Forskningsrådet

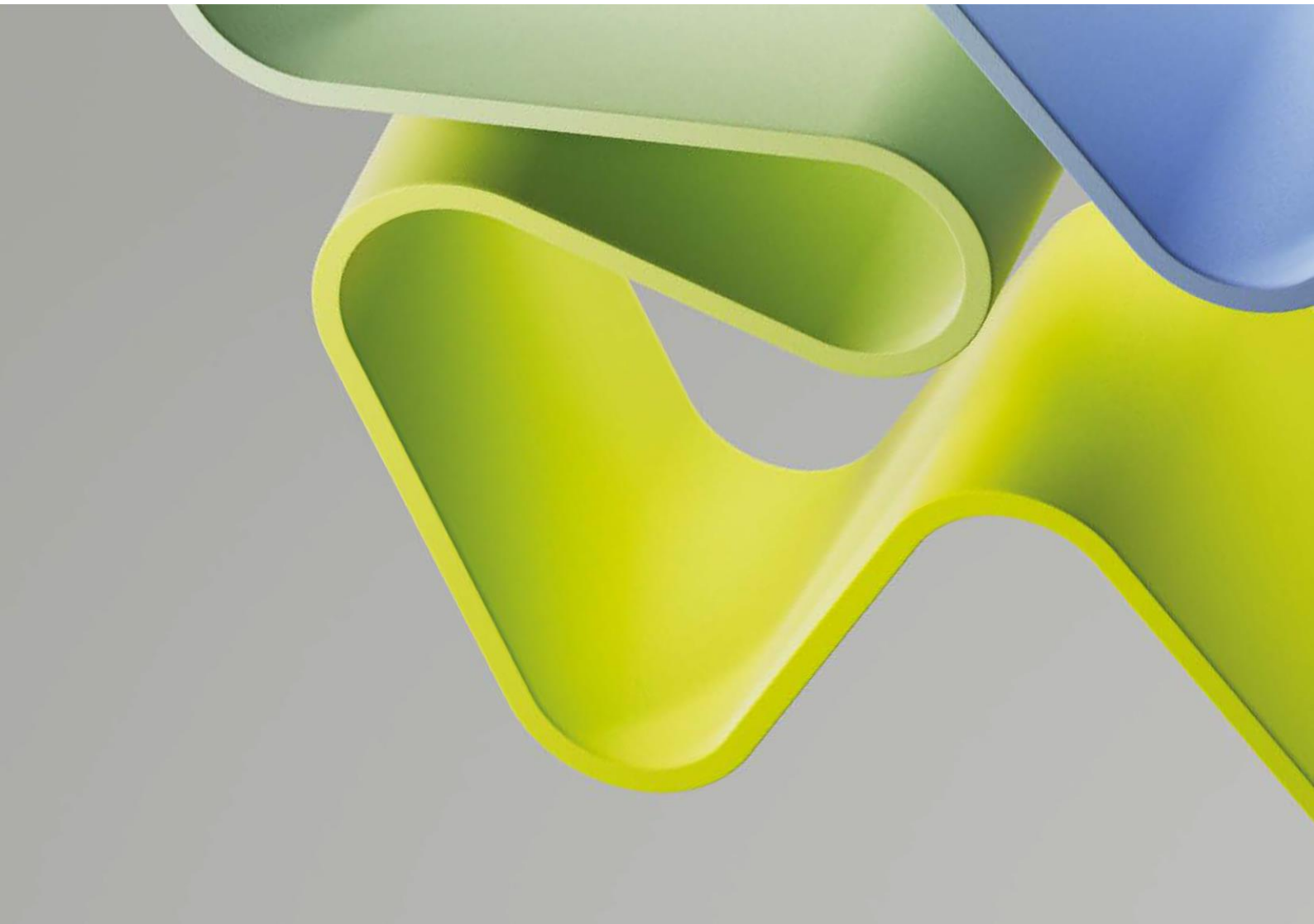
Evaluation of Life Sciences 2022-2024

Evaluation of medicine and health 2023-2024

Evaluation report

ADMINISTRATIVE UNIT: Division of Cancer Medicine
INSTITUTION: Oslo University Hospital and University of Oslo

December 2024



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Statement from Evaluation Committee Health Trust 2

This report is from Evaluation Committee Health Trust 2 which evaluated the following administrative units representing the hospital trusts in the Evaluation of medicine and health 2023-2024:

- Cancer Registry of Norway, Cancer Registry
- Lovisenberg Diaconal Hospital, Lovisenberg Diaconal Hospital
- Martina Hansens Hospital, Martina Hansens Hospital
- Møre and Romsdal Hospital Trust (HMR), Møre and Romsdal Hospital Trust (HMR)
- Division of Cardiovascular and pulmonary diseases, Oslo University Hospital and University of Oslo
- Division of Clinical Neuroscience, Oslo University Hospital and University of Oslo
- Division of Emergency and Critical Care, Oslo University Hospital and University of Oslo
- Division of Prehospital Services, Oslo University Hospital and University of Oslo
- Division of Cancer Medicine, Oslo University Hospital and University of Oslo

The conclusions and recommendations in this report are based on information from the administrative units (self-assessment), digital meetings with representatives from the administrative units, bibliometric analysis and personnel statistics from the Nordic Institute for Studies of Innovation, Research, and Education (NIFU) and Statistics Norway (SSB), and selected data from Studiebarometeret (NOKUT). The digital interviews took place in Autumn 2024.

This report is the consensus view from committee Health Trust 2. All members of the committee have agreed with the assessments, conclusions and recommendations presented here.

Evaluation committee Health Trust 2 consisted of the following members:

Professor Martin Ingvar (Chair)
Karolinska Institute

Professor Ashley Blom
University of Sheffield

Professor Signe Borgquist
Aarhus University

Professor Vibeke Elisabeth Hjortdal
University of Copenhagen

Professor Thomas Kubiak
Johannes Gutenberg University Mainz

Professor Gavin Perkins
Warwick Medical School

Professor Erica Villa
University Hospital of Modena

Geert van der Veen, Technopolis Group, was the committee secretary.

Oslo, December 2024

Profile of the administrative unit

The Division of Cancer Medicine (DCM) operates under Oslo University Hospital (OUS) and the University of Oslo (UiO) Faculty of Medicine. The division is a key component of the Oslo Comprehensive Cancer Centre (CCC), staffed by approximately 630 full-time employees, with a budget of 91.8 million Euros. DCM is structured into multiple departments, such as the Department of Medical Physics, the Department of Cancer Treatment and the Department of Haematology, in addition to the Institute for Cancer Genetics and Informatics (ICGI) and the Institute for Cancer Research (ICR), fostering both clinical and translational research.

DCM aligns with the overarching OUS-CCC cancer strategy (2022-2026), focusing on precision medicine, early cancer detection, patient-centred care, and technological advancements in treatment and diagnostics. As part of OUS-CCC, DCM collaborates closely with UiO, engaging 46 scientists with shared OUS-UiO roles and leveraging extensive resources such as biobanks, core facilities, and a clinical trial unit.

DCM's research supports the hospital's commitment to sectoral and societal health improvement, emphasized through initiatives like IMPRESS-Norway, a national trial in precision cancer medicine. Collaborations with national health trusts and private stakeholders, such as CONNECT, strengthen DCM's impact on cancer treatment standards across Norway.

The division aims to expand its role as a European leader in cancer research through continuous innovation and strategic partnerships. Future goals include broadening international collaborations, advancing personalized therapies, and scaling clinical trials to further integrate precision medicine and improve patient outcomes.

Overall evaluation

The overall assessment of the evaluation committee, considering the Terms of Reference provided by the administrative unit, is that the Division of Cancer Medicine at UiO/OUS (DCM) is a highly esteemed research institution being successful in delivering top-ranked cancer research and cancer researchers. The DCM administrative unit encompasses an extensively broad unit in terms of number of departments and institutions as well as personnel, research activities scientific outputs, and funding. The academic DCM organisation and the clinical CCC (Comprehensive Cancer Centre) organisation are highly integrated.

A strong line of translational research from basic science to clinical trials and implementation of research results into clinic, is definitely a unique strength of DCM positioning the unit with a convincing leading role internationally. To fully achieve the clinical potential of the recognised research performed by DCM, a clearer organisation and integration of clinical researchers within the unit, holds promise.

DCM presents strong impact cases, demonstrating the ambitions and abilities to deliver and implement ambitious research achievements. The future prospects are highly promising.

Recommendations

- Consider developing more specific areas and measurable strategic goals and/or setting up specific criteria for success in the existing areas, followed by well-defined milestones and key performance indicators (for the unit in itself defined outside of the context of the Comprehensive Cancer Centre (CCC), based on the premise that DCM does not equal CCC).
- Consider bringing the surgical departments under DCM (and not only under OUS-CCC). This will make stronger synergies between cancer surgery (research) and other cancer research possible.
- Continue the successful grant strategy.
- Continue the successes, and in addition, consider how the well-developed knowledge-bank at DCM can have the most impactful outreach to the public, to smaller cancer research institutions in Norway, and to the international cancer research community.
- Consider further participation or leading in international collaborative efforts within the expertise of DCM.
- Ensure that the DCM dedication to adhere to FAIR principles is disseminated in the whole DCM-organisation.
- Continue the present collaboration strategy.
- Protect the permanent positions for senior researchers
- Integrate part-time clinical researchers more formally in the organisation. This is of importance as to promote the individual´s scientific career development, for the safeguarding of the research integrity and to make sure that support for state-of-the-art methodology reaches also part time researchers.
- Develop a strategy for the recruitment and retention of top talents, which is currently not described.
- Continue monitoring the gender balances in different categories of personnel.
- Continue the steep improvement curve in open Science policy.
- Facilitate the implementation of strategic goals towards diversity and inclusion through implementational workshops and monitoring of the milestones defined.
- Specify how the unit considers inclusion in hiring processes would be valuable for the future.
- Consider strategies for informing health care stake holders and public partners on the infrastructure needed (data access, research time for researchers etc) to ensure the high-level cancer research performed by DCM.

1. Strategy, resources and organisation of research

1.1 Research Strategy

The Division of Cancer Medicine (DCM) is affiliated to both Oslo University Hospital (OUS) and University of Oslo. OUS is accredited by OECI (Organisation of European Cancer Institutes) as a Comprehensive Cancer Centre (CCC), for the first time in 2016 and reaccredited recently in 2023. DCM is fully integrated in the OUS CCC, and therefore the OUS CCC is the overarching structure for the admin unit. DCM has a very central role in the OUS CCC: The director of DCM is leading the OUS CCC and the head of research of the DCM is also head of the OUS CCC Research Council.

The vision for OUS CCC (and therefore also for DCM) is to be a leading European Cancer Centre in order to realise more effective treatments, less side-effects and better quality of life.

These goals are to be developed within 4 focus areas: early cancer detection; patient-centred care; precision medicine; and technological development (diagnostics, radiotherapy, surgery).

Cancer research in DCM includes basic science, translational science, clinical studies and trials. The DCM presents in its self-assessment five research strategies, two outreach strategies, and four strategies for open access. The CCC research council is key for working on the six key performance indicators: clinical trial performance; number of publications; number of high-impact publications; number of finalised PhDs; and number of innovations.

For basic research, DCM presents centres of excellence (Centre for Cancer Biomedicine (CCB) and Centre for Cancer Cell Reprogramming (CanCell)), whereas for clinical research DCM presents the established Advanced gene and Cell Therapy (ACT) centre and a development of patient centred treatment (MyPath) and large precision medicine projects within diagnostics and clinical trials (InPreD, IMPRESS Norway).

The committee´s evaluation

The organisation of DCM is based on the CCC-structure and has developed its strategic focuses within the framework of the continued CCC-processes, including development of a cancer research strategy. The unit DCM does not in itself have a research strategy but is integrated within the five presented research strategies: two for Oslo University Hospital, one for the Faculty of Medicine, one for the University of Oslo and one for Comprehensive Cancer Medicine. The presentation of all five strategies in the self-assessment does not indicate the specific research strategy for DCM, albeit give a broad overview for the strategies at the hospital and the university: The most relevant of the 5 strategies, seems the CCC cancer strategy specifically covering the cancer area. A cancer research strategy in itself is an integrated part of the overall cancer strategy, although sparsely documented.

While we understand that the DCM unit is a tremendously large and ambitious and successful unit with a complex and diverse organisation, we find the cancer research strategic goals less developed in the available material for evaluation.

The cancer research strategy developed for the Oslo CCC may have served as a helpful guidance in the evaluation of the DCM cancer research, but the means of action for strategic measures in laboratory and translational research are generic and focused on infrastructure and financial matters. In clinical cancer research, similar concerns arise from

the presented material, apart from clinical trials which is ambitiously and precisely defined in terms of criteria of success.

