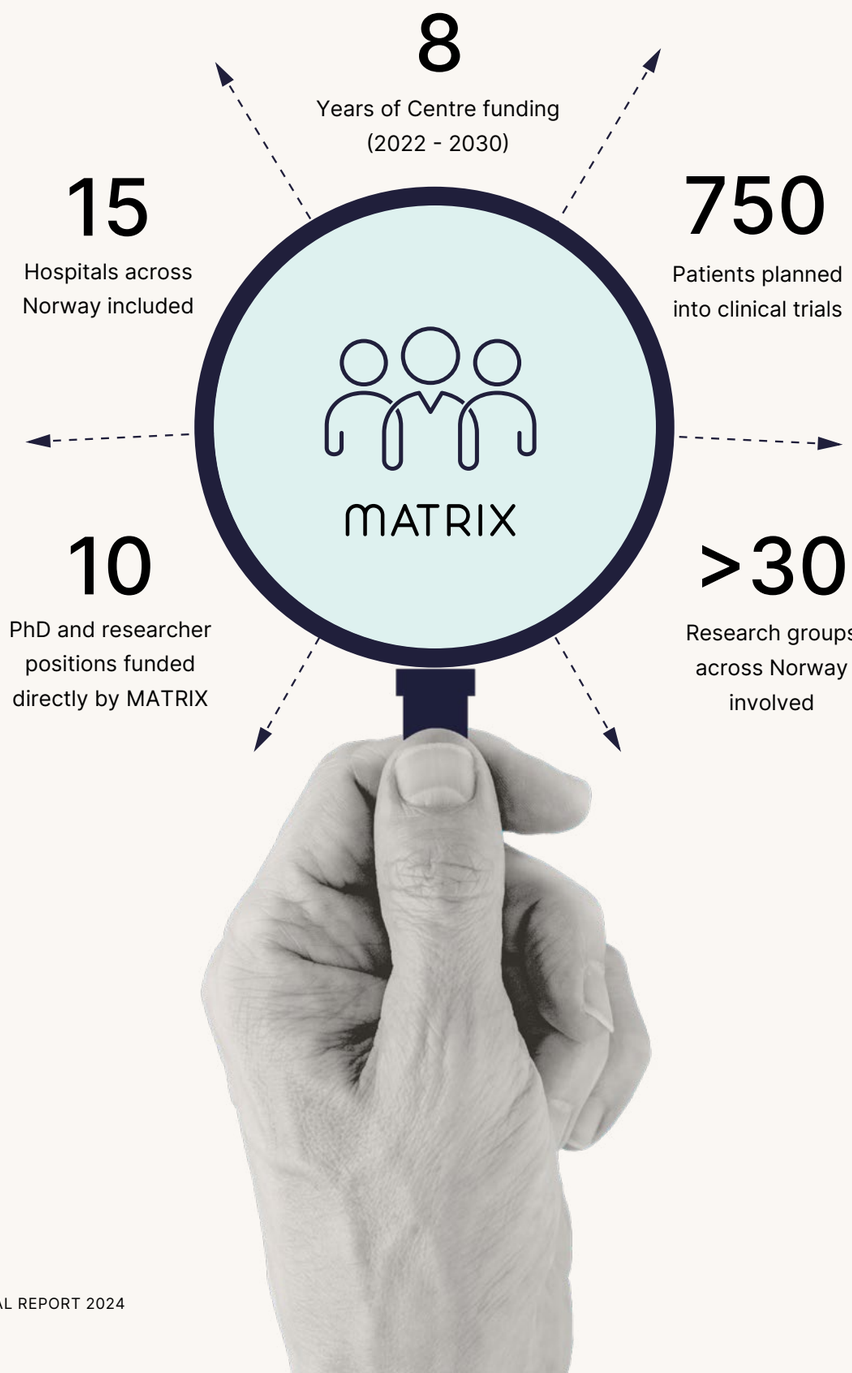
In connection to the SAB visit, we also plan to gather all partners for our annual meeting that will take place in Oslo in the fall.

Furthermore, we are happy to announce that the second Acta Oncologica Nordic Precision Cancer Medicine Symposium will take place in September and look forward to sharing more details about the program and registration soon.

We encourage researchers, industrial partners, patients and other interested stakeholders to contact us to get more information and to discuss opportunities to shape the future of cancer treatment together.

March 2025

Åslaug Helland
Director, MATRIX



ABOUT

MATRIX – A *Brief* Overview

The Norwegian Centre for Clinical Cancer Research is a national research centre with an overall ambition to help patients with hard-to-treat cancers live longer with better quality of life. The scope of the center is very broad, ranging from the development of new diagnostics and new treatments to the development of new cancer care tools.

Thus, MATRIX is facilitating the development and implementation of next-generation cancer care. Research in MATRIX is divided into five work packages that are described in more detail later.

MATRIX has been fully operational for 2.5 years and is funded by the Research Council of Norway and the Norwegian Cancer Society. The centre is one of four Centres for Clinical Treatment Research (FKB) in Norway. This funding scheme aims to establish and strengthen clinical research environments, and through outstanding research, the aim is to contribute to improved outcomes for Norwegian patients.

The centres receive support for a maximum of eight years, and the primary research tasks are to perform clinical studies.

All Norwegian hospitals with cancer departments were invited to join MATRIX, and the centre has partners and study sites across all health regions in Norway. Altogether, fifteen hospitals as well as the University of Oslo and Oslo Metropolitan University (OsloMet) are partners in MATRIX.

MATRIX collaborates closely with large ongoing national precision cancer medicine initiatives, national tumour groups, national initiatives in patient-centred care and the unique infrastructure for clinical trials.

Moreover, the centre has a close collaboration with a private ICT company, DNV Imatis, regarding digital innovations for better patient care and care planning. In addition, MATRIX has a broad network of international collaborators and is strongly involved in several large ongoing EU projects within the areas of precision cancer medicine and patient-centred and palliative care.

IMPACT

Clinical Cancer *Research*

Improved diagnostics

MATRIX develops new diagnostic methods in molecular profiling, drug sensitivity screening, and immune system characterization, as well as artificial intelligence (AI) tools for analysis of images and clinical real-world data.

We collaborate closely with the national infrastructure for precision diagnostics (InPreD) to ensure systematic and rapid testing of the clinical benefit of diagnostic tools in new clinical trials.

More clinical studies and precise treatment

MATRIX develops and tests new treatment strategies in clinical trials. We support trials focusing on patient benefit for hard-to-treat cancers.

This includes trials focusing on testing new diagnostics, precision cancer medicine or improving quality of life. Furthermore, MATRIX can design and offer studies in earlier lines of treatment and which may include studies of new drug combinations. The trials should be available to patients from all of Norway.

Patient follow-up and patient participation are central

There is a need for novel digital tools that ensure that the patient's needs and preferences are integrated into all treatment decisions.

MATRIX is developing systematic digital symptom assessment and patient-centred care pathways with evidence-based content that will secure treatment and follow-up tailored to the individual patient.

A dedicated work package focuses on how these systems can be implemented in the Norwegian healthcare system..

Photo: OUS, Per M Didriksen

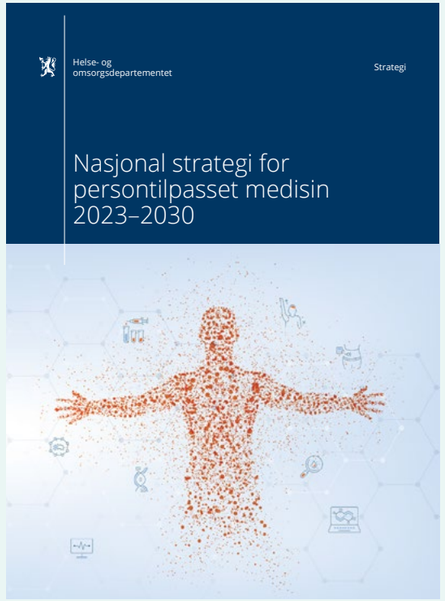
AMBITIONS

Desired Outcomes

The Ministry of Health and Care Services has launched a national strategy for precision medicine for the period 2023-2030 where three strategic goals are clearly expressed:

1. Equality in access to personalized medicine with close integration of patient care, research and other types of systematic generation of knowledge
2. Healthcare services that possess the relevant competence to meet individual needs related to personalised prevention, diagnostics, treatment and follow-up
3. Safe and efficient use, analysis, sharing and storage of large-scale health data needed for personalised medicine applications in healthcare, service development and research within a framework that secures the integrity of the individual and data privacy

The aim is that Norway should offer precision medicine to its citizens as part of an integrated line of treatment within the public healthcare system.



The patients should be offered more precise and targeted diagnostics and treatment while avoiding treatment without effect, as well as to involve patients in shared decision-making processes.

MATRIX collaborates with and builds on already ongoing initiatives in Norway within precision cancer medicine and patient-centred care.

Furthermore, MATRIX collaborates with the EU-funded consortium MyPath (The digital Solution to Patient-centred Cancer Care) as well as with two large European precision medicine initiatives, PCM4EU and PRIME-ROSE. These two projects build on the success of national initiatives to expand access to precision cancer medicine to more patients across Europe and to address key challenges related to implementation. The overall aim of all the combined efforts is to make Norway world-leading in precision cancer research, treatment, and care.

Build competence and experience

with next-generation diagnostics and treatment by conducting a number of clinical trials. Patients are recruited at hospitals all over the country.

Facilitate advanced clinical trials

through the established Clinical Trial Engine for handling regulatory, logistical and clinical needs. The centre also contributes to the training of study personnel.

Establish a systematic pipeline

for the development of new diagnostics, treatments and digital solutions, to be tested in clinical trials and for implementation in the healthcare system.

WORK PACKAGES

Research

More than 38,000 new cancer cases are registered annually in Norway, and although most patients recover, cancer is still the number one cause of death. In 2023, more than 11,000 people died from cancer in Norway.

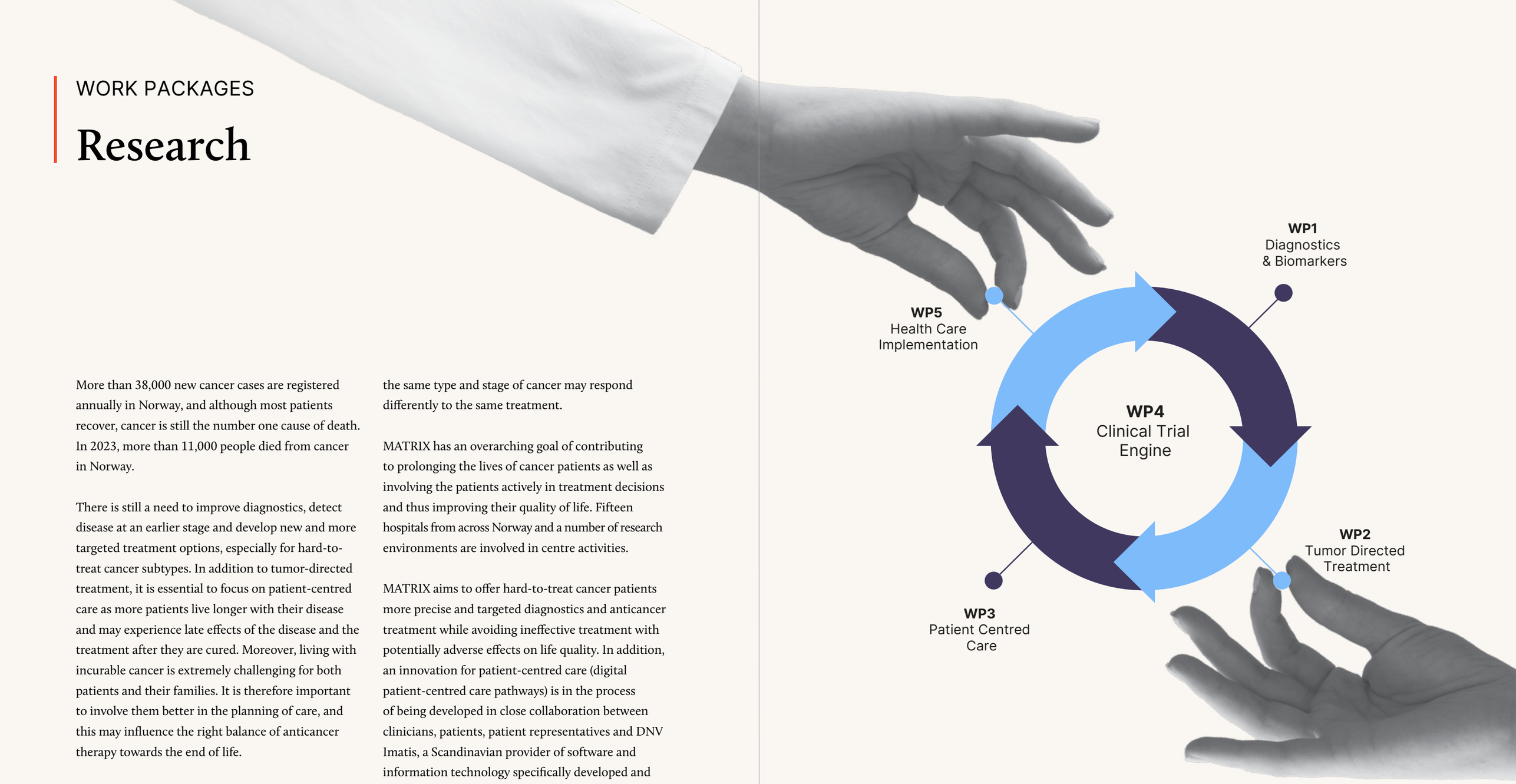
There is still a need to improve diagnostics, detect disease at an earlier stage and develop new and more targeted treatment options, especially for hard-to-treat cancer subtypes. In addition to tumor-directed treatment, it is essential to focus on patient-centred care as more patients live longer with their disease and may experience late effects of the disease and the treatment after they are cured. Moreover, living with incurable cancer is extremely challenging for both patients and their families. It is therefore important to involve them better in the planning of care, and this may influence the right balance of anticancer therapy towards the end of life.

