BEAUMONT RCSI
CANCER CENTRE

BEAUMONT RCSI CANCER CENTRE

CANCER ACTIVITY AND RESEARCH REPORT 2025

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CONTENTS

Beaumont RCSI Cancer Centre
Cancer Activity and Research Report 2025

OUR STRATEGIC OBJECTIVE IS TO UNDERTAKE **PATIENT CENTRIC RESEARCH FROM DISCOVERY TO CLINICAL CARE**

BEAUMONT HOSPITAL
RCSI UNIVERSITY OF MEDICINE AND HEALTH SCIENCES
Saint Luke's Radiation Oncology Network

Our Cancer Centre is made up of strategic partnership of **Beaumont Hospital**, **RCSI University of Medicine and Health Sciences** and **St. Luke's Radiation Oncology Network**.

BEAUMONT RCSI CANCER CENTRE

A MESSAGE FROM THE MEDICAL AND SCIENTIFIC DIRECTORS

Professor Patrick Morris, Medical Director, Beaumont RCSI Cancer Centre and Professor Leonie Young, Scientific Director Beaumont RCSI Cancer Centre.

Beaumont RCSI Cancer Centre, a strategic partnership between Beaumont Hospital, the Royal College of Surgeons in Ireland (RCSI), and the St. Luke's Radiation Oncology Network (SLRON), continues to lead in delivering high-quality, patient-centred cancer care, alongside world-class research and medical education.

As an Organisation of European Cancer Institutes (OECI)-accredited Cancer Centre, it provides integrated multidisciplinary care across 11 tumour site–specific disease groups. Rapid access diagnostic clinics are established for breast, lung, and prostate cancers, supporting timely diagnosis and treatment initiation.

The Cancer Centre maintains strong, internationally competitive clinical and research programmes in colorectal, neuro-oncology, dermatological (skin), and upper gastrointestinal cancers, as well as in endocrine and gynaecological oncology.

The Centre continues to advance the integration of clinical and translational research through shared leadership across the disease-specific programmes. This alignment is central to its mission to deliver biomarker-driven, precision oncology and personalised therapeutic approaches.

The OECI is a non-governmental organisation founded in Vienna in 1979 and remodelled in 2005 into OECI-EEIG, a European Economic Interest Grouping. OECI presently comprises 123 Members, which include some of the most prominent European Comprehensive Cancer Centres.

This report represents the fourth consecutive year of comprehensive clinical outcomes reporting, demonstrating significant progress in the real-time collection, integration, and utilisation of data across all disease groups to improve patient care. In 2025, strategic investment in new surgical appointments and technologies led to innovations including a first in class robotic programme and enhanced clinical trial activity.