The committee´s recommendations

- Consider developing more specific areas and measurable strategic goals and/or setting up specific criteria for success in the existing areas, followed by well-defined milestones and key performance indicators (for the unit in itself defined outside of the context of the Comprehensive Cancer Centre (CCC), based on the premise that DCM does not equal CCC). Elaboration of such milestones are of value as otherwise generic science production goals (bibliometry, etc.) tend to overshadow long term goals as given in the vision statement.

1.2 Organisation of research

The Division of Cancer Medicine is the organisational home for seven departments: Clinical service; Haematology; Oncology; Gynaecological Oncology; Medical Physics; Institute of Cancer Genetics and Informatics; the Institute of Cancer Research. Under the departmental level of Institute of Cancer Research, eight different sections are described, whereof two are administration and core facilities, while the remaining six cover: Cancer Genetics; Cancer Immunology; Molecular cell Biology; Tumour Biology; Molecular Oncology; Radiation Biology. Geographically the DCM is located on 4 different locations (campuses).

The number of researchers is 395, including 42 professors/associate professors, 74 senior physicians, 4 physicians, 3 psychologists, 196 researchers/post docs and 76 PhD-students. The unit is characterised by the close interface between OUS and UiO with 46 adjunct professors having shared positions, and as many as 70% of the publications are jointly affiliated with the hospital and the university.

The infrastructure and research support for DCM is strong with >100 technicians, >60 study nurses and coordinators.

The committee's evaluation

DCM has a robust and unique organisation with solid support in terms of infrastructure, and a considerable number of people engaged in research. The unit shows capacity and ambitions to take on international leadership positions in cancer research and their success is evident. In terms of clinical and research activities, cancer surgery is an integrated part of the OUS-CCC, but surgical departments are not organised under DCM. The Cancer Medicine unit is in its organisational structure less fit for integrating surgical research and research in i.e. cancer rehabilitation, although seemingly these scientific areas are pursued.

Research career opportunities are plenty and robustly described. DCM has a definite aim to have more interaction with international research groups. Doctors and researchers go for sabbatical leave, to gain both expertise and collaboration. Younger researchers go for career-development through established collaboration with both MMSK and MDA, resulting in bilateral visits. The impacts from these visits are seen through Increased collaboration and gain of expertise, access to technology and expertise not present in-house.

The scientific diversity and the considerable size of the DCM is likely both an opportunity and a challenge in terms of fostering joint actions, a challenge well-known in health-academia institutions of large sizes. DCM presents leadership positions with shared positions at OUH/UiO to coordinate research, innovation and education, thus fostering cross-sectional avenues.

The committee´s recommendations

- Consider bringing the surgical departments under DCM (and not only under OUS-CCC). This will make stronger synergies between cancer surgery (research) and other cancer research possible.

1.3 Research funding

The total R & D budget converges to 213 MNOK indirectly - through regional and hospital channels - from the Ministries (Heath and Care + Education and Research), another 327 MNOK in national external grants, and 29 MNOK from international (i.e. EU) external grants.

The committee's evaluation

The research budget is impressive with a strong position on the international level, and DCM holds a favourable track record in attracting prestigious grants during the last five years. The financial situation for research at DCM provides a robust fundament for their highly ambitious scientific portfolio and future research generations can start out from an advantageous situation.

Insights into grant successes of the junior faculty would have been interesting to evaluate, given the importance of promoting young scientists on the grant market.

The committee's recommendations

- Continue the successful grant strategy.

1.4 Use of infrastructures

Efforts to secure biobanking and register data, have been high on the agenda, both at the local level as on the national level. For the large-scaled national initiatives i.e. NorSeq, DCM is a central node. Several of the national infrastructure projects and engaged in international infrastructures. Access to research infrastructures is secured through the Dept. of Core Facilities at DCM. The FAIR-principles are being developed through the Competence Hub QualiFAIR, which the unit is partner in. We cannot from the self-evaluation, understand how and to what extend the FAIR-principles are disseminated further out in the department organisation.

The committee's evaluation

DCM is a substantial contributor and leader of substantial research infrastructure projects, and we congratulate for these remarkable achievements.

The relevant concerns to adhere to the FAIR principles meanwhile adhering to legal restrictions incl. GDPR, are raised by DCM. We note constructive actions taken to develop and fulfil FAIR principles through digital transformation.

The committee's recommendations

- Continue the successes, and in addition, consider how the well-developed knowledge-bank at DCM can have the most impactful outreach to the public, to smaller cancer research institutions in Norway, and to the international cancer research community.

- Consider further participation or leading in international collaborative efforts within the expertise of DCM.
- Ensure that the DCM dedication to adhere to FAIR principles is disseminated in the whole DCM-organisation.

1.5 Collaboration

A sizeable amount of national and international collaborations is listed, and author-lead is evident by 50% being lead or last author on the collaborative publications. International recruitment to the Institute for Cancer research is demonstrated by 33% international staff. International collaboration is further evidenced by the fact that 60% of publications from the unit had international co-authors. Public-Private partnerships are initiated and facilitated by merging of industry partners, hospitals, and public regulatory partners, i.e. the CONNECT consortium.

The committee´s evaluation

Multiple and high-impact research collaborations across the world, mirror the scientific ambitions and achievements, making DCM an attractive collaborator. The unit holds a strong position as lead for the majority of listed high-impact collaborations.
Undoubtfully a collaborative unit, recognising the opportunities and impact resulting from healthy partnerships. The leading role comes with responsibility, support, and generosity, which we believe is carried out comprehensively by DCM.

The committee´s recommendations

- Continue the present collaboration strategy.

1.6 Research staff

A total of 395 persons is listed in 6 different categories. The majority are women (64%). The gender balance varies across categories. Temporary positions are only for PhD-students and postdocs, and thus all professors/associate professors are permanent positions. A fair amount of personnel is allocated to support research.

The committee´s evaluation

The secured and permanent positions for senior researchers are valuable and encourage research leaders to rely on their position and therefore have the courage to plan for long-term projects. We cannot from the listed, determine if there are senior researchers in the category "researchers and post docs", which may be challenged by the temporality of their position.

The committee´s recommendations

- Protect the permanent positions for senior researchers.
- Integrate part-time clinical researchers more formally in the organisation. This is of importance as to promote the individual´s scientific career development, for the safeguarding of the research integrity and to make sure that support for state-of-the-art methodology reaches also part time researchers.
- Develop a strategy for the recruitment and retention of top talents, which is currently not described.

- Continue monitoring the gender balances in different categories of personnel.

1.7 Open Science

The University of Oslo has had an open science policy since 2022, and together with OUS, employees are recommended selection of journals adhering to this policy. Training is offered through the university library - i.e. for sharing and archiving data. The FAIR principles are applied and continuously developed for usage of scientifically rich sources of data and biological material. Publishing in Open Access has significantly improved from 35% to 83% during the last 6 years.

The committee´s evaluation

The structures and ambitions for Open Science at DCM follow the institutional policies directed from the university. We note a substantial improvement in Open Access publications.

The committee´s recommendations

- Continue the steep improvement curve in open Science policy.

2. Research production, quality and integrity

Introduction

The scientific focus areas are under the umbrella of the cancer strategy developed in the CCC-regimen, setting the direction for cancer research at DCM. The scientific activity as measured by peer-reviewed publications, is substantial: A yearly production of around 500 publications reached its maximum in 2021 with 534 cancer publications.

The research integrity strategies of the unit adhere to the policies instructed from the UiO through "Standard for Research Integrity", "Guideline Research Ethics and Integrity", among others. Preventive actions are prepared for and executed through courses for both junior and senior researchers, as well as scientific staff training sessions. Potential "cases" of mishandling research integrity are visualised in reports from "Ombudsman" and chair of commission sent out to research leaders.

2.1 Research quality and integrity

This part includes one overall evaluation of each research group that the administrative unit has registered for the evaluation. The overall assessment of the research group has been written by one of the 18 expert panels that have evaluated the registered research groups in EVALMEDHELSE. The expert panels are solely behind the evaluation of the research group(s). The evaluation committee is not responsible for the assessment of the research group(s).

Department of Cancer Genetics (DCG), Institute for Cancer Research (ICR)

The quality of research is excellent. The research is of highest international standards with a very good level of quality in terms of originality and significance.

A main achievement of DCG is the Research Biobank consisting of >5000 patient samples associated with clinical follow-up data.

Department of Cancer Immunology (DCI)

The research group has developed a critical mass and collaborative vision for their research. The main aim is to maintain and expand the funding and reach, which is always difficult but the group has an excellent strategy. The group has excellent support for activities and produces high quality research which is impactful for society. Furthermore, their level of knowledge exchange is excellent and they communicate with patient groups in the design of their clinical research areas and research design. As such, they have excellent societal impact.

The research group conducts excellent world leading research in the area of cancer. They have excellent benchmarks, so sustaining these will be the challenge. The group is well composed, has access to excellent infrastructure and contributes to the institutional aims. The group contributes to the teaching and training of PhD students. Their funding is national and international, and at an excellent level. Another challenge will be to achieve the levels of funding needed for the level of research being conducted.

Department of Haematology (BLO)

This is a strong, medium large research group consisting of three fairly independent sub-groups with different research profiles. 1) The Cellular Haematology Group, which focuses on clinical and translational studies for most of the diseases where the research group is responsible for treatment of the patients but also involved in translational research. 2) The Research Group for Haemostasis and Thrombosis, which has a focus on clinical and translational studies for patients with bleeding disorders and venous thromboembolism. 3) Oslo Multiple Myeloma Centre (OMC), which has a focus on translational research in multiple myeloma. There seems to be limited collaborations between the different sub-groups. A stronger collaboration could potentially secure access to laboratory facilities with benefit for all groups. The research group is very well funded and produces high-quality research with the different research fields of the sub-groups. The group also has an impressive involvement in numerous ongoing research projects. Furthermore, the group has a high throughput of PhD students in relation to the size of the group. There is, however, no involvement in academic activities outside the research and clinical activities, such as courses and educational activities. This is also reflected in few permanent academic positions within the group.

Department of Molecular Cell Biology (MCB)

MCB conducts cell biological cancer research at the top international level. They are involved in two Norwegian Centres of Excellence, have obtained two European Research Council (ERC) grants as well as one Research Council of Norway (RCN) 'Topforsk' grant. They have published numerous impactful articles in leading journals in their field. Numerous national and international awards for scientific achievements of staff members complete the picture that MCB is an excellent and leading group of researchers.

The organisational structure and the composition as well as the infrastructure/facilities are very well suited to conduct high-level research. The group has successfully recruited both, early-stage and experienced researchers, and collaboration and (international incoming and outward) mobility are priorities, creating a very attractive research environment. The group has built numerous interdisciplinary collaborations, resulting in an excellent international network. Members of the group are active in relevant scientific societies and are engaged in transdisciplinary projects including non-academic stakeholders.

Department of Molecular Oncology (DMO), Institute for Cancer Research (ICR)

This is a top Functional Oncology group engaged in reaching the overarching goal to translate biological discoveries into improved treatment of patients with solid tumours. The group established a biobank of >300 colorectal patients' iPSC-organoid lineages providing the *in vitro* platform to test the patient-specific response to drug treatments according to precision medicine practice; set up liquid biopsies (urine, blood, bile) for early cancer detection and recurrence; stored and processed patients' clinical, pathological and large-scale multi-omics data at diagnosis and follow-up by bioinformatics analyses to establish a reference framework. It also expanded/updated broad research technology platforms in-lab introducing in throughput genomic investigations (Long Read Sequencing) which allows detection of structural rearrangement and direct methylome analysis and developed new tools/pipelines for data integration. This intense activity accompanied by high performance in educational activities, national/international projects attracting external grants, excellent cooperation with the administration team, is promising further achievements.

Due to excellent performance across all evaluation criteria and outstanding contribution to translate groundbreaking discoveries on solid tumours into patients' diagnosis and care the research group stands out at the national and the international level.

Department of Oncology, Medical Physics and of Gynaecological Oncology (DOO)

This multidisciplinary clinical and basic research group's organisation and composition are very well suitable for pursuing its research goal. The strategy for succeeding with the group's goals is in line with the vision of host institution and the faculties to which the group is associated. They educate a high number of national and international master and produce a lot of publications in top journals and PhD theses. The benchmark strategy is well in line with what the group would like to achieve and seems to serve the group very well given its output. Through numerous of collaboration within the departments and institution, within the hospital and university, on a national level as well as internationally, the group is very successful. The institutional/administrative support provided by the host unit is impressive and contributes to a solid infrastructure platform on which the group seems to excel.