A key element in modern cancer treatment is the possibility of guiding patient treatment based on a detailed molecular characterization of each patient's disease - precision cancer medicine. These individual molecular properties may explain why patients with the same type and stage of cancer may respond differently to the same treatment.

MATRIX has an overarching goal of contributing to prolonging the lives of cancer patients as well as involving the patients actively in treatment decisions and thus improving their quality of life. Fifteen hospitals from across Norway and a number of research environments are involved in centre activities.

MATRIX aims to offer hard-to-treat cancer patients more precise and targeted diagnostics and anticancer treatment while avoiding ineffective treatment with potentially adverse effects on life quality. In addition, an innovation for patient-centred care (digital patient-centred care pathways) is in the process of being developed in close collaboration between clinicians, patients, patient representatives and DNV Imatis, a Scandinavian provider of software and information technology specifically developed and adapted within the healthcare industry.

Research taking place in MATRIX is organized into five work packages, which together cover the broad scope of the centre:



WP1

Next-Generation Cancer Diagnostics & Biomarkers

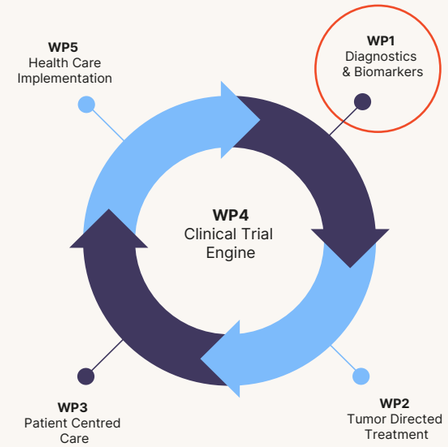
Research focus:

There is still a great potential to improve the benefit of therapy for individual cancer patients by better patient selection. This can be achieved through increased biological characterization of their disease, as well as by the design of unique synergistic combination therapies that could give cure or overcome treatment resistance. Furthermore, a driver for precision cancer medicine is the advancement of methods and technologies for advanced data analyses for systems biology, machine learning, and artificial intelligence (AI).

- Research in WP1 is organized into two sub-projects: WP1a utilizes and further develops available technologies in collaboration with InPreD (national infrastructure for precision diagnostics, cancer), leading to the implementation of next-generation diagnostics. Other omics, liquid biopsy assays as well as functional approaches such as cancer drug sensitivity screening and pharmacogenomic profiling, are included.
- WP1b utilizes new imaging (MRI and PET) technologies and methodologies, such as multi-parametric scanning in collaboration with the CRAI Unit at OUS, to gain decisive insight into resistance factors. Including clinico-pathological and / or molecular factors and analysis by learning algorithms (machine and deep learning) aid the development of predictive / prognostic markers for treatment selection.

Major aims:

- Establish advanced genomics for cancer diagnostics and standardize analysis to support clinical decisions on inclusion in trials
- Establish standard operating procedures (SOPs) and transfer cancer drug sensitivity screening (CDSS) and CDSS-based testing to a diagnostic platform for patient stratification in clinical trials
- Develop a pipeline for circulating tumour DNA (ctDNA) sequencing for patient stratification in clinical trials
- Develop frameworks for efficient extraction of big radiological data from PACS to dedicated databases for deep learning-based model training



- Develop predictive models for assessment of treatment response
- Develop end-to-end pipelines for fully automated radio-genomic analysis for selected hard-to-treat cancers

Highlights 2024:

- Testing of HRD analyses initiated (homologue repair defect) as an add-on to the TSO500 panel (OUS in collaboration w/ IMPRESS-Norway and Illumina).
- Functional multiplex in situ testing of HRD status initiated (OUS in collaboration w/ Knights Cancer Institute, USA and Hilde Nilsen, OUS).
- Long read sequencing ongoing for 4 subprojects (OUS in collaboration w/ Oxford Nanopore).
- WGS/WTS analyses of paediatric cancer ongoing.
- Analysed ctDNA in the prospective breast cancer biobank (Stavanger University Hospital), comparison with NGS in tissue from primary and metastases.
- CDSS methods established and documented for CLL (Hermansen et al. njp Precision Oncology, 2024). CLL retrospective validation cohorts examined (papers submitted).
- Regulatory approval obtained for the COSENSE1 trial for clinical decision support in first line therapy for colon cancer patients with metastatic disease (CDSS methodology).
- Protocols for (Glyco)proteomics analyses in serum from breast cancer patients established (Stavanger University Hospital).
- Implementation of several hospital-embedded software for querying and curating radiographic data for artificial intelligence (AI) deployment
- Methods for longitudinal tracking of brain tumour growth established as well as predictive models for treatment responses
- The CRAI team has become a federated EUCAIM (EUropean Federation for CAncer Images) node. EUCAIM is the cornerstone of the European Commission-initiated European Cancer Imaging Initiative, with the aim to foster innovation and deployment of digital technologies in cancer treatment and care.

“Our work with delivering new technologies to facilitate stratification of patients onto trials using functional testing, imaging and modelling approaches is moving forward nicely”,

Kjetil Taskén, WP1 leader

Goals for 2025:

- Inclusion of first patients in the COSENSE-1 trial (St. Olavs Hospital)
- Complete paediatric cancer prospective analyses and implement protocols into the InPreD diagnostic pipeline.
- Reporting pipeline and interpretation tools for whole genome and whole transcriptome to be finalised for both adult and paediatric patients.
- ctDNA testing available for advanced prostate cancer patients (Stavanger University Hospital)
- Cancer Drug Sensitivity Screening (CDSS) will be standardized and adaptated for patient stratification to trials in more cancers.
- Multi-omics analyses (metabolomics, (glyco) proteomics, ctDNA, microRNA, CTCs) for personalized monitoring of breast cancer patients (Stavanger University Hospital)
- Implementing AI for prostate cancer in routine pathology (Stavanger University Hospital / Helse Vest)
- Evaluation of specific AI-based software solutions, including predicting glioma tumor progression and their relationship with proliferation, invasion and angiogenesis (CHRONOS)
- The OUS EUCAIM team will implement the computer infrastructure to become a federated node for hosting local data

Work package leader: Professor Kjetil Taskén, Oslo University Hospital
Work package co-leader: Professor Emiel Janssen, Stavanger University Hospital
Lead WP1a: Professor Hege G. Russnes, Oslo University Hospital
Lead WP1b: Kyrre E. Emblem, Oslo University Hospital

Photo: St. Olavs hospital, Geir Otto Johansen

Photo: Stavanger University Hospital, Helse Stavanger, Svein Lunde.

WP2

Tumour-Directed Treatment

Research focus:

MATRIX supports and develops investigator-initiated clinical trials focusing on hard-to-treat cancers with participation and engagement in hospitals throughout Norway. Altogether, 15 hospitals are partners and study sites in MATRIX.

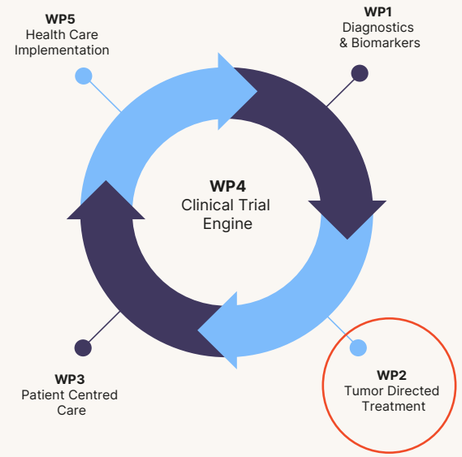
Next-generation diagnostics guide the use of precision cancer therapy with new and old drugs, alone and in combinations. MATRIX facilitates the use of material and data across trials and connect clinical investigators with appropriate research groups and core facilities, allowing for the use of cutting-edge-technology and expertise within immunology, genomics, proteomics, imaging and other areas. Moreover, MATRIX wants to move the precision cancer medicine approach forward in the lines of treatment.

To reach its overarching goal to increase patient survival through the use of precision cancer medicine, we have, in particular established close collaborations with InPred, the national infrastructure for precision cancer diagnostics, the Centre for Advanced Cell & Gene Therapy (ACT) in addition to constant interactions with the pharma industry.

By the end of 2024, more than 280 Norwegian patients had been included in MATRIX-supported studies. Principal investigators from MATRIX partner institutions with trials focusing on hard-to-treat cancers, can contact MATRIX for support, and proposals are discussed regularly by the national management team. MATRIX-supported trials are described in more detail under the clinical trials section.

Major aims:

- Increase the number of clinical studies available for patients with hard-to-treat cancers
- Increase the number of patients included in clinical trials
- Increase the number of national studies (multicentre trials)
- Include cell and gene therapy studies



Highlights 2024:

- MATRIX-RARE: A trial designed for rare and hard-to-treat cancers initiated, CTIS application filed for regulatory approval
- A national study coordinator recruited for MATRIX-RARE at OUS A researcher recruited at the University Hospital of North Norway
- Support earmarked to ten investigator-initiated trials (not all started inclusion yet)
- 7 of 10 MATRIX-supported studies are multicentre studies
- > 280 patients have received study treatment or diagnostics with support from MATRIX
- The studies SAMVAL and REMNANT, supported by MATRIX, have finalised inclusion in 2024, and received all earmarked financial support.
- Collaboration with NorTrials to reach out to all hospitals treating cancer patients

Goals for 2025:

- First patients included in the MATRIX-RARE clinical trial (PI Å. Helland, OUS)
- Expand MATRIX-RARE with more available drugs
- First patients included in the COSENSE-1 trial
- Support initiation of more clinical studies
- Secure and further develop the national network for clinical trials

"Clinical studies are important for our cancer patients as they provide new and innovative treatments. In addition, studies are necessary for further development of our clinical scientific envrironments, thus ensuring improvements for all cancer patients",

Åslaug Helland, WP2 leader

Work package leader:
Professor Åslaug Helland, Oslo University Hospital

Work package co-leader:
Professor Egil S. Blix, University Hospital of North Norway

WP3

Patient-centred Care

Research focus:

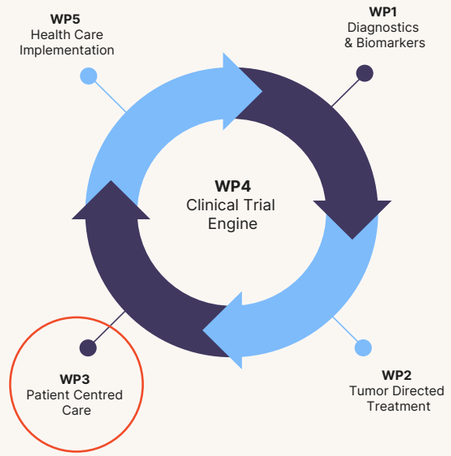
Patient-centred care focuses on the patient living with disease or life after treatment has ended and not exclusively on the cancer diagnosis. This applies to the entire treatment trajectory, from diagnosis, throughout treatment and beyond. The aim is to optimize and maintain quality of life, level of functioning and well-being in all phases of treatment.

To improve current cancer treatment, patient-centred care should complement tumor-directed treatment on a systematic level, and treatment and care should be tailored to the individual patient. Thus, systematic information about the patient's symptoms, functions, needs, and preferences needs to be collected (Patient Reported Outcome Measures, PROMs). Although robust documentation from randomized trials shows convincing patient-centred benefits of routine use of PROMs, this is still not part of routine clinical practice today.

We develop digital patient-centred care pathways (dPCCP) building on digital registrations of PROMs in collaboration with DNV Imatis. Following iterative test-rounds and revisions, we plan to implement these pathways into routine clinical practice at all hospitals participating in MATRIX. Four Norwegian hospitals are currently participating in the development and test phases: Ålesund Hospital, Helse Førde, Telemark Hospital and Oslo University Hospital.

The dPCCPs contain both real-time and prior information from patients' digital self-reports, and this provides patients and healthcare providers with sufficient information to plan for individualized symptom management and care. Rapid transfer of real-time data and online communication secure active patient involvement in decisions about their own care and treatment.

While work package three operates on a national level, corresponding international solutions are being developed in the EU- funded project MyPath, also led by Stein Kaasa, OUS.



Major aims:

- Develop digital patient-centred care pathways building on PROMs
- Revise the current version of Eir and other digital PROMs / PREMs to optimise the content for use in MATRIX clinical studies
- Perform iterative test rounds in mock patients and healthcare providers / clinicians to revise and adapt the patient-centred structure for optimal usability and performance
- Enhance screening and recruitment strategies to increase patient recruitment in clinical studies
- Monitor the effect of the abovementioned strategies

Highlights 2024:

- Significant progress in the development of the underlying structure and content of the dPCCPs
- Content for the symptom pathways of three cardinal cancer problems (pain, nutritional intake and emotional distress) agreed upon and programming almost finalized by end of 2024
- Work on a new pathway on social challenges related to having a life-limiting, advanced disease, for patients and significant others initiated
- Continued adaptation of Eir, our former digital PROM, to the DNV Imatis Fundamentum platform
- A prototype of the clinician application presenting PROMs to healthcare providers developed and tested
- Involvements of patients and healthcare providers in designing the content and structure of the MyPath-MATRIX digital solutions.
- Interviews performed with healthcare professionals, patients and caregivers regarding perceived utility, use and perceptions when using a digital tool for reporting of symptoms
- Anchored and consolidated the collaboration with the hospital's ICT, technology and legal departments and the MyPath-MATRIX research team, to prepare the implementation of the digital MyPath solution

"The WP3 project made significant progress in late 2024, especially with the development and implementation of dPCCPs to enhance patient-centred cancer care.
The strong commitment from all parties involved is promising for continued success in 2025"

Stein Kaasa, WP3 leader

Goals for 2025:

- Finalize programming of the clinician application
- Perform iterative test-rounds of the first programmed PROMs application and subsequently the clinician application in four hospitals (Ålesund, Førde, Skien and Oslo)
- Continuous use of feedback from real-time testing and use to configure the MyPath-MATRIX digital tool, both clinician and patient versions, in iterative processes throughout the year
- Continue the preparations and iterative collaboration to enhance the complete implementation process of MyPath-MATRIX
- Finalise the social challenges pathway
- Initiate work on ACP (advance care planning) to be an inherent part of the MyPath pathway library

Work package leader:
Professor em. Stein Kaasa, Oslo University Hospital

Work package co-leader:
Associate Professor Jo-Åsmund Lund, Ålesund Hospital

Photo: OUS, Thea Tønnesen

WP4

Clinical Trial Engine

Research focus:

There are many hurdles to overcome when planning and conducting a researcher-initiated clinical trial. MATRIX has addressed this by establishing a Clinical Trial Engine (CTE) support function that can help to build competence nationally and, in particular, aims to support decentralized trials with less in-house clinical trial support compared to the university hospitals.

The Clinical Trial Engine offers tailored services according to needs. Support from the CTE hopefully results in more efficient initiation and conduct of trials and should secure quality in all the phases of a trial.

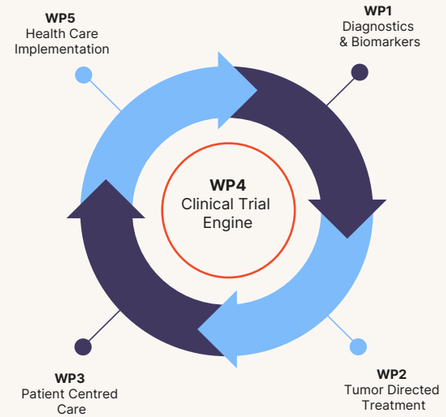
One major obstacle to the implementation of precision cancer medicine is access to employees with state-of-the-art knowledge and expertise. Thus, there is a need to raise the competence of all types of study personnel (e.g. doctors, study nurses and project coordinators) on a national level. Work package four, in collaboration with OsloMet, develops new master-level courses in clinical intervention studies. Furthermore, a program in collaboration with the University of Oslo and the Health Innovation School is in progress.

Major aims:

- More effective initiation and conduct of clinical trials
- Establish a structure for decentralised clinical trials
- Establish formal education / training for clinical trial personnel

Highlights 2024:

- A Professor hired at UiO (20% position, will start in 2025)
- The CTE has provided advice to several studies and supported the MATRIX-RARE trial through the regulatory CTIS application process
- The CTE has supported several investigator-initiated clinical studies, including the EVIDENT trial
- Together with OsloMet the first master-level course in clinical research for health personnel has been revised and conducted for a second time. The course was fully booked and all students passed their exams



- A second, more advanced master-level course in clinical research is in preparation (collaboration with OsloMet)

Goals for 2025:

- Continue to provide low-threshold advice to trials prepared by MATRIX institutions
- Support trials selected by the MATRIX national management team
- Increase competence within the MATRIX Clinical Trial Engine
- Invite study teams from other MATRIX sites for visits and training
- Finalize preparations for a more advanced master-level course in clinical research, together with OsloMet (start-up of course in 2026)
- Provide teaching and mentoring at the School of Health Innovation, UiO

"We are enthused by the strong interest for our master course in clinical research at OsloMet and look forward to further building competence through a second new master course, and by contributing to the UiO Growth House and School of Health Innovation",

Jon Amund Kyte, WP4 leader

Work package leader:
Professor Jon Amund Kyte,
Oslo University Hospital & OsloMet

Work package co-leader:
Bjørnar Gilje, Stavanger University Hospital

WP5

Healthcare Implementation

Research focus:

The rising cancer incidence and more people living with cancer and other complex conditions, have made the Norwegian Health Care Authorities request an increase in efficiency regarding the delivery of health care, in terms of more health of better quality to more people, and at the right level of care. Thus, in the future cancer care, resource optimization and efficient ways of care delivery at all levels is essential. Existing and cutting-edge clinical research results should guide evidence-based implementation in clinical care towards the goal of improved patient outcomes.

Work package five is together with work package three aiming to improve the quality of patient-centred care, communication and logistics by implementing digital patient-centred care pathways (dPCCPs). These pathways are developed and tested in WP3 before we will use evidence-based implementation strategies to secure uptake in routine clinical care, not only as parts of designated clinical trials. Evaluation of success will follow the guidelines and theoretical frameworks for evaluation of complex interventions published by the Medical Research Council, including implementation theories, strategies, process and outcomes.

Major aims:

- Ensure commitment at all involved hospital sites
- Scoping at potential new sites as applicable
- Iterative test rounds of the dPCCP of pain, nutrition and emotional distress in synthetic patients and healthcare providers
- Publish a protocol for the implementation study
- Continue the integration, preparations with iterative test rounds among all end-users and ICT personnel
- ICT installations at all sites
- Start staggered implementation at the sites based on level of readiness
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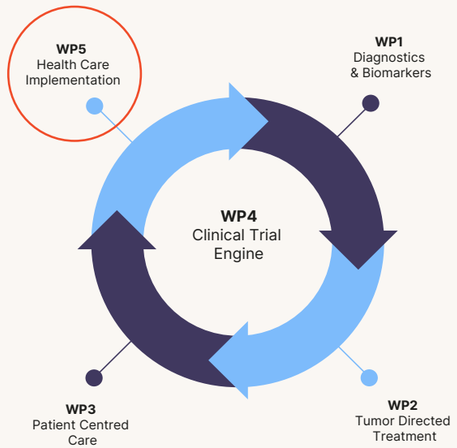
Highlights 2024:

- Anchoring the project at all four participating sites
- In-depth scoping of the person-centred activities at the sites
- Significant development at each site in mapping of current clinical practice and making detailed plans for clinical implementation



- Qualitative methods (interviews, focus groups), quantitative data on health care use, patient flow in the relevant departments
- Continuous testing of functionality and content of PROMs application and preliminary pathways
- Follow-up of each sites ICT department to facilitate the ICT installation, , as a joint venture with WP3
- Protocol for the implementation study finalized
- Preparing the application for ethical approval for the implementation phase
- Development of an overall clinical data management plan (d-PMP) for the flow, storage and handling of all collected data (qualitative, quantitative, clinical, process)

Goals for 2025:

- Last version of the DMP circulated to all centres, emphasising that this is a living document for use over time in the MyPath Matrix project
- Install the MyPath solution, either in cloud or on local server at all sites
- Submit application for ethical approval for the implementation study
- Improve the digital solution based on feedback during implementations (with WP3)
- Add applications and modules to the digital solution as they are developed, programmed and tested
- Publish several papers on the intention behind the MyPath project, the development of the dPCCPs, the qualitative data collections and the implementation process

“We have efficiently collaborated with WP3 in developing the dPCCPs. This includes consolidating pivotal collaborations with key stakeholders, end-users, ICT, and other leading resources to implement the dPCCPs. We are now looking forward to making the implementation a reality”,

Marianne Hjermstad, WP5 leader

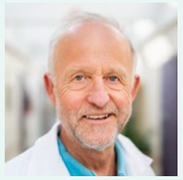
Work package leader:
Marianne Hjermstad, Oslo University Hospital

Work package co-leader:
Ørnulf Paulsen, Telemark Hospital

ORGANIZATION

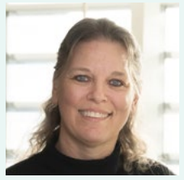
Centre Structure


Åslaug Helland


Stein Kaasa


Kjetil Taskén


Jon Amund Kyte


Elisa Bjørgo

MATRIX has partners and study sites across all of Norway, and Oslo University Hospital functions as host institution.