The research group's monographs, scientific books and societal contribution is more than impressive. They perform comprehensive national / international clinical and translational research in oncology to improve patient care developing new therapies, finding new targets and tailoring therapy plans. By attracting and educating both technical and medical coworkers at all academic levels and establishing collaborations in the hospital sector as well as academically and with industry, the group aim to be competitive for both national and international funding, which they have proved to be during the evaluation period (almost 550 MNOK).

The benchmark strategy involves optimising patient-centred care, enhance all phase clinical trials, develop evidence-based guidelines, translational research, strategic collaboration internationally. The level of the research group compared to other similar national and international research groups is outstanding.

Department of Radiation Biology (DRB), Institute of Cancer Research (ICR)

The main lines of DRB's research covers several topics in the areas of radiation biology, radiation resistance and cancer treatments. The research and projects are highly interdisciplinary in nature and their relevance and quality are very good. The introduction of proton therapy-related research is a relevant development.

DRB is involved in both Norwegian and European research networks, and this is important for the impact of its research, for example, DRB's involvement with the ESTRO Biology Committee.

Department of Tumour Biology (DTB), Institute for Cancer Research (ICR)

The DTB organisational structure and scientific content are very strong to support the production of excellent research on cancer biology. The funding of the institution is very good with 70% from external sources. This is also a potential risk for the future if these external sources dry up due to change in the economic environment or research policy. The infrastructure of the institution is well connected with EU projects. The data management is adequate and according to GDPR regulation. Diversity is well balanced and there are collaborations with industry too.

It is a strength that academic research and clinical practice take place in close vicinity and interactions exist with other groups in Oslo including the use of shared core facilities. This is beneficial for the local and international fundraising strategy. Patient cohorts and biobanks are a strong asset. The DTB unit does not use social media and other communication tools optimally to communicate with the scientific community. Financial stability is clearly achieved through a diverse range of funding sources including public-private collaborations. The large dependency on external money can become a risk with strong inflation.

Institute for Cancer Genetics and Informatics (ICGI)

ICGI has a well-developed and established organisation suited to conduct its educational and research activities. The balance between medical and technical expertise, which can be sensitive, seems to work well. It is more difficult to assess the balance between the routine laboratory health care functions and the research projects.

The project funding is considerable. But in relation to the stated vision of being a world leading research environment both more EU, NIH, and other international funding would be appropriate. The same is true for industrial projects and funding.

ICGI projects are of the highest quality which is also reflected in their listed publications. This work should be continued but the listed international cooperation should be emphasised, and exchange of researchers can be one way to go. Increased EU infrastructure cooperation should easily be available to this competent group.

The development of cancer information sites for patients and oncologists is of great clinical importance. The overall societal impact of the group is assessed as very important, it is difficult to see that any other Norwegian research group would pass that level.

3. Diversity and equality

The unit acknowledges the diversity and equality initiatives set by UiO and OUS as presented by 4 different action plans.

The committee´s evaluation

64% of staff are women and this holds true within all categories of staff presented, although with the highest dominance among researchers/post docs. Gender-balance is achieved. We cannot read from the self-evaluation how the unit is undertaking a facilitation of the action plans for diversity and policy against administration. It is stated being part of the hiring processes, although not specified further.

The committee´s recommendations

- Facilitate the implementation of strategic goals towards diversity and inclusion through implementational workshops and monitoring of the milestones defined.
- Specify how the unit considers inclusion in hiring processes would be valuable for the future.

4. Relevance to institutional and sectorial purposes

Sector specific impact generated by DCM is exemplified by two notable websites: Kreftlex and Oncolex, providing valuable information to both patients and care givers. Patients' information and improved public knowledge in cancer is taken on as a responsibility by DCM and delivered through multiple public outreach meeting and meetings with patient representatives as well as through social media platforms. Internally, DCM holds a large number of informative meetings and seminars for research personal and other employees. A specific focus on the group of PhD-students is provided through specific seminars for current PhD-students but further for medical students to attract future PhD-students. Overall, research is considered an integrated part of medical education, in which DCM actively engage. For medical students, the Medical Student research Program, offers research funding and training for scientifically interested students with a maximum of 20 each year. Not only is DCM collaborating with UiO as university partner, but additionally NMBU and OsloMet.

The committee´s evaluation

The unit has taken on an ambitious role in educating future generations of students through their knowledge gained in science and recognises the societal task of informing people and patients about ongoing and succeed scientific findings.

The committee's recommendations

N/A

5. Relevance to society

DCM is delivering tot the long-term plan of the Ministry of Education and Research in terms of utilising patient data, collaborating with business partners, European consortiums, in order to enhance quality of health care services and improve patient outcomes.

The committee´s evaluation

Societal understanding of the demand for clinical research to improve clinical outcomes, is needed to ensure continued support for usage of clinical data in research and inclusion of patients in trials. Relevance to society is presented quite generic and not cancer oriented. The self-evaluation does not present if and how societal impact is measured and what the milestones are.

The committee´s recommendations

- Consider strategies for informing health care stake holders and public partners on the infrastructure needed (data access, research time for researchers etc) to ensure the high-level cancer research performed by DCM.

Comments on impact case 1: Impact of underpinning cancer research – Consequences of its organisation in the RCN CoE Centre for Cancer Biomedicine (CCB) and the subsequently developed portfolio

A Norwegian Centre of Excellence by RCN funded in the 2nd cycle of CoEs, achieved ground-breaking insight into the biological mechanisms of cancer development, as well as biological factors that can aid diagnosis and guide precision cancer medicine. The wider impact of CCB is illustrated by the fact that CCB scientists have headed several additional joint high-impact projects and centres during and after the CCB period, 01.01.2008-31.12.2017.

Important step in the ambitions to achieve impact beyond academia, bringing scientific discoveries from bench to bedside and foster commercial interest, CCB scientists filed as many as 36 patent applications for their scientific innovations. These have so far resulted in 24 granted patents, ranging from applications of novel biomarkers for cancer diagnosis and personalized therapy to novel informatics and bioinformatics tools and apps for smartphones

Results from the centre were published in leading journals, including as many as 13 articles in Nature and Science, of which 8 had CCB scientists as corresponding authors.

Details of the impact: Commercial development of these products may ultimately benefit health care personnel as well as cancer patients.

Comments on impact case 2: OUS Immune Oncology (OUS-IO): From Discovery Research to Clinical Translation

The OUS-IO impact case demonstrates significant advancements in cancer immunotherapy, particularly in identifying novel tumour antigens, T cell receptors, CARs, and overcoming immune suppression in tumours. Further, the successful establishment of a novel national infrastructure for manufacturing of advanced therapy medicinal products (ATMPs), and a clinical trial engine within MATRIX, an RCN-funded Centre of Excellence in

Clinical Research. The impact is further illustrated in strong industry partnerships, and significant contributions to clinical trials, positioning OUS as an international leader in precision immunotherapy research.

Scientific Breakthrough 1: New technologies for discovery of novel classes of tumour antigens and T cell receptors (TCRs)(ref 3), and identification of new CARs. Scientific Breakthrough 2: Overcoming suppressive mechanisms driving functional disarming and exhaustion of immune effector cells. Clinical breakthrough: Development of IO clinical programs based on in-house developed concepts and infrastructure to support them. This led to various articles including in Nature Biotechnology, Nature Medicine, Cancer Cell and Science.

The research described in this impact case builds on long-term strategic investments in immunotherapy research at the Division of Cancer Medicine, OUS. During early years (1990-2010), the main focus of immunotherapy research at this unit was on various types of cancer vaccines

Comments on impact case 3: Development of national precision cancer medicine (PCM) implementation initiative

The case has provided access to molecular cancer diagnostics and precision cancer medicine (PCM) in the health care. From 2019, a bottom-up and top-down coordinated effort lead by DCM, OUS, involving oncology, haematology and pathology environments nationally, has resulted in (i) the formation of the national Infrastructure for Precision Cancer Diagnostics, InPreD,, the IMPRESS-Norway clinical trial for PCM, currently with 24 drugs in algorithm, including patients at all hospitals in Norway treating cancer patients, (iii) the CONNECT Public-Private partnership (18 pharma, 12 public and NGO partners), and (iv) the Norwegian Centre for Clinical Cancer Research, MATRIX for new PCM diagnostics and treatment

The Norwegian Cancer Genomics Consortium (NCGC) from 2012 to 2018. NCGC contributed to genome-wide sequencing of >1000 tumour-normal pairs of different cancer diagnoses, established large-scale tumour sequencing (NGS) in Norway with laboratory and computational procedures (Bioinformatics, 2018), and enhanced the knowledge of cancer-specific genomic aberrations. Piloted early molecular- and computational pipelines for clinical translation of PCM and contributed competence in molecular analyses, computational pipelines for interpretation of genomic variants, and composition of multidisciplinary tumour boards (ESMO Open, 2017)

The InPreD national Infrastructure for Precision Diagnostics that offers 500-gene panel testing for patients with advanced disease for stratification into clinical trials and includes a permanent national molecular tumour board. The IMPRESS-Norway clinical trial (modelled after the DRUP study in the Netherlands) that uses a combined umbrella and basket design and Simon two-stage model to test a set of drugs (currently 24) on new indications based on molecular diagnostics and an amalgamated algorithm. The CONNECT Public-Private Partnership for PCM Implementation discussing and observing the projects with all stakeholders

Comments on impact case 4: Palliative Care

The European Palliative Care Research Centre (PRC) have been expanded internationally, and international guidelines have been updated (ESMO and EAPC) under the units´

leadership. Large scale RCTs and cohort studies are conducted – MENAC, EPCCS, Zopiclone Trial, 2 vs 3 step pain ladder, and HUNT Pain Examination Study.

PRC was established in 2009, as a joint venture between Trondheim University Hospital and The Norwegian University of Science and Technology NTNU, and the Department of Oncology, Oslo University Hospital and Institute of Clinical Medicine, University of Oslo. PCR coordinates groups and individual researchers within 26 core collaborating centres across Europe and overseas. The main research focus is palliative care (PC), encompassing the wider patient-centred care concept. The four main pillars of research are: Symptom management; herein: pain, cachexia, psychological distress, sleep, hard-to–treat-cancers: pancreatic cancers and brain metastases, health care services research and implementation science research. In the past 5-6 years they have been incorporated modern implementation science strategies to enhance the impact and sustainability of their research results. The unit´s development of Eir, an innovative digital symptom assessment tool, is a central element in all research activities. Various Journal articles in e.g. Lancet Oncology were published.

1. Symptom management: They have challenged the clinical appropriateness of the traditional 3-step WHO pain ladder for relief of cancer, which generated great interest and discussions in renowned medical journals and cancer pain associations2. This has led to better understanding and treatment also in non-cancer populations.

2. Sleep, psychological distress, cognitive function, and physical function. All of these were part of our national and international trials, such as the EPCCS study (2011-18) and the Zopiclone RCT (2017-22) 5. The breadth of our research represents an important contribution to the understanding and uptake of validated symptom assessment methods and their importance for patients' well-being and even survival.

3. The group has contributed substantially to the launching of multiple international assessment and treatment guidelines on cachexia with ESMO and ESPEN to increase the awareness of this syndrome and improve clinical outcomes.

4. Hard-to–treat-cancers: pancreatic cancers and brain metastases, hereunder handling of cachexia. PRC leads the major work of revising the international guidelines on cachexia classification and treatment, currently ongoing.

5, Health care services research: The Orkdal project (2013-20) is a unique example of how they combine research pillars, PC and optimised individual symptom management, cancer treatment, and provision of health care services also outside institutional care. Here they implemented the provision of a standardized care pathway with integrated care to home dwelling and hospitalized patients in a Norwegian rural region.

6. Implementation research. implementation science strategies to conduct research with sustainable practice changes. Explanations of why health innovations fail are numerous, but mostly related to insufficient planning, and poor anchoring and follow-up from all involved. PRC has a pivotal role in the ongoing and the forthcoming Joint Action calls from EU (JANE1&JANE2).

Comments on impact case 5: Implementing an OUS Comprehensive Cancer Centre (OUS-CCC) – Enhancing the organisational infrastructure for cancer research and cancer care

Cornerstones of the CCC concept are the integration of research and clinical care, and the translation of research findings into evidence-based practice changes. The designation of OUS as a Comprehensive Cancer Centre (OUS-CCC) (OECI-accredited 2017, re-

accredited 2023) mobilised and combine relevant disciplines, and the infrastructure for cancer research was strengthened and further developed.