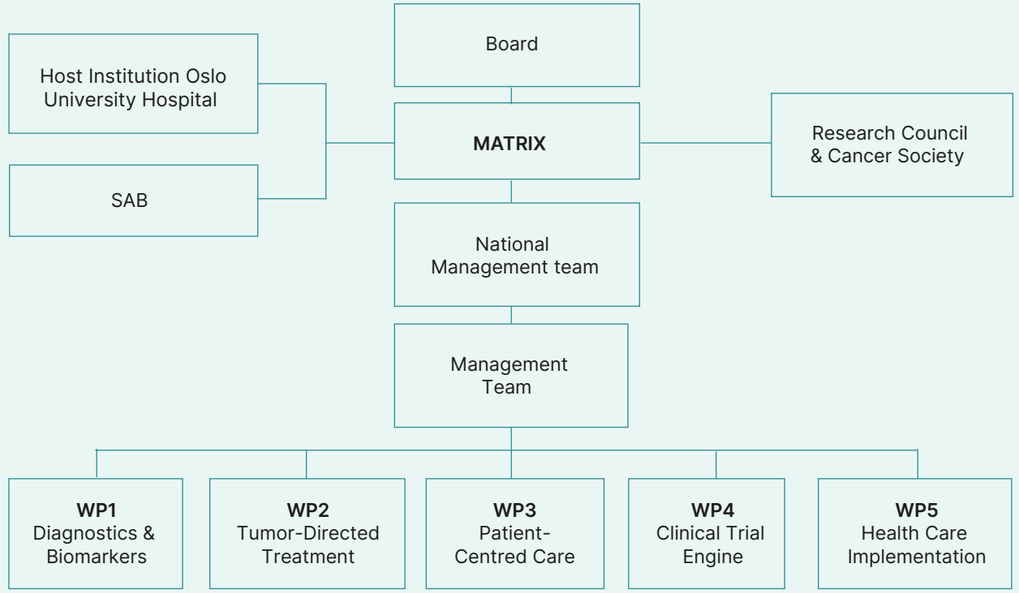
The centre is funded by the Research Council of Norway and the Norwegian Cancer Society for a maximum of eight years (until 2030).

Centre Management Team

MATRIX is coordinated and managed from Oslo University Hospital (OUS).

The Centre Management Team takes care of the day-to-day running of MATRIX and consists of:

- **Director Åslaug Helland**, MD, PhD, Professor, Research leader of Oslo University Hospital Comprehensive Cancer Centre & Head of IMPRESS-Norway
- **Co-Director Stein Kaasa**, MD, PhD, Professor Emeritus, Department of Oncology, OUS
- **Professor Kjetil Taskén**, MD, PhD, Head of Institute for Cancer Research, OUS
- **Professor Jon Amund Kyte**, MD, PhD, Head Department of Clinical Cancer Research, OUS
- **Elisa Bjørgo**, PhD, Administrative Manager MATRIX



MATRIX Organizational Chart

Extended National Management Team

The extended National Management Team coordinates activities in the five work packages and ensures national participation and engagement.

The members of this team represent all health regions in Norway. Among the tasks of the national management team is assessment of trial proposals and approving initiation of new clinical trials within the centre.

The National Management Team currently consists of:

- **Åslaug Helland**, Oslo University Hospital
- **Stein Kaasa**, Oslo University Hospital
- **Kjetil Taskén,** Oslo University Hospital
- **Jon Amund Kyte**, Oslo University Hospital
- **Hege G. Russnes**, Oslo University Hospital
- **Kyrre E. Emblem**, Oslo University Hospital
- **Marianne J. Hjermstad**, Oslo University Hospital
- **Egil Blix**, University Hospital of North Norway
- **Åsmund Flobak**, St. Olav University Hospital
- **Line Bjørge**, Haukeland University Hospital
- **Bjørnar Gilje**, Stavanger University Hospital
- **Emiel Janssen**, Stavanger University Hospital
- **Jo-Åsmund Lund**, Ålesund Hospital
- **Ørnulf Paulsen**, Telemark Hospital

Photo: Helse Sør-Øst

MATRIX Board

The Board is in collaboration with the Centre Management Team, responsible for the overall coordination and progress of MATRIX. Furthermore, the Board should make sure that the interactions between the project management and collaboration partners work well and according to plan.

Sigbjørn Smeland, Head of the Division of Cancer Medicine at Oslo University Hospital, chairs the MATRIX Board. In addition, consortium partners are represented with one member each, and relevant patient organizations are also represented. The funders, the Research Council of Norway and the Norwegian Cancer Society, participate in Board meetings as observers.

Scientific Advisory Board

The main mission of the MATRIX Scientific Advisory Board (SAB) is to offer academic and strategic advice as well as benchmark the performance of the centre internationally. The SAB was appointed in 2023 and consists of five internationally renowned clinicians and researchers with expertise in precision medicine and cancer research. The first start-up meeting took place in January 2024 and was a digital event where all MATRIX work package leaders and co-leaders were invited in addition to the Centre Management Team. The first on-site visit is planned for November 2025 in Oslo.

The following experts constitute the MATRIX SAB:

- Professor Ahmad H. Awada (Chair), Jules Bordet Cancer Institute, Brussels, Belgium
- Professor Irene Higginson, PhD, Kings College London, UK
- Professor Janne Lehtiö, PhD, Karolinska Institute, Sweden
- Professor Sonja Loges, MD, PhD, University Medical Center Mannheim / German Cancer Research Center (DKFZ), Heidelberg, Germany
- Peter Hall, PhD, Reader, Cancer Research UK Edinburgh Centre, The University of Edinburgh, UK

Consortium Participants

MATRIX consists of altogether seventeen consortium partners. The national clinical network consists of fifteen partner hospitals with cancer departments, and participation of hospitals across all of Norway facilitates that patients get the opportunity to participate in clinical trials as close to their own homes as possible. In addition, the University of Oslo and Oslo Metropolitan University

Helse Nord:

- University Hospital of North Norway
- Nordland Hospital Trust

Helse Midt-Norge:

- St. Olavs hospital Trondheim University Hospital
- Levanger Hospital
- Ålesund Hospital

Helse Vest:

- Haukeland University Hospital
- Stavanger University Hospital
- Førde Hospital
- Haugesund Hospital

Helse Sør-Øst:

- Oslo University Hospital (Management & Coordination)
- Innlandet Hospital Trust
- Østfold Hospital Trust
- Telemark Hospital Trust
- Vestfold Hospital Trust
- Sorlandet Hospital Trust

PPI

Patient and Public Involvement

Patient and public involvement (PPI) in research is important to strengthen the relevance of the research and to ensure that patients' perspectives, experiences and needs are reflected in the projects.

A patient perspective in research and innovation processes is useful both when making larger strategic decisions, when planning and establishing new projects, as well as when planning smaller, but essential details that ensure that projects are aligned to the requirements and challenges of the people that live with the diagnosis.

The overall ambition of MATRIX is to extend the lives and improve the quality of life of patients with hard-to-treat cancers. Patient and public involvement is in particular important in work packages three and five where the aim is to develop and implement digital patient-centered care pathways (see research section) and where regular interactions with user representatives are essential for the project to succeed.

National course on PPI in medical and health research

A 3-day course designed to facilitate patient and public involvement in medical and health research (CCBIONEUR910) took place in Bergen in April 2024 and gathered altogether 85 participants, both researchers and patient representatives (more details under highlights).

The course, originally established by Neuro-SysMed and Center for Cancer Biomarkers (CCBIO) in Bergen, was in 2024 extended to a national event where MATRIX was one of the co- organizers together with the other Centres for Treatment Research REMEDY and NorHead in addition to NorCrin, the National Association for Public Health and OUS Formi.

From the left: Course participant Kristin V. Guldhav (PhD fellow and coordinator for clinical research, Cancer Dept. at Helse Førde), invited speaker Bettina Ryll (Founder of Melanoma Patient Network Europe), organizer Elisa Bjørgo and course participant Magne Sellevold (patient representative from Helse Førde).

The DAM Foundation supports this course for two years, and the next course will take place in Bergen on May 7-9, 2025.

MATRIX User Panel

In January 2025 the MATRIX user panel was appointed by the Norwegian Cancer Society. The panel consists of altogether seven members representing different cancer subtypes and different regions of Norway.

The user panel will interact regularly with the MATRIX management team, and their activity areas include:

- Function as a link between users and MATRIX
- Contribute with knowledge and experience
- Represent users at various events
- Contribute to increased visibility of center activities
- Create awareness of the need for precision cancer medicine and patient-centred care

Members of the user panel:

- Charlotte Borge-Andersen (Pancreaskreft Nettverk Norge)
- Anita Eik Roald (Blærekreftforeningen)
- Astrid Hjelde (Blodkreftforeningen)
- Ove Vestheim (Sarkomer & Sarkomer Vest)
- Arild Granerud (Prostatakreftforeningen)
- Kurt Myrvang (Prostatakreftforeningen)
- Thomas Engelskjøn (Kreftforeningen)

CLINICAL NETWORK

Clinical Trials

Research Centres for Clinical Treatment (FKBs) focus on frontline research to improve treatment for Norwegian patients, and the primary research tasks in MATRIX is to conduct clinical trials for patients with hard-to-treat cancers. Our national clinical network consists of fifteen hospitals with cancer departments across Norway.

Principal investigators from MATRIX partner institutions can contact the centre to register new trials or ask for support from the Clinical Trial Engine via an electronic registration form. Potential new trials connected to MATRIX must aim for patient benefit, either by offering precision cancer medicine, new diagnostics or because it will extend the expected lifespan or improve the quality of life of cancer patients.

MATRIX as a research center has flexibility in what type of trials to support, and MATRIX-affiliated trials can for example be studies that use new drugs in earlier treatment lines, trials testing new diagnostics for treatment stratification or new study designs.

The extended national management team meets regularly to assess trial proposals and approve initiation of new clinical trials within MATRIX. In the first 2.5 years of operations, the national management team has decided to allocate earmarked per-patient support to ten clinical studies, based on registered needs. Funding is transferred upon patient inclusion, and the per-patient contribution is earmarked to the hospital treating the patient.

MATRIX-initiated clinical trials

MATRIX-RARE: Precision cancer medicine in hard-to-treat rare cancers - repurposing drugs in earlier lines of treatment (NCT06119789)

Principal Investigator:

- Professor Åslaug Helland, MD, PhD, Oncologist, Oslo University Hospital

MATRIX-RARE is a new national clinical trial where patients with some rare and aggressive cancer subtypes will be offered precision cancer medicine outside indication in earlier treatment lines.

Cancer cells are more susceptible to treatment in earlier lines of treatment, and it is therefore likely that patients will benefit more if targeted therapy is attempted earlier in the course of the disease. This will now be investigated in more detail in MATRIX-RARE.

Photo: OUS, Apeland/Katrine Lunke

The national trial IMPRESS-Norway has since April 2021 included more than 2500 cancer patients with advanced disease for comprehensive gene panel testing, and we see an enrichment of rare cancers (approximately half of all the patients in IMPRESS-Norway have rare cancers). Several hard-to-treat cancers are rare cancers, and few clinical studies are currently available for these patients.

However, from IMPRESS-Norway we now know that a larger proportion of these tumors (approx. 23%) have genetic alterations that match targeted drugs approved for other indications, and that 42% of these patients benefit from treatment that matches the molecular biomarker in their tumors.

MATRIX-RARE will use knowledge from IMPRESS-Norway and focus on subgroups of patients with rare hard-to-treat cancers, who benefit from precision cancer treatment.

The first agreement with a pharma company was signed in 2024, and the trial has received funding from both the Norwegian Cancer Society and from the South-Eastern Norway Regional Health Authority, HSØ. MATRIX-RARE has received regulatory approvals and is since March 2025 open for patient inclusion.

MATRIX-supported clinical trials

EVIDENT: *Ex vivo* drug sensitivity testing in metastatic colorectal cancer (EudraCT: 2020-003395-41)

Principal Investigators:

- Tormod Guren, MD, PhD, Oncologist, Oslo University Hospital (OUS)
- Professor Ragnhild A. Lothe, Head Dept. of Molecular Oncology, OUS

EVIDENT is an interventional phase 2 study of *ex vivo* drug sensitivity testing in metastatic coloretal cancer at Oslo University Hospital. Based on a combination of cancer molecular profiling and drug sensitivity testing of patient-derived *ex vivo* tumor organoids, the trial expands the oncologic treatment repertoire and improves the selection of treatments to individual patients. Patient inclusion started in 2022, and the trial will continue to include patients until the end of 2026.

A crucial aspect of this study is the experimental *ex vivo* diagnostics, involving culturing of cancer cells from tumor tissues under conditions fostering formation of 3D organoids that resemble the architecture and molecular profile of the patient's own tumor.

The organoids are subsequently exposed to many different drugs or drug combinations (n=73), providing robust read-outs of drug sensitivities of a growing "living biobank" of colorectal cancer models.

A combined pharmacogenomics profile of all tumor samples and organoids per patient is presented in a report to the national molecular tumor board (MTB).

The MTB provides recommendations for *ex vivo*-guided treatment in the third line. EVIDENT has approval to intervene with 23 of the drugs in the screen, most of which are experimental treatments for metastatic colorectal cancer. Treatment nomination criteria include comparisons with a large reference panel of *ex vivo* drug sensitivities of patient-derived organoids from colorectal cancer liver metastases. In addition, evaluation of multiple samples from each patient reduces the risk of nominating drugs with heterogeneous activities across lesions and tumor sub clones. This design puts EVIDENT at the international forefront of functional precision oncology research.

In 2024, EVIDENT was presented at the first joint meeting of the European Hematology Association and the Society for Functional Precision Medicine in Copenhagen by Kushtrim Kryeziu, who is leading the functional precision oncology team in the Lothe lab. The pros and cons of various functional precision oncology trials, including EVIDENT, was debated by an international panel (see photo).

So far, 135 samples from 95 patients have been processed and drug screened (equals organoid growth success in 66% of the patients). Seven patients have started experimental treatment based on the pharmacogenomics profile of their organoid model. MATRIX supports EVIDENT with a per-patient contribution for *ex vivo* diagnostics of up to 150 patients and for experimental treatment of up to 20 patients.

Panel discussion of trial design and precision medicine studies: from left, Phillipp Staber, EXALT-1 and -2, Keith Flaherty, NCI-MATCH trials and Kushtrim Kryeziu, EVIDENT trial.

REMNANT: The Relapse from MRD Negativity as Indication for Treatment (NCT04513639)

Principal Investigator:

- Fredrik Schjesvold, MD, PhD, Head Oslo Myeloma Center, Oslo University Hospital (OUS)

REMNANT is a national phase 2/3 trial for multiple myeloma patients, and the trial includes thirteen of the MATRIX partner hospitals. Altogether, 400 newly diagnosed myeloma patients have been included in the trial over a four-year period (2020 – 2024).

The study follows patients until they progress on second-line treatment, which means 10-12 years from enrolment in the trial.

Patients receive standard first-line treatment in the first part of the study (phase 2). Patients who show a deep response to treatment measured by the absence of minimal residual disease (MRD), subsequently move on to the part two of the study (phase 3). These patients are randomized to receive relapse treatment according to current treatment guidelines for myeloma, or to receive treatment in the event of earlier and minor signs of recurrence (become MRD+). The aim of the study is to discover whether very early relapse treatment affects long-term prognosis.

Data from REMNANT may change national as well as international guidelines for when to start relapse treatment. No other study in the myeloma community is comparing starting relapse treatment early versus later.

By the end of 2024, patient inclusion had been finalized for part one of the trial whereas 181 patients so far have been enrolled in part two. MATRIX has supported inclusion of 50 patients in this study with a per-patient contribution to the MATRIX hospitals where the patients are treated.

GAIN: Green Approach to Improve Nutritional support for cancer patients (NCT05544318)

Principal Investigators

- Professor Christine Henriksen, RD, PhD, University of Oslo & Head Centre for Clinical Nutrition OUS/UiO
- Ingvild Paur, RD, PhD, Head Norwegian Advisory Unit on Disease-related Undernutrition, OUS

GAIN is an interventional study aiming to reduce the burden of malnutrition in cancer patients by implementing and evaluating an improved nutritional support, using digital monitoring and communication tools during the clinical pathway.

The effect of individualized, intensive nutrition support is evaluated in a randomized controlled trial. In addition, a cost-effectiveness analysis is planned. Altogether, 130 patients with lymphomas, gynecological, colorectal or lung cancer will be included in this trial.

MATRIX supports GAIN with some funding for a study nurse.

SAMVAL: Integrating geriatric assessment and shared decision-making to optimize treatment choice in advanced lung cancer

Principal Investigator:

- Associate Professor Margrethe A. Schaufel, MD, PhD, Haukeland University Hospital

This trial is a phase IV implementation study looking at decision-making processes and patient outcomes in the treatment of advanced lung cancer. The aim is to improve the shared decision-making process. This multicentre study includes Haukeland University Hospital, Stavanger University Hospital, Helse Fonna and Helse Førde, and altogether, and patient inclusion was finalized in 2024 with a total of 40 patients. MATRIX has supported this trial with a per-patient contribution for all the 40 patients.

COMIT-2: Combinatory Immunotherapy-2 (EudraCT: 2021-003266)

Principal Investigator:

- Vilde D. Haakensen, MD, PhD, Oncologist, Oslo University Hospital

Most patients with non-small cell lung cancer (NSCLC) who are treated with immune checkpoint inhibitors alone or in combination with chemotherapy, progress within the first year of treatment.

COMIT-2 is a phase 2 randomised open two-arm study to assess the tolerability and efficacy of immunotherapy combined with extensive radiotherapy for the treatment of stage IV NSCLC. Extensive radiotherapy is combined with immune checkpoint inhibitors alone or in combination with chemotherapy to increase response rates through immune activation, avoid hyper-progression by inducing local control and give the immune system time to develop cancer-specific immunity. The overall aim of the study is to develop a new personalized approach for immunotherapy treatment for patients with metastatic NSCLC to improve response rates and duration of response and potentially cure patients who are currently considered incurable.

In total, 30 patients without liver and brain metastases will be included in the trial by the end of 2028. In addition, patients with liver and brain metastases may be included. The trial includes patients from Oslo University Hospital, St Olavs

Photo: OUS, Lars Petter Devik

Hospital and Innlandet Hospital.
By the end of 2024, altogether 32 patients have been included in this trial, 10 of whom have metastases to the liver and/or brain. MATRIX supports COMIT-2 with a per-patient contribution for patients included from January 2024 and onwards.

ctDNA: Use of liquid biopsy and testing of circulating tumor DNA (ctDNA) for patients with advanced cancer

Principal Investigator:

- Professor Hege G. Russnes, MD, PhD, Pathologist

The ctDNA project is a sub-study of IMPRESS-Norway focusing on new diagnostic tools where liquid biopsy and ctDNA testing of patients with advanced cancer is performed in a prospective study design.

The short-term aim of the project is to identify patient groups where comprehensive genomic profiling of ctDNA in peripheral blood cells is beneficial. The long-term aim is to implement comprehensive profiling of ctDNA in diagnostics in the public healthcare system.

All MATRIX-affiliated hospitals are included in this study where 1000 patients will be included, and MATRIX supports the project with a per-patient contribution.

Upcoming MATRIX-supported clinical trials

STEAP 1: CAR-T cell therapy targeting treatment refractory prostate cancer and Ewing Sarcoma

Principal Investigator:

- Professor Jon Amund Kyte, MD, PhD, Oncologist, Oslo University Hospital

Kyte and his team have developed a specific CAR-T that targets the protein STEAP1. This protein is expressed in about 80-90% of all prostate cancers and Ewing sarcoma in addition to subsets of other cancers, including non-small cell lung cancer, bladder cancer, breast cancer, pancreatic cancer, glioblastoma, and ovarian cancer. Moreover, STEAP1 is highly expressed in metastatic disease.

CAR-T cell therapy is approved against leukaemia, lymphoma, and myeloma, but CAR-T treatment against solid tumours is more challenging, and little documentation is still available. A major challenge in solid tumors is the lack of attack points that are important for the ability of cancer cells to spread but at the same time are poorly expressed in normal tissue. STEAP1 is highly expressed in metastatic disease, and the proprietary CAR-T therefore offers hope for potent therapy for patients without other effective treatment options.

The STEAP1 CAR-T study will be a phase 1/2 trial where the newly developed STEAP1 CAR-T will be used in patients with refractory Ewing sarcoma or prostate cancer. Ewing sarcoma is a rare form of cancer that often affects children and young adults (5-25 years) and is usually incurable after metastasis. Approximately 5-10 new cases are diagnosed in Norway every year. Prostate cancer is the most common cancer among males and among the most common causes of cancer-related deaths. Altogether, 30 patients are planned for the screening phase of the trial, whereas 20 patients can be included for treatment.

The STEAP1 trial aims to open in 2026, and MATRIX will support the STEAP1 study provisionally with a per-patient contribution, provided that the GMP cell therapy product becomes approved.

PSEUDOVAX: A cancer vaccine targeting mutated GNAS combined with immune checkpoint inhibition for patients with Pseudomyxoma peritonei

Principal Investigator:

- Professor Kjersti Flatmark, MD, PhD, Consultant Surgeon and research group leader, Oslo University Hospital

Pseudomyxoma peritonei (PMP) is a rare cancer that often starts in the appendix but can also start in other organs such as the large bowel and ovary.

In Norway, all PMP patients are treated at the Radium Hospital in Oslo, and standard treatment is cytoreductive surgery and hyperthermic intraperitoneal chemotherapy. Approximately half of the patients are cured, but patients with relapses or where the tumor cannot be completely removed, have very few effective treatment options today.

Patients with PMP have a frequent occurrence of mutations in the oncogene GNAS, but there is currently no targeted treatment for this mutation.

Photo: OUS, Thea Tønnesen

Pseudovax is a phase I study for patients with recurrence of GNAS-mutated Pseudomyxoma Peritonei where an in-house developed peptide vaccine will be used in combination with a PD1 immune checkpoint inhibitor.

In total, 10 patients with relapsed GNAS-mutated PMP or primarily unresectable disease who have no other presumed effective treatment options, will be included, and MATRIX will support the trial with a per-patient contribution. The team aims to open the trial in 2025.

Highlights from 2024
Awards

Excellent Researcher Award

Kjetil Taskén, Head of the Institute for Cancer Research, Oslo University Hospital (OUS), in June 2024 received the OUS Excellent Researcher Award.

The Committee highlighted Taskén's own research over several decades as well as his pioneering work in establishing precision cancer medicine in Norway and now also Europe, when justifying the 2024 award. The prize of 400,000 NOK is earmarked continued research at OUS.

The Committee also highlighted that Taskén, by virtue of his role as head of the Institute for Cancer Research and the OUS Center for Precision Cancer Medicine, has established and leads a strong, vibrant and still growing environment for cancer research at the hospital.

Furthermore, he is a leading force in the national precision cancer medicine initiative.

> "Kjetil Taskén has emerged as a front figure of precision cancer medicine in Norway. The strong, national initiatives pioneered by him form a basis for system changes in the healthcare system and enable front-line diagnostics and treatment for Norwegian cancer patients. His exceptional leadership skills significantly enrich the research environment at Oslo University Hospital".

Kjetil Taskén received the OUS Excellent Researcher Award at a ceremony at Rikshospitalet.

Acta Oncologica Award Lecture

The Acta Oncologica Award

The Swedish Society of Oncology annually honors a person who has made "great scientific, clinical and educational contributions to oncology". The recipient of the Acta Oncologica Award is invited to give an award lecture at the association's annual meeting.

Kjetil Taskén received the 2024 Acta Oncologica Award and gave his award lecture in March during the Oncology Days in Malmö, Sweden.

> “The award is a recognition of Kjetil Taskén's research and strategic work over many years and shows that his efforts are also valued beyond Norway's borders”.

Lecturer of the Year Åsmund Flobak teaching medical students at NTNU. Photo: Håkon Borgen

The Norwegian Medical Association's Basic Education Award

Åsmund Flobak, oncologist at St. Olavs Hospital and Associate Professor at the Norwegian University of Science and Technology (NTNU) in Trondheim, teaches both at NTNU and SINTEF. In 2024, he received the Norwegian Medical Association’s Basic Education Award after being nominated by the medical students at NTNU. Read more about his teaching philosophy and get to know more about Åsmund Flobak in an interview published by Tidsskriftet in January 2025

> "Åsmund Flobak has the ability to connect cell biology to the clinic, so that we better understand why we are learning about the things we do. Flobak helps us to see the bigger picture, in addition to pointing out what is relevant to know both for the exam and for the professional life as a medical doctor, which is fantastic. He is a fabulous and down-to-earth lecturer”, the first-year medical students at NTNU stated in their nomination".

Ørnulf Paulsen from Telemark Hospital presenting work in work packages 3 and 5.

Inspiring MATRIX gathering in Stavanger

The annual MATRIX gathering took place in March in beautiful surroundings at the Sola beach outside Stavanger. Around 60 participants from the different partner institutions joined this 2-day event that included updates from each work package, presentations from clinical trials supported by the centre as well as topic-specific workshops. There was also time for good discussions and networking.