Standardized cancer care pathways were implemented through politically imposed reforms (ref. Mæhle et al, 2020, Mæhle et al 2021a and 2021b and reviewed in Mæhle and Smeland, 2021). This led to focus on standardization and quality assessment and next on organisation OUS and in the wider region. The Nordic countries, therefore, looked to the European CCC concept and the OECI Accreditation and Designation programme. Through the establishment of infrastructure, governance structures, and collaborative mechanisms, the CCC at OUS is poised to facilitate significant advancements in cancer research and ultimately enhance patient outcomes.

Level 1) Establishment of the Cancer Centre with its Cancer Centre Board and a cancer centre Research Council in 2016 created an arena facilitating cross-organizational coordination of resources in the hospital and its research environment. This has also resulted in major initiatives enhancing cancer research

Level 2) The connected cross-organizational collaborative behaviour and attitudes influencing the development of cancer research actively stimulating cross-disciplinary collaboration. This is connected to specific cancer diagnoses and not least across cancer diagnoses for example through workshops and seminars. Most recently diagnosis-specific centres are being established at the new Radium Hospital opening September 2024. Clinical research and closer collaboration with translational research at the Institute for Cancer Research is a main task for these centres.

Level 3) Improved outcome for patients, the bottom-up influence on development of health care and cancer politics and policy implementation. The first is already a reality by increased patient access to advanced experimental studies. The second is a reality through the hospital´s ability to influence the political and administrative initiatives on precision medicine and on the role OUS has achieved in influencing the establishment of a European network of CCCs (CRANE). This aims at taking a coordinating role in the development of cancer research eco-systems in Europe.

Appendices

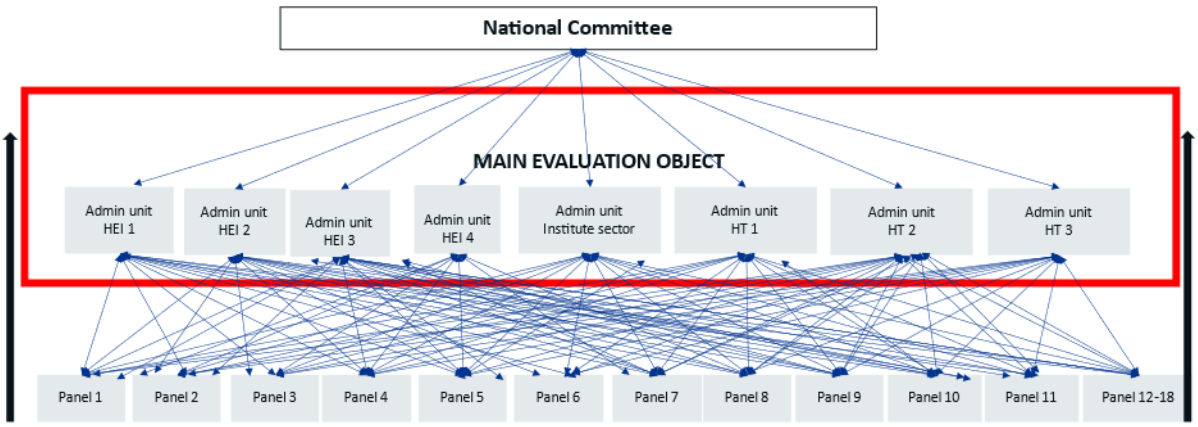
Evaluation of Medicine and health 2023-2024

By evaluating Norwegian research and higher education we aim to enhance the quality, relevance, and efficiency. In accordance with the statutes of the Research Council of Norway (RCN), the RCN evaluates Norwegian professional environments to create a solid and up-to-date knowledge base about Norwegian research and higher education in an international perspective.

The evaluation of life sciences is conducted in 2022-2024. The evaluation of medicine takes place in 2023-2024. The evaluation of biosciences was carried out in 2022-2023. The primary aim of the evaluation of life sciences is to reveal and confirm the quality and the relevance of research performed at Norwegian Higher Education Institutions (HEIs), the institute sector and the health trusts. The evaluation shall result in recommendations to the institutions, the RCN and the ministries.

Evaluation of medicine and health (EVALMEDHELSE) 2023-2024
The evaluation of medicine and health includes sixty-eight administrative units (e.g., faculty, department, institution, center, division) which are assessed by evaluation committees according to sectorial affiliation and other relevant similarities between the units. The administrative units enrolled their research groups (315) to eighteen expert panels organised by research subjects or themes and assessed across institutions and sectors.

Organisation of evaluation of medicine and health 2023-2024



The institutions have been allowed to adapt the evaluation mandate (Terms of Reference) to their own strategic goals. This is to ensure that the results of the evaluation will be useful for the institution's own strategic development. The administrative unit together with the research group(s) selects an appropriate benchmark for each of the research group(s).

The Research Council of Norway has commissioned an external evaluation secretariat at Technopolis Group for the implementation of the evaluation process.

Each institution/administrative unit is responsible for following up the recommendations that apply to their own institution/administrative unit. The Research Council will use the results from the evaluation in the development of funding instruments and as a basis for advice to the Government.

The web page for the evaluation of medicine and health 2023-2024: [Evaluation of medicine and health sciences (forskningsradet.no)]

Forskningsrådet

Se vedlagte adresseliste

Vår saksbehandler / tlf.	Vår ref.	Deres ref.	Sted
Hilde G. Nielsen/40922260	23/3056	[Ref.]	Lysaker 28.4.2023

Invitasjon til å delta i fagevaluering av medisin og helsefag (EVALMEDHELSE) 2023-2024

Vi viser til varsel om oppstart av nye evalueringer sendt institusjonenes ledelse 9. november 2021 (vedlegg 2).

Porteføljestyret for livsvitenskap har vedtatt å gjennomføre fagevaluering av livsvitenskap 2022-2024 som to evalueringer:

- Evaluering av biovitenskap (EVALBIOVIT) (2022-2023)
- Evaluering av medisin og helsefag (EVALMEDHELSE) (2023-2024)

Hovedmålet med fagevalueringen av livsvitenskap 2022-2024 er å vurdere kvalitet og rammebetingelser for livsvitenskapelig forskning i Norge, samt forskningens relevans for sentrale samfunnsområder. Evalueringen skal resultere i anbefalinger til institusjonene, til Forskningsrådet og til departementene. Den forrige fagevalueringen av biologi, medisin og helsefag ble gjennomført i 2010/2011 (vedlegg 3).

Fagevaluering av livsvitenskap retter seg mot UH-sektor, helseforetak og instituttsektor (vedlegg 4). Forskningsrådet forventer at aktuelle forskningsmiljøer deltar i evalueringene, selv om beslutning om deltagelse gjøres ved den enkelte institusjon. Videre ber vi om at deltakende institusjoner setter av tilstrekkelig med ressurser til å delta i evalueringsprosessen, og at institusjonen oppnevner minst én representant som kontaktperson for Forskningsrådet.

Invitasjon til å delta i fagevaluering av medisin og helsefag (2023-2024)

Fagevaluering av medisin og helsefag er organisert over to nivåer (vedlegg 4, side 11). Internasjonale ekspertpaneler vil evaluere forskergrupper på tvers av fag, disiplin og forskningssektorer (UH, institutt og helseforetak) etter kriteriene beskrevet i kapittel 2 i evalueringsprotokollen (vedlegg 4).

Panelrapporten(e) for forskergruppene vil inngå i bakgrunnsdokumentasjonen til forskergruppen(e)s administrative enhet (hovedevalueringsobjektet i evaluering), og som vil bli evaluert i internasjonale

sektorspesifikke evalueringskomiteer. Evalueringskriteriene for administrative enheter er beskrevet i kapittel 2 i evalueringsprotokollen (vedlegg 4).

Innmelding av administrative enheter og forskergrupper – frist 6. juni 2023

Administrative enheter (hovedevalueringsobjektet i evalueringen) – skjema 1

Forskningsrådet inviterer institusjonene til å melde inn sine administrative enhet/er ved å fylle ut skjema 1. Definisjonen av en administrativ enhet i denne evalueringen er å finne på side 3 (kap 1.1) i evalueringsprotokollen (vedlegg 4). Ved innmelding av administrativ/e enhet/er anbefaler Forskningsrådet institusjonene til å se innmelding av administrativ enhet/er i sammenheng med tilpasning av mandat for den administrative enheten (Appendix A i evalueringsprotokollen).

Forskergrupper – skjema 2

Forskningsrådet ber de administrative enheter om å melde inn forskergrupper i tråd med forskergruppedefinisjonen (kap 1.1) og minimumskravene beskrevet i kapittel 1.2 i evalueringsprotokollen. Hver administrative enhet melder inn sin/e forskergruppe/r ved å fylle ut Skjema 2. Vi ber også om at forskergruppene innplasseres i den tentative fagpanelinndelingen for EVALMEDHELSE (vedlegg 5).

Forskningsrådet vil ferdigstille panelstruktur og avgjøre den endelige fordelingen av forskergruppene på fagpaneler *etter* at alle forskergrupper er meldt inn. Mer informasjon vil bli sendt i slutten av juni 2023.

Invitasjon til å foreslå eksperter – skjema 3

Forskningsrådet inviterer administrative enheter og forskergrupper til å spille inn forslag til eksperter som kan inngå i evalueringskomitéene og i ekspertpanelene. Hver evalueringskomité vil bestå av 7-9 komitémedlemmer, mens hvert ekspertpanel vil bestå av 5-7 eksperter.

Obs. Det er to faner i regnearket:

- FANE 1 – forslag til medlemmer til evalueringskomitéene. Medlemmene i evalueringskomitéene skal inneha bred vitenskapelig kompetanse, både faglig kompetanse og andre kvalifikasjoner som erfaring med ledelse, strategi- og evalueringsarbeid og kunnskapsutveksling.
- FANE 2 – forslag til medlemmer til ekspertpanelene. Medlemmene i ekspertpanelene skal være internasjonalt ledende eksperter innen medisin og helsefaglig forskning og innovasjon.

Utfylte skjemaer (3 stk):

- innmelding av administrative enhet/er (skjema 1)
- innmelding av forskergruppe/er (skjema 2)
- forslag til eksperter (skjema 3)

sendes på epost til evalmedhelse@forskningsradet.no **innen 6. juni 2023.**

Tilpasning av mandat – frist 30. september 2023

Forskningsrådet ber med dette administrative enheter om å tilpasse mandatet (vedlegg 4) ved å opplyse om egne strategiske mål og andre lokale forhold som er relevant for evalueringen.

Forskningsrådet

Tilpasningen gjøres ved å fylle inn de åpne punktene i malen (Appendix A). Utfylt skjema sendes på epost til evalmedhelse@forskningsradet.no innen 30. september 2023.

Digitalt informasjonsmøte 15. mai 2023, kl. 14.00-15.00.
Forskningsrådet arrangerer et digitalt informasjonsmøte for alle som ønsker å delta i EVALMEDHELSE.

Påmelding til informasjonsmøtet gjøres her: Fagevaluering av medisin og helsefag (EVALMEDHELSE) - Digitalt informasjonsmøte (pameldingssystem.no) .

Nettsider
Forskningsrådet vil opprette en nettside på www.forskningsradet.no for EVALMEDHELSE hvor informasjon vil bli publisert fortløpende. Her kan dere lese om Fagevaluering av biovitenskap (EVALBIOVIT) 2022-2023. Fagevaluering av medisin og helsefag vil bli gjennomført etter samme modell.

Spørsmål vedrørende fagevaluering av medisin og helsefag kan rettes til Hilde G. Nielsen, hgn@forskningsradet.no eller mobil 40 92 22 60.

Med vennlig hilsen
Norges forskningsråd

Ole Johan Borge	Hilde G. Nielsen
avdelingsdirektør	spesialrådgiver
Helse	Helse

Dokumentet er elektronisk godkjent og signert og har derfor ikke håndskrevne signaturer.

Kopi
Helse- og omsorgsdepartementet
Kunnskapsdepartementet

Vedlegg
1. Adresseliste
2. Nye fagevalueringer – varsel om oppstart november 2021
3. Erfaringer med oppfølging av fagevaluering av biologi, medisin og helsefag 2010/2011
4. Fagevaluering av livsvitenskap 2022-2024 – Evalueringsprotokoll
5. Tentativ panelinndeling EVALMEDHELSE mai 2023
6. Skjema 1 – Innmeldingsskjema Administrative enheter
7. Skjema 2 – Innmeldingsskjema Forskergrupper
8. Skjema 3 – Forslag til internasjonale eksperter til evalueringskomiteene og ekspertpanelene
9. Appendix A – word format

The Research Council of Norway

Evaluation of life sciences in Norway 2022-2023

LIVSEVAL protocol version 1.0

By decision of the Portfolio board for life sciences April 5., 2022

The Research Council of Norway
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The report can be downloaded at
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Oslo, 5 April 2022

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1 Introduction

Research assessments based on this protocol serve different aims and have different target groups. The primary aim of the evaluation of life sciences is to reveal and confirm the quality and the relevance of research performed at Norwegian Higher Education Institutions (HEIs), and by the institute sector and regional health authorities and health trusts. These institutions will hereafter be collectively referred to as Research Performing Organisations (RPOs). The assessments should serve a formative purpose by contributing to the development of research quality and relevance at these institutions and at the national level.