Each work-package had workshops on day 2 of the gathering. WP1 discussed topics such as artificial intelligence in pathology, challenges and opportunities in data sharing, ctDNA analyses, the ongoing collaboration with Oxford Nanopore on DNA methylation and functional precision oncology.

The WP2 team discussed both ongoing and potentially new clinical trials, with a particular focus on areas with few current treatment options as well as challenges connected to decentralized studies.

Work package 4 mainly discussed the development of new master-level courses in clinical studies and the possibility of establishing a separate clinical trial master program at OsloMet.

Work packages 3 and 5 joined forces and created a full-day meeting on the development and implementation of digital patient-centered processes, where all four hospitals currently involved in the project (Ålesund, Førde, Skien, and OUS) as well as the developers from DNV Imatis participated to discuss practical solutions, testing of prototypes as well as implementation science in general.

The MATRIX gathering took place at Sola Strand Hotel outside Stavanger.

The 70th anniversary symposium included great talks and lively discussions.

70th Anniversary of the Institute for Cancer Research

The Institute for Cancer Research marked its 70th anniversary by organizing the Norwegian Cancer Symposium 2024. The event took place at The Hub in Oslo in September and gathered altogether 430 participants over two days.

State Secretary Karl Kristian Bekeng from the Ministry of Health and Care Services opened the anniversary conference followed by warm greetings from Ingrid Stenstadvold Ross, Secretary General of the Norwegian Cancer Society, Terje Rootwelt, CEO of the South-Eastern Norway Regional Health Authority, as well as Per Morten Sandset, vice-rector at the University of Oslo.

The scientific program was kicked off with a keynote lecture by Professor Douglas Hanahan from the Ludwig Institute for Cancer Research and the Swiss Federal Institute of Technology Lausanne (EPFL). He set the standard with a very interesting lecture about Hallmarks of Cancer 2024. In addition to the opening lecture, the program included 15 distinguished speakers, of which 11 were international, and eight selected short talks distributed over five sessions. Moreover, 118 posters were presented during two vibrant poster sessions.

"I am very proud of what the Institute for Cancer Research has delivered and the excellence we stand out with at present. Expectations are high also for the future, and I am sure we will continue to deliver also in the coming years",

Kjetil Taskén, Head of Institute for Cancer Research.

Bjørnar Gilje presenting MATRIX. Photo: Per M. Didriksen, OUS.

Onkologisk Forum

In November, the annual Oncology Forum took place in Bergen. More than 550 participants enjoyed an exciting program, good discussions and a great banquet dinner.

MATRIX was well represented at this year's event. In the session on clinical trials, Bjørnar Gilje from Stavanger University Hospital presented MATRIX and described in more detail how the center can help principal investigators with their clinical trials.

In addition to many excellent plenary lectures, the Oncological Forum also organize specialist group meetings. This year, a new Norwegian specialist group for cancer treatment was established.

The Norwegian Precision Medicine Cancer Group (NPCG) was constituted at the conference, and the new group aims to bring together clinicians and diagnosticians who work on the genetic origins of cancer to strengthen diagnostics, treatment and follow-up using precision medicine. One of the initiators of NPCG is Åsmund Flobak, oncologist, acting consultant at the Cancer Clinic at St. Olavs Hospital and a central researcher in MATRIX WP1.

The first official NPCG meeting was very well attended, and in addition to Flobak, several key players from MATRIX contributed with interesting presentations. PhD fellow Katarina Puco (OUS) described new recommendations from ESMO and focused on who should be referred for genetic diagnostics.

Hege Russnes, head of the national infrastructure for precision diagnostics in cancer (InPreD) and co-lead in MATRIX WP1, discussed the national molecular tumor board (mol-MDT) whereas PhD fellow Ingrid Dyvik (OUS) presented her project on ctDNA profiling and experiences from IMPRESS-Norway.

In addition, Tormod Guren, oncologist at the Department of Cancer Treatment, OUS gave an overview of molecularly guided studies both in Norway and the Nordic region.

Symposium on public service innovation at the Norwegian Academy of Science and Letters. Photo: Ine Eriksen, UiO

Symposium on public service innovation

In December, a symposium on public service innovation took place at the Norwegian Academy of Science and Letters. The overall theme of this full day event was to address what characterizes public service innovation, how to initiate change processes, and what is unique for innovation within the healthcare system. Approximately 90 participants from around Norway gathered in Oslo and enjoyed an interesting program. The event was also accessible via streaming and a recording of the event is available.

The background for this symposium was that Kjetil Taskén in 2023 was awarded the UiO Innovation Prize for his instrumental work in building precision cancer medicine in Norway, and MATRIX organized this event together with him and the University of Oslo.

The program included great talks, examples from successful innovation projects and reflections from key players in our joint healthcare system. After a full day of presentations, good discussions and networking, the participants could enjoy a three-course dinner.

"Public service innovation is difficult. It is not always perceived as innovation, it does not fit easily into available funding mechanisms, and it must happen within organizations that are operational. Thus, innovation needs test arenas for piloting, focus and anchoring from the management as well as resource allocations if we are to achieve the changes our society needs, e.g. within the health services",

says Kjetil Taskén.

Discussion in one of the reflection panels. From the left: Bettina Ryll (Stockholm School of Economics), Nils Olav Refsdal (Ministry of Health and Care Services), Ingrid Stenstadvold Ross (Secretary General Norwegian Cancer Society), Kjetil Taskén (OUS) and Christian Bason (Transition Collective, Denmark). Photo: Ine Eriksen, UiO

Photo: Ine Eriksen, UiO

Funding successes

Three projects awarded funding from the Norwegian Cancer Society

Åslaug Helland (OUS), Kjetil Taskén (OUS) and Eli Sihn S. Steinskog (Haukeland University Hospital) all received funding for new research projects from the Norwegian Cancer Society 2024 call.

Helland is awarded 8 million NOK over three years for a project connected to MATRIX-RARE, a national clinical precision cancer medicine trial for patients with rare and aggressive cancer subtypes. Taskén receives 8 million NOK over three years for a project focusing on regulatory T cells that will examine how by blocking these suppressor cells, one can restore the body's own immune defense against cancer.

In addition, Steinskog has been awarded 8 million NOK connected to the national clinical trial NorCUP, a study for cancer patients with cancer of unknown origin.

We look forward to following these ambitious projects in the years to come!

Three MATRIX-affiliated projects receive funding from HSØ

South-Eastern Norway Regional Health Authority (HSØ) awarded 150 million NOK in regional research funds for new projects starting in 2024. One of the funded projects, “Drug repurposing in hard-to-treat cancers - MATRIX-RARE”, led by Åslaug Helland at OUS, received 8.7 million NOK over a three-year period. The project recruited both a coordinator and a PhD fellow in 2024.

End 2024, HSØ allocated 149 million NOK to new research projects starting in 2025. Kjetil Taskén (OUS) was awarded 9 million NOK over 3 years for his research project "Targeting Tumor Immune Evasion Mechanisms - Precision Immune-Oncology Testing-Platform (INTERCEPT)”. Furthermore, Jon Amund Kyte (OUS) was awarded 4 million NOK over 3 years for the project "Dual-function immuno-stimulatory antibody drug conjugates for targeted cancer therapy".

We look forward to updates from all these exciting projects in the years to come!

Eli Sihn S. Steinskog, PI of the national NorCUP trial led from Haukeland University Hospital, received funding from the Norwegian Cancer Society.

The Norwegian Cancer Society allocated 210 MNOK for altogether 27 new research projects in 2024, and invited the recipients to a gathering at Eitri, Haukeland University Hospital in February 2025. Photo: Rønnaug Kolve.

Photo: Stavanger University Hospital

Three new grants to MATRIX-affiliated researchers at Stavanger University Hospital

Bjørnar Gilje and Emiel Janssen at Division of Medical Services, Haematology and Oncology, Stavanger University Hospital have been awarded 8 MNOK for two three-year projects (2025-2027) funded by Helse Vest.

These projects are focusing on new diagnostic tools and in particular, on liquid biopsy testing in breast cancer.

In addition, the team receives 1.2 MNOK from the Folke Hermansen Foundation for validation of AI tools for pathologists working with breast cancer, a collaborative project with Big Picture and the Universitat Politecnica de Valencia in Spain.

KLINBEFORSK grants to Jon Amund Kyte and Åslaug Helland

The National program for clinical treatment research in the specialist health service (KLINBEFORSK) recently awarded 152 million NOK to seven new clinical treatment studies.

Jon Amund Kyte (OUS) was awarded 13.8 million NOK for the project "Phase I/II trial evaluating CAR T cell therapy against prostate cancer".

This project is coordinated by OUS, and collaboration partners include the University Hospital of North Norway, St. Olavs Hospital, Haukeland University Hospital, Stavanger University Hospital, Sørlandet Hospital Trust and Østfold Hospital Trust. MATRIX is pleased that Kyte has been awarded funding for his STEAP1 CAR-T cell therapy project and looks forward to this trial becoming ready for patient inclusion.

PI Åslaug Helland and IMPRESS-Norway will receive 20 MNOK from KLINBEFORSK KLINBEFORSK in 2025 (and 2026 and 2027) for the continuation of this national precision cancer medicine trial for patients with advanced cancer progressing on standard treatment and without other treatment options.

IMPRESS-Norway offers experimental, targeted treatment outside of indication based on comprehensive molecular profiling of the tumor.

JANE2 - Shaping the EU Networks of Expertise on cancer

A Joint Action project on Networks of Expertise on Cancer, JANE2, was launched in November 2024 as a follow-up project to the Joint Action JANE (2022 – 2024). This project, led by Istituto Nazionale Tumori in Italy, aims to build seven networks of expertise to strengthen Europe-wide cooperation and collaboration through exchange of knowledge and expertise.

In JANE2, Oslo University Hospital with Stein Kaasa as the lead of work package 6, will continue its leadership of the palliative care network of expertise. This work package and OUS has been granted 1.3 million Euro over four years.

Sigrid Skånland awarded funding from EP PerMed

The CLL-OUTCOME consortium, Chronic lymphocyticleukemia: Improving survival and quality of life, led by MATRIX researcher Sigrid Skånland (OUS) recently received 1.5 million Euro over three years from the European Partnership for Personalised Medicine (EP PerMed). The project has seven partners from six European countries.

New grants to Kyrre Emblem, Atle Bjørnerud and the OUS CRAI team focusing on computational radiology and AI

The CRAI team at OUS develop deep-learning methods in medical imaging diagnostics, clinical deployment of AI applications and database development optimized for machine learning applied to big medical data.

Atle Bjørnerud, Head of CRAI, and Kyrre Emblem, co-lead of MATRIX WP1b and Head of Dept. of Diagnostic Physics, OUS, have been awarded four grants in 2024 that will allow new projects related to MATRIX-activities to be initiated in the coming years:

- Improved Brain Tumor Diagnostics Using Deep Learning on Magnetic Resonance Imaging (OMETS-AI): PI Atle Bjørnerud, South-Eastern Norway Regional Health Authority Innovation Grant (0.5 MNOK)
- SAFARI: Structural Assessment of cancer Function by ARtificial Intelligence: PI Kyrre Emblem, Norwegian Cancer Society Innovation Grant (0.5 MNOK)
- IQ-BRAIN - Improving QMRI By Realizing trustworthy integration of AI in Neuro-imaging: PI Kyrre Emblem, Horizon TMA Marie Skłodowska-Curie Doctoral Networks 2023 Grant 101169519 (Total grant: 47.5 MNOK, approx. 4.5 MNOK to OUS).
- EUropean Federation for CAncer IMages (EUCAIM) open call - Federated node: PI Kyrre Emblem, funded by EU4Health programme (1.8 MNOK).

Popular course in Bergen on patient and public involvement in medical and health research

The aim of this course is to bring researchers and user representatives together and increase the knowledge about PPI so both sides understand the value of it and are competent to exercise appropriate user participation in research projects.