1.1 Evaluation units

The assessment will comprise a number of *administrative units* submitted for evaluation by the host institution. By assessing these administrative units in light of the goals and strategies set for them by their host institution, it will be possible to learn more about how public funding is used at the institution(s) to facilitate high-quality research and how this research contributes to society. The administrative units will be assessed by evaluation committees according to sectoral affiliation and/or other relevant similarities between the units.

The administrative units will be invited to submit data on their *research groups* to be assessed by expert panels organised by research subject or theme. See Chapter 3 for details on organisation.

Administrative unit	An administrative unit is any part of an RPO that is recognised as a formal (administrative) unit of that RPO, with a designated budget, strategic goals and dedicated management. It may, for instance, be a university faculty or department, a department of an independent research institute or a hospital.
Research group	Designates groups of researchers within the administrative units that fulfil the minimum requirements set out in section 1.2. Research groups are identified and submitted for evaluation by the administrative unit, which may decide to consider itself a single research group.

1.2 Minimum requirements for research groups

1) The research group must be sufficiently large in size, i.e. at least five persons in full-time positions with research obligations. This merely indicates the minimum number, and larger units are preferable. In exceptional cases, the minimum number may include PhD students, postdoctoral fellows and/or non-tenured researchers. *In all cases, a research group must include at least three full-time tenured staff*. Adjunct professors, technical staff and other relevant personnel may be listed as group members but may not be included in the minimum number.

2) The research group subject to assessment must have been established for at least three years. Groups of more recent date may be accepted if they have come into existence as a consequence of major organisational changes within their host institution.
3) The research group should be known as such both within and outside the institution (e.g. have a separate website). It should be able to document common activities and results in the form of co-publications, research databases and infrastructure, software, or shared responsibilities for delivering education, health services or research-based solutions to designated markets.
4) In its self-assessment, the administrative unit should propose a suitable benchmark for the research group. The benchmark will be considered by the expert panels as a reference in their assessment of the performance of the group. The benchmark can be grounded in both academic and extra-academic standards and targets, depending on the purpose of the group and its host institution.

1.3 The evaluation in a nutshell

The assessment concerns:

- research that the administrative unit and its research groups have conducted in the previous 10 years
- the research strategy that the administrative units under evaluation intend to pursue going forward
- the capacity and quality of research in life sciences at the national level

The Research Council of Norway (RCN) will:

- provide a template for the Terms of Reference[1] for the assessment of RPOs and a national-level assessment in life sciences
- appoint members to evaluation committees and expert panels
- provide secretarial services
- commission reports on research personnel and publications based on data in national registries
- take responsibility for following up assessments and recommendations at the national level.

RPOs conducting research in life sciences are expected to take part in the evaluation. The board of each RPO under evaluation is responsible for tailoring the assessment to its own strategies and specific needs and for following them up within their own institution. Each participating RPO will carry out the following steps:

1) Identify the administrative unit(s) to be included as the main unit(s) of assessment
2) Specify the Terms of Reference by including information on specific tasks and/or strategic goals of relevance to the administrative unit(s)

[1] The terms of reference (ToR) document defines all aspects of how the evaluation committees and expert panels will conduct the [research area] evaluation. It defines the objectives and the scope of the evaluation, outlines the responsibilities of the involved parties, and provides a description of the resources available to carry out the evaluation.

3) The administrative unit will, in turn, be invited to register a set of research groups that fulfil the minimum criteria specified above (see section 1.2). The administrative unit may decide to consider itself a single research group.
4) For each research group, the administrative unit should select an appropriate benchmark in consultation with the group in question. This benchmark can be a reference to an academic level of performance or to the group's contributions to other institutional or sectoral purposes (see section 2.4). The benchmark will be used as a reference in the assessment of the unit by the expert panel.
5) The administrative units subject to assessment must provide information about each of their research groups, and about the administrative unit as a whole, by preparing self-assessments and by providing additional documentation in support of the self-assessment.

1.4 Target groups

- Administrative units represented by institutional management and boards
- Research groups represented by researchers and research group leaders
- Research funders
- Government

The evaluation will result in recommendations to the institutions, the RCN and the ministries. The results of the evaluation will also be disseminated for the benefit of potential students, users of research and society at large.

This protocol is intended for all participants in the evaluation. It provides the information required to organise and carry out the research assessments. Questions about the interpretation or implementation of the protocol should be addressed to the RCN.

2 Assessment criteria

The administrative units are to be assessed on the basis of five assessment criteria. The five criteria are applied in accordance with international standards. Finally, the evaluation committee passes judgement on the administrative units as a whole in qualitative terms. In this overall assessment, the committee should relate the assessment of the specific tasks to the strategic goals that the administrative unit has set for itself in the Terms of Reference.

When assessing administrative units, the committees will build on a separate assessment by expert panels of the research groups within the administrative units. See Chapter 3 'Evaluation process and organisation' for a description of the division of tasks.

2.1 Strategy, resources and organisation

The evaluation committee assesses the framework conditions for research in terms of funding, personnel, recruitment and research infrastructure in relation to the strategic aims set for the administrative unit. The administrative unit should address at least the following five specific aspects in its self-assessment: 1) funding sources, 2) national and international cooperation, 3) cross-sector and interdisciplinary cooperation, 4) research careers and mobility, and 5) Open Science. These five aspects relate to how the unit organises and actually performs its research, its composition in terms of leadership and personnel, and how the unit is run on a day-to-day basis.

To contribute to understanding what the administrative unit can or should change to improve its ability to perform, the evaluation committee is invited to focus on factors that may affect performance.

Further, the evaluation committee assesses the extent to which the administrative unit's goals for the future remain scientifically and societally relevant. It is also assessed whether its aims and strategy, as well as the foresight of its leadership and its overall management, are optimal in relation to attaining these goals. Finally, it is assessed whether the plans and resources are adequate to implement this strategy.

2.2 Research production, quality and integrity

The evaluation committee assesses the profile and quality of the administrative unit's research and the contribution the research makes to the body of scholarly knowledge and the knowledge base for other relevant sectors of society. The committee also assesses the scale of the unit's research results (scholarly publications, research infrastructure developed by the unit, and other contributions to the field) and its contribution to Open Science (early knowledge and sharing of data and other relevant digital objects, as well as science communication and collaboration with societal partners, where appropriate).

The evaluation committee considers the administrative unit's policy for research integrity and how violations of such integrity are prevented. It is interested in how the unit deals with research data, data management, confidentiality (GDPR) and integrity, and the extent to which independent and critical pursuit of research is made possible within the unit. Research integrity relates to both the scientific integrity of conducted research and the professional integrity of researchers.

2.3 Diversity and equality

The evaluation committee considers the diversity of the administrative unit, including gender equality. The presence of differences can be a powerful incentive for creativity and talent development in a diverse administrative unit. Diversity is not an end in itself in that regard, but a tool for bringing together different perspectives and opinions.

The evaluation committee considers the strategy and practices of the administrative unit to prevent discrimination on the grounds of gender, age, disability, ethnicity, religion, sexual orientation or other personal characteristics.

2.4 Relevance to institutional and sectoral purposes

The evaluation committee compares the relevance of the administrative unit's activities and results to the specific aspects detailed in the Terms of Reference for each institution and to the relevant sectoral goals (see below).

Higher Education Institutions

There are 36 Higher Education Institutions in Norway that receive public funding from the Ministry for Education and Research. Twenty-one of the 36 institutions are owned by the ministry, whereas the last 15 are privately owned. The HEIs are regulated under the Act relating to universities and university colleges of 1 August 2005.

The purposes of Norwegian HEIs are defined as follows in the Act relating to universities and university colleges[2]

- provide higher education at a high international level;
- conduct research and academic and artistic development work at a high international level;
- disseminate knowledge of the institution's activities and promote an understanding of the principle of academic freedom and application of scientific and artistic methods and results in the teaching of students, in the institution's own general activity as well as in public administration, in cultural life and in business and industry.

In line with these purposes, the Ministry for Research and Education has defined four overall goals for HEIs that receive public funding. These goals have been applied since 2015:

1) High quality in research and education
2) Research and education for welfare, value creation and innovation
3) Access to education (esp. capacity in health and teacher education)
4) Efficiency, diversity and solidity of the higher education sector and research system

The committee is invited to assess to what extent the research activities and results of each administrative unit have contributed to sectoral purposes as defined above. In particular, the committee is invited to take the share of resources spent on education at the administrative units into account and to assess the relevance and contributions of research to education, focusing on the master's and PhD levels. This assessment should be distinguished from an

[2] https://lovdata.no/dokument/NLE/lov/2005-04-01-15?q=universities

assessment of the quality of education in itself, and it is limited to the role of research in fostering high-quality education.

Research institutes (the institute sector)

Norway's large institute sector reflects a practical orientation of state R&D funding that has long historical roots. The Government's strategy for the institute sector[3] applies to the 33 independent research institutes that receive public basic funding through the RCN, in addition to 12 institutes outside the public basic funding system.

The institute sector plays an important and specific role in attaining the overall goal of the national research system, i.e. to increase competitiveness and innovation power to address major societal challenges. The research institutes' contributions to achieving these objectives should therefore form the basis for the evaluation. The main purpose of the sector is to conduct independent applied research for present and future use in the private and public sector. However, some institutes primarily focus on developing a research platform for public policy decisions, others on fulfilling their public responsibilities.

The institutes should:

- maintain a sound academic level, documented through scientific publications in recognised journals
- obtain competitive national and/or international research funding grants
- conduct contract research for private and/or public clients
- demonstrate robustness by having a reasonable number of researchers allocated to each research field

The committee is invited to assess the extent to which the research activities and results of each administrative unit contribute to sectoral purposes and overall goals as defined above. In particular, the committee is invited to assess the level of collaboration between the administrative unit(s) and partners in their own or other sectors.

The hospital sector

There are four regional health authorities (RHFs) in Norway. They are responsible for the specialist health service in their respective regions. The RHFs are regulated through the Health Enterprises Act of 15 June 2001 and are bound by requirements that apply to specialist and other health services, the Health Personnel Act and the Patient Rights Act. Under each of the regional health authorities, there are several health trusts (HFs), which can consist of one or more hospitals. A health trust (HF) is wholly owned by an RHF.

Research is one of the four main tasks of hospital trusts.[4] The three other mains tasks are to ensure good treatment, education and training of patients and relatives. Research is important if the health service is to keep abreast of stay up-to-date with medical developments and carry out critical assessments of established and new diagnostic methods,

[3] Strategy for a holistic institute policy (Kunnskapsdepartementet 2020)

[4] Cf. the Specialist Health Services Act § 3-8 and the Health Enterprises Act §§ 1 and 2

treatment options and technology, and work on quality development and patient safety while caring for and guiding patients.

The committee is invited to assess the extent to which the research activities and results of each administrative unit have contributed to sectoral purposes as described above. The assessment does not include an evaluation of the health services performed by the services.

2.5 Relevance to society

The committee assesses the quality, scale and relevance of contributions targeting specific economic, social or cultural target groups, of advisory reports on policy, of contributions to public debates, and so on. The documentation provided as the basis for the assessment of societal relevance should make it possible to assess relevance to various sectors of society (i.e. business, the public sector, non-governmental organisations and civil society).

When relevant, the administrative units will be asked to link their contributions to national and international goals set for research, including the Norwegian Long-term Plan for Research and Higher Education and the UN Sustainable Development Goals. Sector-specific objectives, e.g. those described in the Development Agreements for the HEIs and other national guidelines for the different sectors, will be assessed as part of criterion 2.4.

The committee is also invited to assess the societal impact of research based on case studies submitted by the administrative units and/or other relevant data presented to the committee. Academic impact will be assessed as part of criterion 2.2.