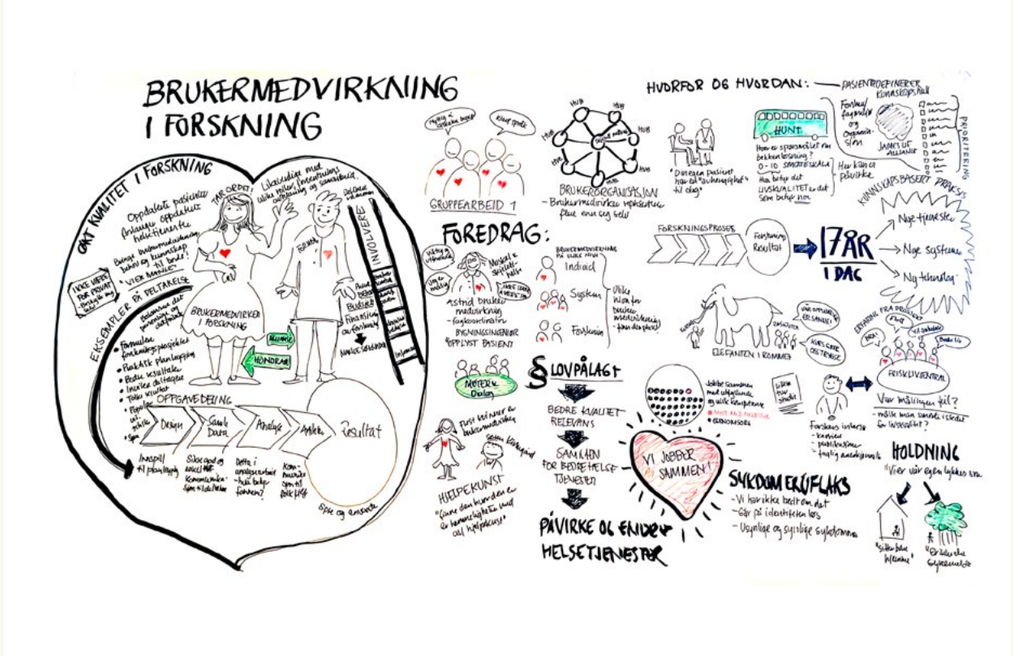
In April, 85 participants, both researchers and user representatives, gathered in Bergen to gain knowledge about how to actively use patient and public involvement (PPI) in medical research projects. The three-day course consisted of lectures, group work and discussions and took place at the premises of Eitri, a medical incubator right next to Haukeland University Hospital.

MATRIX was one of the co-organizers of this national course, and Elisa Bjørgo participated both in the program planning as well as attended the course as a facilitator. In addition, MATRIX invited Bettina Ryll as a speaker. She is the founder of Melanoma Patient Network Europe and talked about PPI in large EU projects, user-driven research and innovation as well as design thinking.

The course participants asked interesting questions, contributed actively during group assignments and case discussions and interacted with other participants across disciplines.

Among the participants were Kristin V. Guldhav, PhD student and coordinator for clinical research at the Cancer Department in Helse Førde, and Magne Sellevold, user representative for the Norwegian Cancer Society in Helse Førde. Both are involved in the MyPath-MATRIX project (WP3 & 5). In addition, IMPRESS-Norway coordinator Kajsa Johansson attended the course.

The course is supported by the DAM Foundation and is a collaboration between Neuro-SysMed, CCBIO, UiB, MATRIX, NorHead, REMEDY, NorCRIN, Nasjonalforeningen for folkehelse and FORMI OUS.



Bettina Ryll shared her thoughts on EU missions and user-driven research and innovation.

Novartis the *first* pharmaceutical company to join MATRIX-RARE

MATRIX-RARE (Precision medicine in hard-to-treat cancers - Repurposing drugs in earlier lines of treatment) is a new researcher-initiated clinical trial in which precision medicine in earlier lines of treatment will be offered patients with rare cancers that are difficult to treat.

In November, MATRIX was excited to announce that Novartis as the first pharmaceutical company, has joined MATRIX-RARE. Novartis is entering the study with two drugs.

Novartis will through this partnership offer the drugs dabrafenib (Tafinlar and Finlee) and trametinib (Mekinist and Spexotras). The agreement provides a new treatment option for a total of 72 patients. Dabrafenib is a so-called BRAF inhibitor, and trametinib is an inhibitor of the MEK protein.

These drugs are approved for melanoma, lung cancer with metastasis, and certain types of brain cancer, with a specific mutation in the BRAF gene.

In MATRIX-RARE, the drugs will be used outside indication in patients with rare and aggressive cancers where BRAFV600 mutations have been found through comprehensive molecular profiling of the tumor.

The MATRIX-RARE protocol is adaptable, which allows for the continuous inclusion of new companies and drugs as the study develops.

Commitment and contributions from pharma companies are crucial for the trial to succeed.

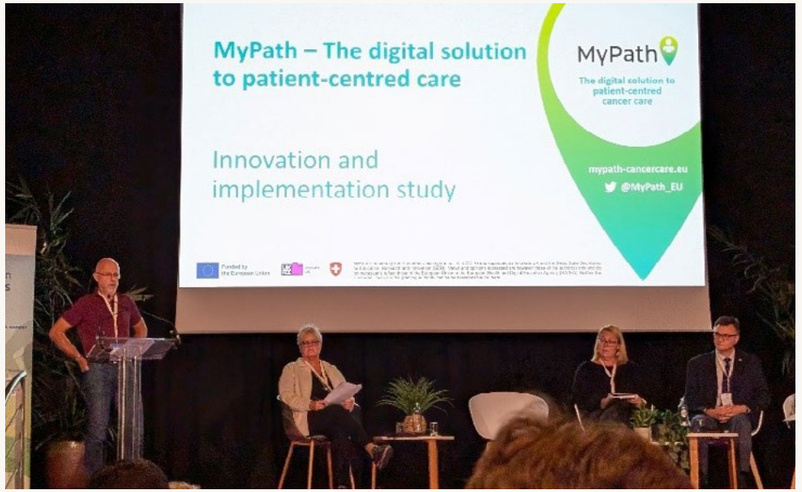
In addition, the MATRIX-RARE research project will focus on biomarkers in the future, as more robust predictive biomarkers are essential for the further development of precision cancer medicine.

Åslaug Helland is the national PI of MATRIX-RARE. Photo: Per M. Didriksen, OUS

"The public-private collaboration in IMPRESS-Norway has shown that there is a culture of innovative partnerships between the healthcare sector and the pharmaceutical industry.

Novartis is proud to be the first pharmaceutical company to have entered into an agreement to bring targeted drugs to MATRIX-RARE. Soon, some patients with aggressive rare cancers will be able to start tailored treatment earlier in the course of their disease"

Tarje Bergdahl, Medical Director Novartis Norway.



Stein Kaasa presented MyPath-MATRIX at the Cancer Mission Conference Innovative Palliative Care for People with Cancer.

Cancer Mission Conference on innovative palliative care in cancer

In October, the European Commission hosted the Cancer Mission conference «Innovative Palliative Care for People with Cancer» in Brussel.

The conference aimed to inform both citizens and decision-makers about the necessity of proper palliative care across Europe. With sessions focusing on ways to integrate palliative care throughout the cancer trajectory and how to overcome challenges to obtain equal and equitable access, different solutions, including innovative approaches and new technologies, were presented.

MyPath and the European Palliative Cancer Research Centre (PRC) had a significant presence during the two-day conference. Among the speakers were Stein Kaasa, head of the EU-funded MyPath project and deputy director in MATRIX.

He presented ways to overcome barriers to palliative and patient-centred care, focusing in particular on commercial and social determinants, in the section ***"How palliative care can be a natural part at all stages of cancer care".***

As an implementation science project, MyPath-MATRIX was presented as a novel and sustainable solution to overcome these challenges to improved cancer care in the future.

Read more about the MyPath-MATRIX project on the OUS blog Ekspertsykehuset.

The MyPath-MATRIX project currently includes four Norwegian hospitals:

1.

Institute for Cancer Research, Oslo University Hospital
Photo: OUS, Thea Tønnesen

2.

Helse Møre og Romsdal here represented by Ålesund Hospital
Photo: Helse Møre og Romsdal

3.

Helse Førde
Photo: Photo: Eivind Standnes

4.

Telemark Hospital in Skien
Photo: Telemark Hospital Trust

EU CONSORTIA

International Collaboration

The MATRIX work package leaders and MATRIX-affiliated researchers have well-established international networks and are all part of larger international consortia connected to their research. In 2024, MATRIX-affiliated researchers and Oslo University Hospital have, in particular, been heavily involved in four large EU-funded projects.

MyPath

MyPath: The digital solution to patient-centred cancer care (2022 – 2027)

MyPath, funded over the EU's Horizon Europe program, is coordinated by MATRIX co-director Stein Kaasa and includes 15 partners from research, clinics, SMEs and NGOs to jointly develop and implement novel patient-centred care pathways, patient-reported outcome measures (PROMs), patient-reported experience measures (PREMs) and treatment decision support incorporated in a user-friendly digital solution. The project, funded with 6.5 million Euro, aims to integrate the MyPath solution in routine cancer care in nine cancer centres in Europe to prove its effectiveness and sustainability. MATRIX is tightly connected to this project and is developing similar solutions in Norway to implement these in the Norwegian healthcare system (see research WP3 & 5).

MyPath 2024 highlights involving MATRIX-affiliated researchers include:

- MyPath highlighted at e-QuoL kick-off meeting. "The MyPath experience" was presented by Tonje Lundeby (January)
- A significant milestone reached when the first "proof-of-concept" solution was delivered to project partners (February)
- The 3rd MyPath General Assembly held in Edinburgh, gathering partners from across Europe to discuss the latest outcomes and collaborative efforts (June)
- Stein Kaasa presented MyPath at the DNV Imatis Forum (September)
- MyPath strongly represented at the Innovative Palliative Care for People with Cancer conference hosted by the European Commission (October)
- OUS and the three other MyPath-MATRIX hospitals met in Oslo to provide updates on the development of the digital solution, findings so far, and the implementation plan for each site (October)
- Amaia Urrizola (OUS) presented MyPath at the E-Helse i Norge (EHiN) Congress (November)
- The first version of the MyPath PROMs application was developed and tested with clinicians and patients (November)
- Stein Kaasa presented MyPath at ESMO Asia 2024 (December)

PCM4EU consortium meeting and Spring Academy in Porto, Portugal in April 2024. Photo: IPOPORTO

PCM4EU
Personalised Cancer Medicine for all EU Citizens

PCM4EU: Personalised Cancer Medicine for all EU Citizens (2023-2025)

PCM4EU, funded over the EU4Health program, is coordinated by Leiden University Medical Centre (LUMC), The Netherlands and includes 17 partners from 15 European countries. The PCM4EU project, funded with 3 million Euro, is set up to facilitate the use of precision cancer medicine diagnostics and pragmatic trials across Europe, and it builds on the family of DRUP-like clinical trials. The aim is to widen access to molecular diagnostics and precision cancer medicine within regions and countries in the EU.

MATRIX-affiliated researchers play essential roles in the project and have three work package co-leaders:

- WP2 Molecular diagnostics & Tumour Boards: Hege G. Russnes (OUS)
- WP3 Implementation of DRUP-like clinical trials: Åslaug Helland (OUS)
- WP4 Implementation & Dissemination: Kjetil Taskén (OUS)
-
- PCM4EU 2024 highlights involving MATRIX-affiliated researchers include:
- The PCM4EU podcast series, providing training material about different aspects of precision cancer medicine, has produced more than 50 episodes. MATRIX-affiliated researchers interviewed for several episodes.
- Spring Academy Academy was organised in April in Porto with 26 early-career participants and 26 lecturers
- White paper "Guidance on personalised diagnostics" published in Journal of Internal Medicine (May). This was a deliverable in WP2, co-lead by Hege G. Russnes (OUS).
- Data sharing agreement signed (August)
- Site-visit from Estonia at OUS to learn more the Norwegian precision medicine ecosystem (October)
- Final PCM4EU consortium meeting in Leiden, The Netherlands (November)

PRIME-ROSE
Precision Cancer Medicine Repurposing System Using Pragmatic Clinical Trials

PRIME-ROSE: Combining Expertise Across Borders to Promote Precision Cancer Medicine in Europe (2023-2028)

PRIME-ROSE, funded with 6 million Euro by the EU Cancer Mission, is coordinated by Kjetil Taskén, OUS, and consists of 28 partners from altogether 19 European countries. The PRIME-ROSE vision is access to affordable precision cancer medicine that prolongs life at the best quality possible for all cancer patients. Whereas PCM4EU focuses on the deployment of novel PCM diagnostic tools, PRIME-ROSE is treatment-oriented.