3 Evaluation process and organisation

The RCN will organise the assessment process as follows:

- Commission a professional secretariat to support the assessment process in the committees and panels, as well as the production of self-assessments within each RPO
- Commission reports on research personnel and publications within life sciences based on data in national registries
- Appoint one or more evaluation committees for the assessment of administrative units.
- Divide the administrative units between the appointed evaluation committees according to sectoral affiliation and/or other relevant similarities between the units.
- Appoint a number of expert panels for the assessment of research groups submitted by the administrative units.
- Divide research groups between expert panels according to similarity of research subjects or themes.
- Task the chairs of the evaluation committees with producing a national-level report building on the assessments of administrative units and a national-level assessments produced by the expert panels.

Committee members and members of the expert panels will be international, have sufficient competence and be able, as a body, to pass judgement based on all relevant assessment criteria. The RCN will facilitate the connection between the assessment levels of panels and committees by appointing committee members as panel chairs.

3.1 Division of tasks between the committee and panel levels

The expert panels will assess research groups across institutions and sectors, focusing on the first two criteria specified in Chapter 2: 'Strategy, resources and organisation' and 'Research production and quality' The assessments from the expert panels will also be used as part of the evidence base for a report on Norwegian research within life sciences (see section 3.3).

The evaluation committees will assess the administrative units based on all the criteria specified in Chapter 2. The assessment of research groups delivered by the expert panels will be a part of the evidence base for the committees' assessments of administrative units. See figure 1 below.

The evaluation committee has sole responsibility for the assessments and any recommendations in the report. The evaluation committee reaches a judgement on the research based on the administrative units and research groups' self-assessments provided by the RPOs, any additional documents provided by the RCN, and interviews with representatives of the administrative units. The additional documents will include a standardised analysis of research personnel and publications provided by the RCN.

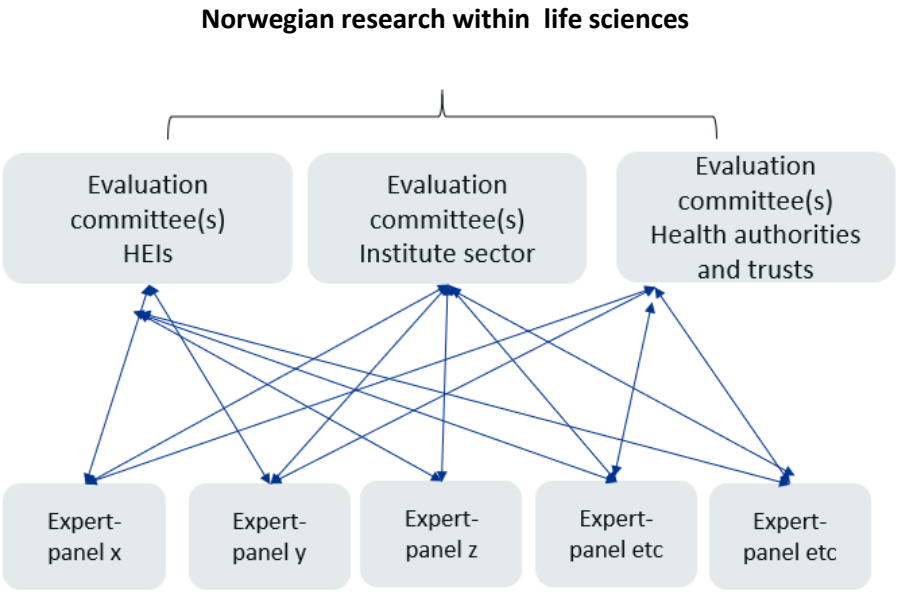

Figure 1. Evaluation committees and expert panels

The evaluation committee takes international trends and developments in science and society into account when forming its judgement. When judging the quality and relevance of the research, the committees shall bear in mind the specific tasks and/or strategic goals that the administrative unit has set for itself including sectoral purposes (see section 2.4 above).

3.2 Accuracy of factual information

The administrative unit under evaluation should be consulted to check the factual information before the final report is delivered to the RCN and the board of the institution hosting the administrative unit.

3.3 National level report

Finally, the RCN will ask the chairs of the evaluation committees to produce a national-level report that builds on the assessments of administrative units and the national-level assessments produced by the expert panels. The committee chairs will present their assessment of Norwegian research in life sciences at the national level in a separate report that pays specific attention to:

- Strengths and weaknesses of the research area in the international context
- The general resource situation regarding funding, personnel and infrastructure
- PhD training, recruitment, mobility and diversity
- Research cooperation nationally and internationally
- Societal impact and the role of research in society, including Open Science

This national-level assessment should be presented to the RCN.

Appendix A: Terms of References (ToR)

[Text in red to be filled in by the Research-performing organisations (RPOs)]

The board of [RPO] mandates the evaluation committee appointed by the Research Council of Norway (RCN) to assess [administrative unit] based on the following Terms of Reference.

Assessment
You are asked to assess the organisation, quality and diversity of research conducted by [administrative unit] as well as its relevance to institutional and sectoral purposes, and to society at large. You should do so by judging the unit's performance based on the following five assessment criteria (a. to e.). Be sure to take current international trends and developments in science and society into account in your analysis.

a) Strategy, resources and organisation
b) Research production, quality and integrity
c) Diversity and equality
d) Relevance to institutional and sectoral purposes
e) Relevance to society

For a description of these criteria, see Chapter 2 of the life sciences evaluation protocol. Please provide a written assessment for each of the five criteria. Please also provide recommendations for improvement. We ask you to pay special attention to the following [n] aspects in your assessment:

1. …
2. …
3. …
4. …

…

[To be completed by the board: specific aspects that the evaluation committee should focus on – they may be related to a) strategic issues, or b) an administrative unit's specific tasks.]

In addition, we would like your report to provide a qualitative assessment of [administrative unit] as a whole in relation to its strategic targets. The committee assesses the strategy that the administrative unit intends to pursue in the years ahead and the extent to which it will be capable of meeting its targets for research and society during this period based on available resources and competence. The committee is also invited to make recommendations concerning these two subjects.

Documentation
The necessary documentation will be made available by the life sciences secretariat at Technopolis Group.

The documents will include the following:

- a report on research personnel and publications within life sciences commissioned by RCN
- a self-assessment based on a template provided by the life sciences secretariat
- [to be completed by the board]

Interviews with representatives from the evaluated units
Interviews with the [administrative unit] will be organised by the evaluation secretariat. Such interviews can be organised as a site visit, in another specified location in Norway or as a video conference.

Statement on impartiality and confidence
The assessment should be carried out in accordance with the *Regulations on Impartiality and Confidence in the Research Council of Norway*. A statement on the impartiality of the committee members has been recorded by the RCN as a part of the appointment process. The impartiality and confidence of committee and panel members should be confirmed when evaluation data from [the administrative unit] are made available to the committee and the panels, and before any assessments are made based on these data. The RCN should be notified if questions concerning impartiality and confidence are raised by committee members during the evaluation process.

Assessment report
We ask you to report your findings in an assessment report drawn up in accordance with a format specified by the life sciences secretariat. The committee may suggest adjustments to this format at its first meeting. A draft report should be sent to the [administrative unit] and RCN by [date]. The [administrative unit] should be allowed to check the report for factual inaccuracies; if such inaccuracies are found, they should be reported to the life sciences secretariat no later than two weeks after receipt of the draft report. After the committee has made the amendments judged necessary, a corrected version of the assessment report should be sent to the board of [the RPO] and the RCN no later than two weeks after all feedback on inaccuracies has been received from [administrative unit].

Appendix B: Data sources

The lists below shows the most relevant data providers and types of data to be included in the evaluation. Data are categorised in two broad categories according to the data source: National registers and self-assessments prepared by the RFOs. The RCN will commission an analysis of data in national registers (R&D-expenditure, personnel, publications etc.) to be used as support for the committees' assessment of administrative units. The analysis will include a set of indicators related to research personnel and publications.

- **National directorates and data providers**
- Norwegian Directorate for Higher Education and Skills (HK-dir)
- Norwegian Agency for Quality Assurance in Education (NOKUT)
- Norwegian Agency for Shared Services in Education and Research (SIKT)
- Research Council of Norway (RCN)
- Statistics Norway (SSB)

National registers

1) R&D-expenditure
    a. SSB: R&D statistics
    b. SSB: Key figures for research institutes
    c. HK-dir: Database for Statistics on Higher Education (DBH)
    d. RCN: Project funding database (DVH)
    e. EU-funding: eCorda
2) Research personnel
    a. SSB: The Register of Research personnel
    b. SSB: The Doctoral Degree Register
    c. RCN: Key figures for research institutes
    d. HK-dir: Database for Statistics on Higher Education (DBH)
3) Research publications
    a. SIKT: Cristin - Current research information system in Norway
    b. SIKT: Norwegian Infrastructure for Bibliometrics
    (full bibliometric data incl. citations and co-authors)
4) Education
    a. HK-dir/DBH: Students and study points
    b. NOKUT: Study barometer
    c. NOKUT: National Teacher Survey
5) Sector-oriented research
    a. RCN: Key figures for research institutes
6) Patient treatments and health care services
    a. Research & Innovation expenditure in the health trusts
    b. Measurement of research and innovation activity in the health trusts
    c. Collaboration between health trusts and HEIs
    d. Funding of research and innovation in the health trusts
    e. Classification of medical and health research using HRCS (HO21 monitor)

Self-assessments

1) Administrative units
    a. *Self-assessment covering all assessment criteria*
    b. Administrative data on funding sources
    c. Administrative data on personnel
    d. Administrative data on the division of staff resources between research and other activities (teaching, dissemination etc.)
    e. Administrative data on research infrastructure and other support structures
    f. SWOT analysis
    g. Any supplementary data needed to assess performance related to the strategic goals and specific tasks of the unit

2) Research groups
    a. *Self-assessment covering the first two assessment criteria (see Table 1)*
    b. Administrative data on funding sources
    c. Administrative data on personnel
    d. Administrative data on contribution to sectoral purposes: teaching, commissioned work, clinical work [will be assessed at committee level]
    e. Publication profiles
    f. Example publications and other research results (databases, software etc.) The examples should be accompanied by an explanation of the groups' specific contributions to the result
    g. Any supplementary data needed to assess performance related to the benchmark defined by the administrative unit

The table below shows how different types of evaluation data may be relevant to different evaluation criteria. Please note that the self-assessment produced by the administrative units in the form of a written account of management, activities, results etc. should cover all criteria. A template for the self-assessment of research groups and administrative units will be commissioned by the RCN from the life sciences secretariat for the evaluation.

Table 1. Types of evaluation data per criterion

Evaluation units / Criteria	Research groups	Administrative units
Strategy, resources and organisation	Self-assessment Administrative data	Self-assessment National registers Administrative data SWOT analysis
Research production and quality	Self-assessment Example publications (and other research results)	Self-assessment National registers
Diversity, equality and integrity		Self-assessment National registers Administrative data
Relevance to institutional and sectoral purposes		Self-assessment Administrative data
Relevance to society		Self-assessment National registers Impact cases
Overall assessment	*Data related to:* *Benchmark defined by administrative unit*	*Data related to:* *Strategic goals and specific tasks of the admin. unit*

Evaluation of Medicine and Health (EVALMEDHELSE) 2023-2024

Self- assessment for administrative units

Date of dispatch: **15 September 2023**
Deadline for submission: **31 January 2024**

Institution (name and short name):_____
Administrative unit (name and short name): _____
Date:_____
Contact person:_____
Contact details (email):_____

Content

Introduction

The primary aim of the evaluation is to reveal and confirm the quality and the relevance of research performed at Norwegian Higher Education Institutions (HEIs), the institute sector and the health trusts. These institutions will henceforth be collectively referred to as research performing organisations (RPOs). The evaluation report(s) will provide a set of recommendations to the RPOs, the Research Council of Norway (RCN) and the responsible and concerned ministries. The results of the evaluation will also be disseminated for the benefit of potential students, users of research and society at large.

You have been invited to complete this self-assessment as an administrative unit. The self-assessment contains questions regarding the unit's research- and innovation related activities and developments over years 2012-2022. All submitted data will be evaluated by international evaluation committees. The administrative unit´s research groups will be assessed by international expert panels who report their assessment to the relevant evaluation committee.

Deadline for submitting self- assessments to the Research Council of Norway – 31 January 2024
As an administrative unit you are responsible for collecting completed self-assessments for each of the research groups that belong to the administrative unit. The research groups need to submit their completed self-assessment to the administrative unit no later than 26 January 2024. The administrative unit will submit the research groups' completed self-assessments and the administrative unit's own completed self-assessment to the Research Council within 31 January 2024.

Please use the following format when naming your document: name of the institution and short name of the administrative unit, e.g. *NTNU_FacMedHealthSci* and send it to evalmedhelse@forskningsradet.no within 31 January 2024.

For questions concerning the self-assessment or EVALMEDHELSE in general, please contact RCN at evalmedhelse@forskningsradet.no.

Thank you!

Guidelines for completing the self-assessment

- Please read the entire self-assessment document before answering.
- The evaluation language is English.
- Please be sure that all documents which are linked to in the self- assessment are in English and are accessible.
- The page format must be A4 with 2 cm margins, single spacing and Calibri and 11-point font.
- The self-assessment follows the same structure as the evaluation protocol. In order to be evaluated on all criteria, the administrative unit must answer all questions.
- Information should be provided by link to webpages i.e. strategy and other planning documents.
  - Provide information – provide documents and other relevant data or figures about the administrative unit, for example strategy and other planning documents.
  - Describe – explain and present using contextual information about the administrative unit and inform the reader about the administrative unit.
  - Reflect – comment in a reflective and evaluative manner how the administrative unit operates.
- Data on personnel should refer to reporting to DBH on 1 October 2022 for HEIs and to the yearly reporting for 2022 for the institute sector and the health trusts. Other data should refer to 31 December 2022, if not specified otherwise.
- Questions in 4.3c should **ONLY** be answered by administrative units responsible for the Cand.med. degree programme, cf. Evaluation of the Professional programme in Medicine (NOKUT).
- It is possible to extend the textboxes when filling in the from. **NB!** A completed self- assessment cannot exceed 50 pages (pdf file) excluding question 4.3.c. The evaluation committees are not requested to read more than the maximum of 50 pages. Pages exceeding maximum limit of 50 pages **might not** be evaluated.
- Submit the self- assessment as a pdf (max 50 pages). Before submission, please be sure that all text are readable after the conversion of the document to pdf. The administrative unit is responsible for submitting the self-assessment of the administrative unit together with the self-assessments of the belonging research group(s) to evalmedhelse@forskningsradet.no within **31 January 2024.**

Please note that information you write in the self- assessment and the links to documents/webpages in the self- assessment are the only available information (data material) for the evaluation committee.

In exceptional cases, documents/publications that are not openly available must be submitted as attachment(s) to the self- assessment (pdf file(s)).

1.Strategy, resources and organisation

1.1 Research strategy

Describe the main strategic goals for research and innovation of the administrative unit. You may include the following:

- How are these goals related to institutional strategies and scientific priorities?
- Describe how the administrative unit's strategies and scientific priorities are related to the "specific aspects that the evaluation committee should focus on" indicated in your Terms of Reference (ToR)
- Describe the main fields and focus of research and innovation in the administrative unit
- Describe the planned research-field impact; planned policy impact and planned societal impact
- Describe how the strategy is followed-up in the allocation of resources and other measures
- Describe the most important occasions where priorities are made (i.e., announcement of new positions, applying for external funding, following up on evaluations)
- If there is no research strategy – please explain why

Table 1. Administrative unit`s strategies

For each category present up to 5 documents which are most relevant for the administrative unit. Please delete lines which are not in use.

Research strategy		
No.	**Title**	**Link**
1		
2		
3		
4		
5		
Outreach strategies		
No.	**Title**	**Link**
1		
2		
3		
4		
5		
Open science policy		
No.	**Title**	**Link**
1		
2		
3		
4		
5		

1.2 Organisation of research

a) Describe the organisation of research and innovation activities/projects at the administrative unit, including how responsibilities for research and other purposes (education, knowledge exchange, patient treatment, researcher training, outreach activities etc.) are distributed and delegated.

b) Describe how you work to maximise synergies between the different purposes of the administrative unit (education, knowledge exchange, patient treatment, researcher training, outreach activities etc.).

1.3 Research staff

Describe the profile of research personnel at the administrative unit in terms of position and gender. Institutions in the higher education sector should use the categories used in DBH, https://dbh.hkdir.no/datainnhold/kodeverk/stillingskoder.

RCN has commissioned reports from Statistics Norway (SSB) on personnel for the administrative units included in the evaluation. These reports will be made available to the units early November 2023.

Only a subset of the administrative units submitted to the evaluation is directly identifiable in the national statistics. Therefore, we ask all administrative units to provide data on their R&D personnel. Institutions that are directly identifiable in the national statistics (mainly higher education) are invited to use the figures provided in the report delivered by Statistics Norway. Please delete lines which are not in use.

Table 2. Research staff

	Position by category	**No. of researcher per category**	**Share of women per category (%)**	**No. of researchers who are part of multiple (other) research groups at the admin unit**	**No. of temporary positions**
No. of Personell by position	Position A (Fill in)				
	Position B (Fill in)				
	Position C (Fill in)				
	Position D (Fill in)				

1.4 Researcher careers opportunities

a) Describe the structures and practices to support researcher careers and help early-career researchers to make their way into the profession.

b) Describe how research time is distributed among staff including criteria for research leave/sabbaticals (forskningstermin/undervisningsfri).

c) Describe research mobility options.

1.5 Research funding

a) Describe the funding sources of the administrative unit. Indicate the administrative unit´s total yearly budget and the share of the unit's budget dedicated to research.

b) Give an overview of the administrative unit's competitive national and/or international grants last five years (2018-2022).

Table 3. R&D funding sources
Please indicate R&D funding sources for the administrative unit for the period 2018-2022 (average NOK per year, last five years).

For Higher Education Institutions: Share of basic grant (grunnbevilgning) used for R&D[1] **For Research Institutes and Health Trusts: Direct R&D funding from Ministries (per ministry)**	
Name of ministry	NOK

National grants (bidragsinntekter) (NOK)	
From the ministries and underlying directorates	
From industry	
From public sector	
Other national grants	
Total National grants	
National contract research (oppdragsinntekter)[2] (NOK)	
From the ministries and underlying directorates	
From industry	

[1] Shares may be calculated based on full time equivalents (FTE) allocated to research compared to total FTE in administrative unit

[2] For research institutes only research activities should be included from section 1.3 in the yearly reporting

From public sector	
Other national contract research	
Total contract research	
International grants (NOK)	
From the European Union	
From industry	
Other international grants	
Total international grants	
Funding related to public management (forvaltningsoppgaver) or (if applicable) funding related to special hospital tasks, if any	
Total funding related to public management/special hospital tasks	
Total all R&D budget items (except basic grant)	

1.6 Collaboration

Describe the administrative unit's policy towards national and international collaboration partners, the type of the collaborations the administrative unit have with the partners, how the collaboration is put to practice as well as cross-sectorial and interdisciplinary collaborations.

- Reflect of how successful the administrative unit has been in meeting its aspirations for collaborations
- Reflect on the importance of different types of collaboration for the administrative unit: National and international collaborations. Collaborations with different sectors, including public, private and third sector
- Reflect on the added value of these collaborations to the administrative unit and Norwegian research system

Table 4a. The main national collaborative constellations with the administrative unit
Please categorise the collaboration according to the most important national partner(s): 5-10 institutions in the period 2012-2022. Please delete lines which are not in use.

National collaborations

Collaboration with national institutions – 1 -10	
Name of main collaboration or collaborative project with the admin unit	
Name of partner institution(s)	
Sector of partner/institution(s)/sectors involved	
Impacts and relevance of the collaboration	

Table 4b. The main international collaborative constellations with the administrative unit
Please categorise the collaboration according to the most important international partner(s): 5-10 international institutions in the period 2012-2022. Please delete lines which are not in use.

International collaborations

Collaboration with international institutions – 1-10	
Name of main collaboration or collaborative project with the admin unit	
Name of partner institution(s)	
Sector of partner/institution(s)/sectors involved	

Impacts and relevance of the collaboration	

1.7 Open science policies

a) Describe the institutional policies, approaches, and activities to the Open Science areas which may include the following:

- Open access to publications
- Open access to research data and implementation of FAIR data principles
- Open-source software/tools
- Open access to educational resources
- Open peer review
- Citizen science and/or involvement of stakeholders / user groups
- Skills and training for Open Science

b) Describe the most important contributions and impact of the administrative unit's researchers towards the different Open Science areas cf. 1.7a above.

c) Describe the institutional policy regarding ownership of research data, data management, and confidentiality. Is the use of data management plans implemented at the administrative unit?

1.8 SWOT analysis for administrative units

Instructions: Please complete a SWOT analysis for your administrative unit. Reflect on what are the major internal Strengths and Weaknesses as well as external Threats and Opportunities for your research and innovation activities/projects and research environment. Assess what the present Strengths enable in the future and what kinds of Threats are related to the Weaknesses. Consider your scientific expertise and achievements, funding, facilities, organisation and management.

Internal	**Strengths**	**Weaknesses**
External	**Opportunities**	**Threats**

2. Research production, quality and integrity

2.1 Research quality and integrity

Please see the bibliometric analysis for the administrative unit developed by NIFU (available by the end of October, 2023).

a) Describe the scientific focus areas of the research conducted at the administrative unit, including the unit's contribution to these areas.

b) Describe the administrative unit's policy for research integrity, including preventative measures when integrity is at risk, or violated.

2.2 Research infrastructures

a) Participation in national infrastructure

Describe the most important participation in the national infrastructures listed in the Norwegian roadmap for research infrastructures (Norsk veikart for forskningsinfrastruktur) including as host institution(s).

Table 5. Participation in national infrastructure

Please present up to 5 participations in the national infrastructures listed in the Norwegian roadmap for research infrastructures (Norsk veikart for forskningsinfrastruktur) for each area that were the most important to your administrative unit.

Areas in roadmap	Name of research infrastructure	Period (from year to year)	Description	Link to website

b) Participation in international infrastructures

Describe the most important participation in the international infrastructures funded by the ministries (Norsk deltakelse i internasjonale forskningsorganisasjoner finansiert av departementene).

Table 6. Participation in international infrastructure

Please describe up to 5 participations in international infrastructures for each area that have been most important to your administrative unit.

Project	Name	Period (from year to year)	Description	Link to infrastructure

c) Participation in European (ESFRI) infrastructures

Describe the most important participation in European (ESFRI) infrastructures (Norske medlemskap i infrastrukturer i ESFRI roadmap) including as host institution(s).

Table 7. Participation in infrastructures on the ESFRI Roadmap
Please give a description of up to 5 participations that have been most important to your administrative unit.

Social sciences and the humanities				
Name	**ESFRI-project**	**Summary of participation**	**Period (from year to year)**	**Link**

d) Access to research infrastructures
Describe access to relevant national and/or international research infrastructures for your researchers. Considering both physical and digital infrastructure.

e) FAIR- principles
Describe what is done at the unit to fulfil the FAIR-principles.

3. Diversity and equality

Describe the policy and practices to protect against any form of discrimination and to promote diversity in the administrative unit.

Table 8. Administrative unit policy against discrimination
Give a description of up to 5 documents that are the most relevant. If the administrative unit uses the strategies, policies, etc. of a larger institution, then these documents should be referred to.
Please delete lines which are not in use.

No.	**Name**	**Valid period**	**Link**
1			

4. Relevance to institutional and sectorial purposes

4.1 Sector specific impact

Describe whether the administrative unit has activities aimed at achieving sector-specific objectives or focusing on contributing to the knowledge base in general. Describe activities connected to sector-specific objectives, the rationale for participation and achieved and/or expected impacts. Please refer to chapter 2.4 in the evaluation protocol.

- Alternatively, describe whether the activities of the administrative unit are aimed at contribution to the knowledge base in general. Describe the rationale for this approach and the impacts of the unit's work to the knowledge base.

4.2 Research innovation and commercialisation

a) Describe the administrative unit's practices for innovation and commercialisation.

b) Describe the motivation among the research staff in doing innovation and commercialisation activities.

c) Describe how innovation and commercialisation is supported at the administrative unit.

Table 9. Policies for innovation including IP policies, new patents, licenses, start-up/spin-off guidelines
Describe up to 5 documents of the administrative unit's policies for innovation, including IP policies, new patents, licenses, start-up/spin-off guidelines, etc., that are the most relevant. If the administrative unit uses the strategies, policies, etc. of a larger institution, then present these documents. Please delete lines which are not in use.

No.	Name	Valid period	Link
1			

Table 10. Administrative description of successful innovation and commercialisation results
Please describe up to 10 successful innovation and commercialisation results at your administrative unit in the period 2012-2022. Please delete lines which are not in use.

No.	Name of innovation and commercial results	Link	Description of successful innovation and commercialisation result.
1			

4.3 Higher education institutions

a) Reflect how research at the administrative unit contributes towards master and PhD-level education provision, at your institutions and beyond.

b) Describe the opportunities for master students to become involved in research activities at the administrative unit.

c) **ONLY** for administrative units responsible for the Cand.med. degree programme, cf. Evaluation of the Professional programme in Medicine (NOKUT).