The PRIME-ROSE consortium will:

- Enable cross-border data sharing
- Build synthetic randomized control cohorts
- Design and conduct pragmatic clinical trials
- Provide the necessary data for implementation
- Involve patients in a consistent and meaningful manner
- Focus on multi-stakeholder collaboration
- Share knowledge and provide education and training

PRIME-ROSE 2024 highlights involving MATRIX-affiliated researchers include:

- 1st Community Advisory Board workshop on health-related Quality of Life (hrQoL) held in Oslo (January 2024)
- Podcast: PRIME-ROSE – The EU's DRUP Trial Champion (February)
- Establishment of a Data Sharing Platform (April)
- Publication about PCM4EU and PRIME-ROSE published in Acta Oncologica (May)
- Data Sharing Agreement signed, and monthly cohort meetings established (September)
- Data pooling established between DRUP-like clinical trial cohorts with similar tumor types, genomic variants and drugs. More than 50 cohorts merged > More rapid evidence generation
- PRIME-ROSE data presented at the ESMO conference in Barcelona (September)
- PRIME-ROSE hang-out networking event during ESMO (September)
- Expansion of Partnership with four new partners (November)

JANE2 - Shaping the EU Networks of Expertise on cancer

In November, the Joint Action on Networks of Expertise on Cancer (JANE2), led by the Istituto Nazionale Tumori in Italy, was launched as a follow-up of the JANE Joint Action (2022 – 2024).

JANE2 is establishing seven Networks of Expertise (NoEs). The aim of the NoEs is to transfer newly acquired knowledge into clinical application together with service providers and research institutions.

Therefore, harmonization with EUnetCCC Joint Action is planned.

PRIME-ROSE
The first Community Advisory Board workshop took place in Oslo in January.

Oslo University Hospital (OUS) is leading work package 6 of the project, focusing on the palliative care NoE. This work is led by MATRIX co-director Stein Kaasa and Augusto Caraceni from FINT, Italy and includes participants representing 40 institutions from 28 European countries. OUS WP6 receives altogether 1.3 million Euro over a four-year period.

CLL-OUTCOME - Chronic lymphocytic leukemia: Improving survival and quality of life
The newly established platform European Partnership for Personalised Medicine opened its first joint transnational call in 2024, Identification or Validation of Targets for Personalised Medicine Approaches (PMTargets). Altogether, 45 million Euros was available through this call.

The project CLL-OUTCOME, Chronic lymphocytic leukemia: Improving survival and quality of life, was awarded 1.5 million Euros over three years through this call.

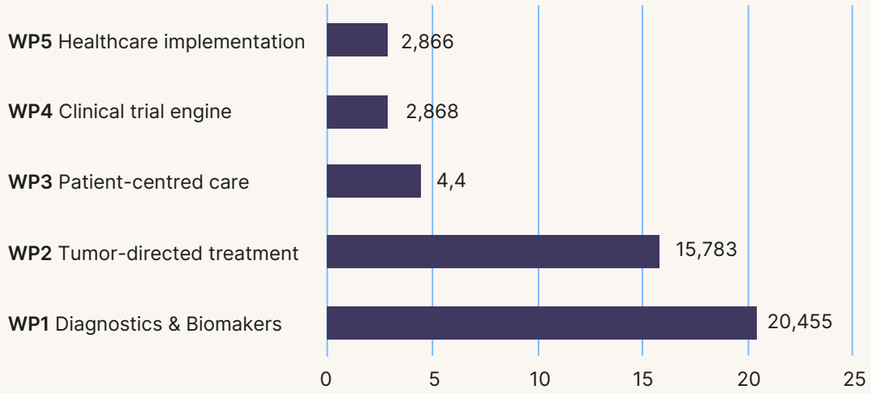
CLL-OUTCOME is coordinated by Sigrid Skånland, project leader at Institute for Cancer Research, OUS and researcher in functional precision oncology in MATRIX and has seven partners

- Sigrid Skånland, Oslo University Hospital (Coordinator)
- Tero Aittokallio, University of Helsinki, Finland
- Barbara Eichhorst, Uniklinik Köln, Germany
- Carsten Utoft Niemann, Rigshospitalet, Copenhagen, Denmark
- Thorsten Zenz, University of Zurich, Switzerland
- Carin Uyl-de Groot, Erasmus Universiteit Rotterdam, The Netherlands
- Olav Ljøsne, Blodkreftforeningen

The main aim of the project is to tailor treatment of patients with CLL (chronic lymphocytic leukemia) to prolong survival and improve quality of life, and the project is a continuation of the ERA PerMed project CLL-CLUE.

CENTRE

Funding



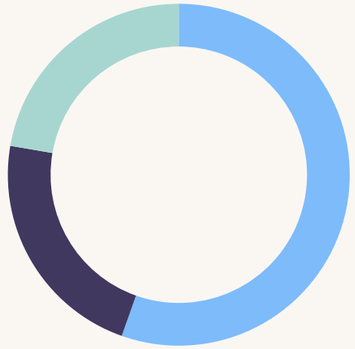
MATRIX 2024 cost distribution on the different work packages.

- MATRIX receives core funding from the Research Council of Norway (RCN) and the Norwegian Cancer Society (NCS). The Centre has been awarded 128 million NOK under the funding scheme for Centres for Clinical Treatment Research (FKB). This funding is granted over an eight-year period (2022 – 2030), pending a successful midterm evaluation after the first five years.

- A prerequisite for the awarded funding as a Centres for Clinical Treatment Research is an own contribution of at least 50%.

- In 2024, MATRIX spent a total of 46.4 MNOK, including own funding. Of the 17 partners in the Centre, eight partners had costs related to the project in 2024:

  Oslo University Hospital (OUS) spent 36.1 MNOK, Stavanger University Hospital spent 2.9 MNOK, the University of Oslo spent 2.5 MNOK, St. Olav Hospital spent 1.9 MNOK, Telemark Hospital spent 1.0 MNOK, Helse Møre & Romsdal spent 0.79 MNOK, the University Hospital of North Norway spent 0.78 MNOK and OsloMet spent 0.36 MNOK.



Core Funding

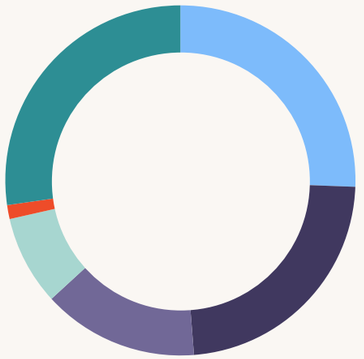
- **22 %** RCN
- **22 %** NCS
- **56 %** Own funding

External Funding

- MATRIX stakeholders have expressed a clear expectation that research environments in MATRIX should be able to attract additional funding from both national and international sources. In 2024, around 95,8 MNOK, in the form of national and international grants to research groups affiliated with MATRIX, has been secured as additional external funding for the coming years.

- National external funding includes 24,5 MNOK from the Norwegian Cancer Society, 22.2 MNOK from the South-Eastern Norway Regional Health Authority, 13.8 MNOK from KLINBEFORSK, 7.9 MNOK from Helse Vest and 1.24 MNOK from Folke Hermansen's Foundation for projects that will be running in the coming years.

  In addition, MATRIX-affiliated researchers are currently heavily involved in five EU projects. In addition to MyPath, PCM4EU and PRIME-ROSE, OUS secured approx. 26,1 MNOK for the JANE2, CLL-OUTCOME and IQ-BRAIN projects (to be spent over the coming 3-4 years).



External Funding secured 2024

- **27 %** EU funding
- **26 %** Norwegian Cancer Society
- **23 %** HSØ
- **15 %** Klinbeforsk
- **8 %** Helse Vest
- **1 %** Other national sources

SCIENTIFIC

Publications

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COMMUNICATION

Dissemination Activities 2024

The MATRIX website has information available in both Norwegian and English. News and other updates are shared both there and via social media channels (X and LinkedIn) regularly. In addition, MATRIX distribute quarterly newsletters.

Researchers affiliated to MATRIX give frequent presentations at both national and international conferences and participate in panel debates, podcasts and other forums to discuss and disseminate new research findings, precision cancer medicine initiatives both in Norway and Europe as well as information about clinical trials. Furthermore, media show an interest in MATRIX-related research and several press items were published in 2024.

A selection of 2024 press items include:

- Vil gje kreftpasientar ein litt betre kvardag - smp.no, Sunnmørsposten 29.01.2024
- Tester ut nytt digitalt verktøy for kreftpasienter, Sykepleien.no, 29.01.2024
- Cancerläkaren 20 februari 2024, Cancerläkaren 20.02.2024
- Gentest gjorde underverk – gir håp i kampen mot kreft – NRK Sørlandet – Lokale nyheter, TV og radio, NRK 05.03.2024
- Én av fire kreftpasienter har fått tilbud om ny behandling gjennom IMPRESS-studien, HealthTalk 02.04.2024
- Nye metoder for kreftbehandling krever virkelighets-data i særklasse, Dagens Medisin 08.04.2024
- Åslaug Helland og Kjetil Taskén fremmer IMPRESS og PRIME-ROSE på ASCO, HealthTalk 04.06.2024
- Den offisielle lungekreftdagen, God Morgen Norge, TV2 11.11.2024
- Norsk Presisjonsmedisinsk Cancer Gruppe: Fremtidens Kreftbehandling i Norge, HealthTalk 21.11.2024
- Europeisk forskerteam ledet av Sigrid Skånland får 17 millioner fra EU, Health Talk 22.11.2024
- Nå er det mulig å tilby mer skånsom stråleterapi for kreftpasienter - Aftenposten, Aftenposten 27.12.2024

Photo: OUS, Lars Petter Devik

RECRUITMENT

New MATRIX staff

MATRIX consists of research environments at 17 partner institutions across Norway, and the affiliated research groups were already operative before the centre opened. In particular, PhD students and postdocs affiliated with MATRIX groups (funded elsewhere) and involved in clinical trials, are already included in MATRIX activities and such involvement is planned throughout the project period. In addition, thirteen positions are directly funded by MATRIX throughout the project period to make sure specific tasks can be fulfilled.

In 2024 the following have joined MATRIX:

Almaz Nigatu Tesfahun joined MATRIX as a researcher at Stavanger University Hospital in January. Almaz is a molecular biologist and has a PhD in DNA damages and repair mechanisms from the University of Stavanger. For the past three years, she has worked with NGS within diagnostics.

Maria Martin Agudo joined MATRIX as researcher at Oslo University Hospital in August. She collaborates with the WP1 team on cancer diagnostics and biomarkers. She is a molecular biologist and bioinformatician with experience in human genetics and computational analysis of genomic data.

Gabriel Stav joined MATRIX in August as a bioinformatician at Oslo University Hospital, bringing expertise in cancer omics and software development. In MATRIX, he collaborates with the WP1 team on advancing cancer diagnostics.

Øyvind Holsbø Hald joined MATRIX and the University Hospital of North Norway (UNN) as a researcher in August and collaborates with the WP2 team. He is a medical doctor and has worked three years as LIS at the Cancer Department UNN Tromsø. Øyvind also holds a PhD in pediatric oncology.

Kathinka Schmidt Slørdahl is an oncologist who joined MATRIX in September. She did her specialist training at the Department of Oncology at OUS and is currently finalizing her PhD. Kathinka joined MATRIX OUS WP2 and is a trial coordinator for both MATRIX-RARE and IMPRESS-Norway.

Turid Rygh Skaara is a medical doctor currently specializing in oncology at OUS. Turid joined MATRIX as a PhD fellow in January 2025 and her PhD project will be mainly focusing on the MATRIX-RARE clinical trial.

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Coordinating Consortium Member
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OSLO UNIVERSITY HOSPITAL

Other Consortium Members
Helse Sør-Øst

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SYKEHUSET INNLANDET
SYKEHUSET I VESTFOLD

Helse Vest

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HELSE BERGEN
Haukeland universitetssjukehus
HELSE FONNA
HELSE STAVANGER
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Helse Midt-Norge

HELSE NORD-TRØNDELAG
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