- Reflect on how research at the administrative unit contributes towards the quality of the Cand.med. degree programme at your institutions and beyond.
- Describe the different opportunities for students on the Cand.med. degree programme to become involved in research activities at the administrative unit, and the extent to which students use those opportunities.

4.4 Research institutes

a) Describe how the research and innovation activities/projects at the administrative unit contribute to the knowledge base for policy development, sustainable development, and societal and industrial transformations more generally.

b) Describe the most important research activities with partners outside of research organisations.

4.5 Health trusts

a) Reflect on how the administrative unit's clinical research, innovation and commercialisation contribute towards development, assessment and implementation of new diagnostic methods, treatment, and healthcare technologies.

b) Reflect on how research at the unit contributes towards the quality of relevant education programme at your institutions or beyond.

c) Describe the different opportunities for students on relevant educational programmes to become involved in research activities at the administrative unit, and the extent to which students use those opportunities.

5. Relevance to society

Reflect on the administrative unit's contribution towards the Norwegian Long-term plan for research and higher education, societal challenges more widely, and the UN Sustainable Development Goals.

5.1 Impact cases

Please use the attached template for impact cases. Each impact case should be submitted as an attachment (pdf) to the self-assessment.

Impact case guidelines

Each case study should include sufficiently clear and detailed information to enable the evaluation committee to make judgements based on the information it contains, without making inferences, gathering additional material, following up references or relying on members' prior knowledge. References to other sources of information will be used for verification purposes only, not as a means for the evaluation committee to gather further information to inform judgements.

In this evaluation, impact is defined as an effect on, change or benefit to the economy, society, culture, public policy or services, health, the environment or quality of life, beyond academia.

Timeframes

- The impact must have occurred between 2012 and 2022
- Some of the underpinning research should have been published in 2012 or later
- The administrative units are encouraged to prioritise recent cases

Page limit

Each completed case study template will be limited to **five pages** in length. Within the annotated template below, indicative guidance is provided about the expected maximum length limit of each section, but institutions will have flexibility to exceed these so long as the case study as a whole remains no longer than **five pages** (font Calibri, font size 11). Please write the text into the framed template under the sections 1–5 below. The guiding text that stands there now, can be deleted.

Maximum number of cases permitted per administrative unit

For up to 10 researchers: one case; for 10 to 30 researchers: two cases; for 30-50 researchers: three cases; for 50-100 researchers: four cases, and up to five cases for units exceeding 100 researchers.

Naming and numbering of cases

Please use the standardised short name for the administrative unit, and the case number for the unit (1,2,3, etc) in the headline of the case. Each case should be stored as a separate PDF-document with the file name: [Name of the institution and name of the administrative unit] [case number]

Publication of cases

RCN plans to publish all impact cases in a separate evaluation report. By submitting the case the head of the administrative units consents to the publication of the case. Please indicate below if a case may not be made public for reasons of confidentiality.

If relevant, describe any reason to keep this case confidential:

Please write the text here

[Name of the institution and name of the administrative unit] [case number]

Institution:
Administrative unit:
Title of case study:
Period when the underpinning research was undertaken:
Period when staff involved in the underpinning research were employed by the submitting institution:
Period when the impact occurred:

1. Summary of the impact (indicative maximum 100 words)
This section should briefly state what specific impact is being described in the case study.

2. Underpinning research (indicative maximum 500 words)
This section should outline the key research insights or findings that underpinned the impact, and provide details of what research was undertaken, when, and by whom. This research may be a body of work produced over a number of years or may be the output(s) of a particular project. References to specific research outputs that embody the research described in this section, and evidence of its quality, should be provided in the next section. Details of the following should be provided in this section:

- The nature of the research insights or findings which relate to the impact claimed in the case study.
- An outline of what the underpinning research produced by the submitted unit was (this may relate to one or more research outputs, projects or programmes).
- Dates of when it was carried out.
- Names of the key researchers and what positions they held at the administrative unit at the time of the research (where researchers joined or left the administrative unit during this time, these dates must also be stated).
- Any relevant key contextual information about this area of research.

3. References to the research (indicative maximum of six references)
This section should provide references to key outputs from the research described in the previous section, and evidence about the quality of the research. All forms of output cited as underpinning research will be considered equitably, with no distinction being made between the types of output referenced. Include the following details for each cited output:
- Author(s)
- Title
- Year of publication
- Type of output and other relevant details required to identify the output (for example, DOI, journal title and issue)
- Details to enable the panel to gain access to the output, if required (for example, a DOI or URL).

All outputs cited in this section must be capable of being made available to panels. If they are not available in the public domain, the administrative unit must be able to provide them if requested by RCN or the evaluation secretariate.

4. Details of the impact (indicative maximum 750 words)
This section should provide a narrative, with supporting evidence, to explain:

- How the research underpinned (made a distinct and material contribution to) the impact;
- The nature and extent of the impact.

The following should be provided:
- A clear explanation of the process or means through which the research led to, underpinned or made a contribution to the impact (for example, how it was disseminated, how it came to influence users or beneficiaries, or how it came to be exploited, taken up or applied).

- Where the submitted administrative unit's research was part of a wider body of research that contributed to the impact (for example, where there has been research collaboration with other institutions), the case study should specify the particular contribution of the submitted administrative unit's research and acknowledge other key research contributions.
- Details of the beneficiaries – who or what community, constituency or organisation has benefitted, been affected or impacted on.
- Details of the nature of the impact – how they have benefitted, been affected or impacted on.
- Evidence or indicators of the extent of the impact described, as appropriate to the case being made.
- Dates of when these impacts occurred.

5. Sources to corroborate the impact (indicative maximum of ten references)

Institution	Administrative unit	Name of research group	Expert panel
Oslo University Hospital and University of Oslo	Division of Cancer Medicine	Department of Cancer Genetics (DCG), Institute for Cancer Research (ICR)	Panel 2c
Oslo University Hospital and University of Oslo	Division of Cancer Medicine	Institute for Cancer Genetics and Informatics (ICGI)	Panel 3a-2
Oslo University Hospital and University of Oslo	Division of Cancer Medicine	Department of Cancer Immunology (DCI)	Panel 2b
Oslo University Hospital and University of Oslo	Division of Cancer Medicine	Department of Haematology (BLO)	Panel 3a-2
Oslo University Hospital and University of Oslo	Division of Cancer Medicine	Department of Molecular Cell Biology (MCB)	Panel 2b
Oslo University Hospital and University of Oslo	Division of Cancer Medicine	Department of Molecular Oncology (DMO), Institute for Cancer Research (ICR)	Panel 2c
Oslo University Hospital and University of Oslo	Division of Cancer Medicine	Department of Oncology, Medical Physics, and of Gynaecological Oncology (DOO)	Panel 3a-2
Oslo University Hospital and University of Oslo	Division of Cancer Medicine	Department of Radiation Biology (DRB), Institute for Cancer Research (ICR)	Panel 2c
Oslo University Hospital and University of Oslo	Division of Cancer Medicine	Department of Tumour Biology (DTB), Institute for Cancer Research (ICR)	Panel 2c

Scales for research group assessment

Use whole integers only – no fractions!

Organisational dimension

Score	Organisational environment
5	An organisational environment that is outstanding for supporting the production of excellent research.
4	An organisational environment that is very strong for supporting the production of excellent research.
3	An organisational environment that is adequate for supporting the production of excellent research.
2	An organisational environment that is modest for supporting the production of excellent research.
1	An organisational environment that is not supportive for the production of excellent research.

Quality dimension

The quality dimension consists of two judgements: 1) Research and publication quality, and 2) Research group's contribution. The first judgement is defined as follows:

Score	Research and publication quality	Supporting explanation
5	Quality that is outstanding in terms of originality, significance, and rigour.	**The quality of the research is world leadin**g in terms of quality, and is comparable to the best work internationally in the same area of research. The publications submitted provide evidence that the work of the group meets the highest international standards in terms of originality, significance, and rigour. Work at this level should be a key international reference in its area.
4	Quality that is internationally excellent in terms of originality, significance and rigour but which falls short of the highest standards of excellence.	**The quality of the research is internationally excellent**. The research is clearly of an international standard, with a very good level of quality in terms of originality, significance, and rigour. Work at this level can arouse significant interest in the international academic community, and international journals with the most rigorous standards of publication (irrespective of the place or language of publication) could publish work of this level.
3	Quality that is recognised internationally in terms of originality, significance and rigour.	**The quality of the research is sufficient to achieve some international recognition.** It would be perceived nationally as strong and may occasionally reach an internationally recognised level in terms of originality, significance and rigour. Internationally recognised journals could publish some work of this level.
2	Quality that meets the published definition of research for the purposes of this assessment.	The international academic community would deem the research to be nationally acceptable, but below world standards. Legitimate nationally recognised peer-reviewed journals could publish work of this level.
1	Quality that falls below the published definition of research for the purposes of this assessment[1].	**The quality of the research** is well below international level, and is unpublishable in legitimate peer-reviewed research journals.

[1] A publication has to meet all of the criteria below:

Societal impact dimension

The societal impact dimension is also composed of two judgements, defined as presented in the table below.

Score	Research group's societal contribution, taking into consideration the resources available to the group	Score	User involvement
5	The group has contributed extensively to economic, societal and/or cultural development in Norway and/or internationally.	5	Societal partner involvement is outstanding – partners have had an important role in all parts of the research process, from problem formulation to the publication and/or process or product innovation.
4	The group's contribution to economic, societal and/or cultural development in Norway and/or internationally is very considerable given what is expected from groups in the same research field.	4	Societal partners have very considerable involvement in all parts of the research process, from problem formulation to the publication and/or process or product innovation.
3	The group's contribution to economic, societal and/or cultural development in Norway and/or internationally is on par with what is expected from groups in the same research field.	3	Societal partners have considerable involvement in the research process, from problem formulation to the publication and/or process or product innovation.
2	The group's contribution to economic, societal and/or cultural development in Norway and/or internationally is modest given what is expected from groups in the same research field.	2	Societal partners have a modest part in the research process, from problem formulation to the publication and/or process or product innovation.
1	There is little documentation of contributions from the group to economic, societal and/or cultural development in Norway and/or internationally.	1	There is little documentation of societal partners' participation in the research process, from problem formulation to the publication and/or process or product innovation.

Methods and limitations

Methods

The evaluation is based on documentary evidence and online interviews with the representatives of Administrative Unit.

The documentary inputs to the evaluation were:

- Evaluation Protocol Evaluation of life sciences in Norway 2022-2023
- Administrative Unit´s Terms of Reference
- Administrative Unit's self-assessment report
- Administrative Unit's impact cases
- Administrative Unit's research groups evaluation reports
- Panel reports from the Expert panels
- Bibliometric data (*NIFU Nordic Institute for Studies of innovation, research and education*)
- Personnel data (*Statistics Norway (SSB)*)
- Funding data – The Research Council´s contribution to biosciences research (*RCN*)
- Extract from the Survey for academic staff and the Student Survey (*Norwegian Agency for Quality Assurance in Education (NOKUT)*)

After the documentary review, the Committee held a meeting and discussed an initial assessment against the assessment criteria and defined questions for the interview with the Administrative Unit. The Committee shared the interview questions with the Administrative Unit two weeks before the interview.

Following the documentary review, the Committee interviewed the Administrative Unit in an hour-long virtual meeting to fact-check the Committee's understanding and refine perceptions. The Administrative Unit presented answers to the Committee's questions and addressed other follow-up questions.

After the online interview, the Committee attended the final meeting to review the initial assessment in light of the interview and make any final adjustments.

A one-page summary of the Administrative Unit was developed based on the information from the self-assessment, the research group assessment, and the interview. The Administrative Unit had the opportunity to fact-check this summary. The Administrative Unit approved the summary without adjustments. ***(Adjust the text if the AU asked for corrections. Include the AU request and explain what adjustments were made).***

Limitations

(Choose one of the three options below and delete the others. Feel free to elaborate slightly if necessary. For example, if you choose option 3, explain the missing information. Note that the Committee can provide detailed feedback and suggestions on improving the evaluation in the Memorandum to the RCN. This section has to remain concise and only summarise whether the information was or was not sufficient.)

(1) The Committee judged the information received through documentary inputs and the interview with the Administrative Unit sufficient to complete the evaluation.

(2) The Committee judged that the Administrative Unit self-assessment report was insufficient to assess all evaluation criteria fully. However, the interview with the Administrative Unit filled gaps in the Committee's understanding, and the information was sufficient to complete the evaluation.
(3) The Committee judged that the Administrative Unit’s self-assessment report was insufficient to assess all evaluation criteria fully, and some information gaps remained after the interview with the Administrative Unit.

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