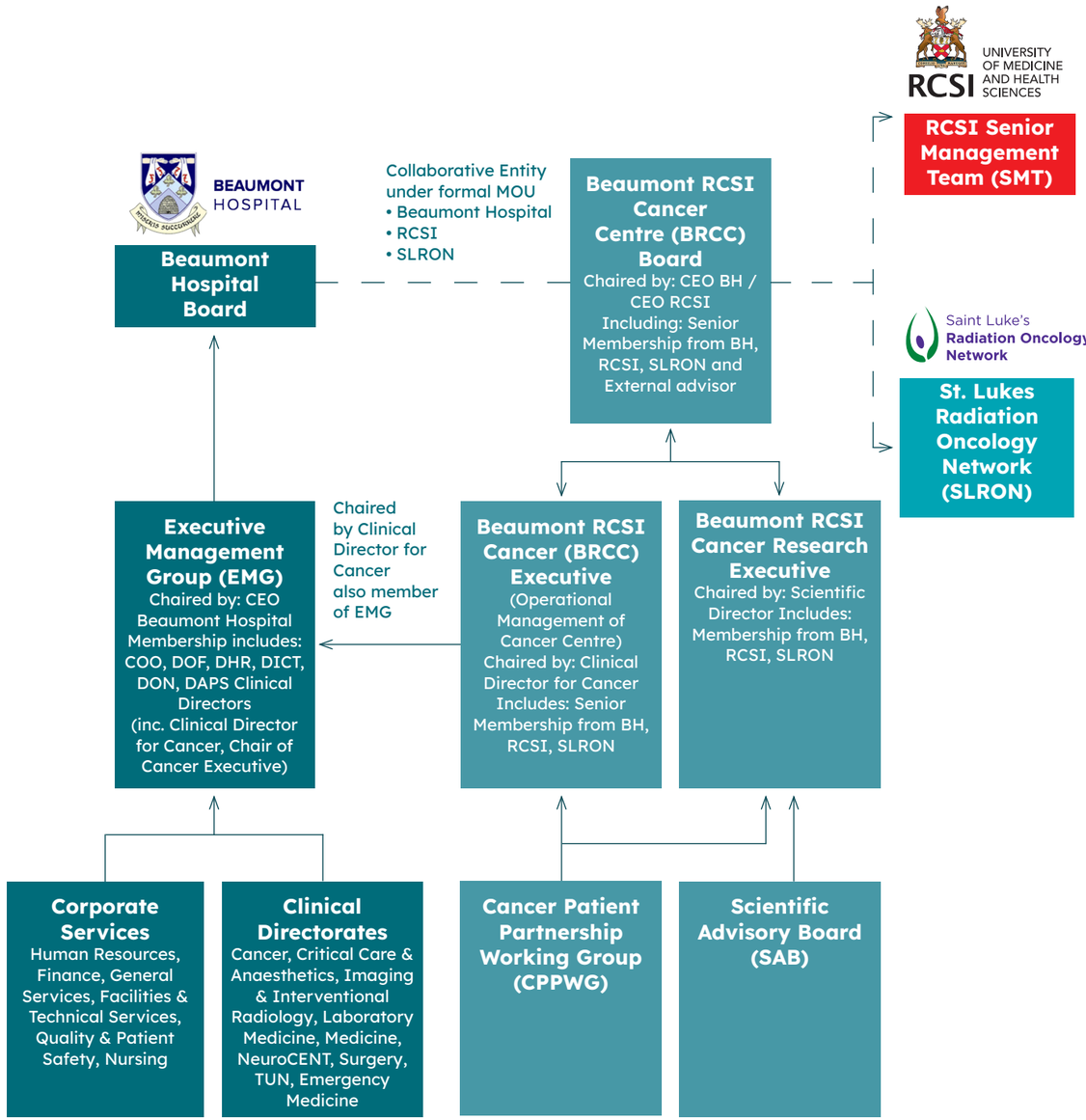
2025 is the 4th of a five-year strategic award from the Health Research Board (HRB), supporting investigator-led clinical trials and translational research programmes in immunotherapy, molecular pathology, and precision oncology. This programme has been the corner stone of a transformative clinical trial landscape within the centre, growing both the number of trials and recruitment substantially year on year. Strong foundations and a collaborative spirit of the centre will ensure our continued growth in innovation and clinical care to provide sustained benefit for our patients.

Patrick Morris
Medical Director,
Beaumont RCSI Cancer Centre

Leonie Young
Scientific Director,
Beaumont RCSI Cancer Centre

GOVERNANCE OVERVIEW

BEAUMONT RCSI CANCER CENTRE GOVERNANCE ORGANOGRAM



BEAUMONT RCSI CANCER CENTRE BOARD


Professor Cathal Kelly


Ms. Anne Coyle


Professor Leonie Young


Professor Patrick Morris


Ms. Claire Noonan


Dr. Aisling Hegarty


Professor Mark Lawler


Professor Arnold Hill


Professor Claire Faul


Ms. Clare Buckley


Mr. Paul Cully


Mr Richard Price


Professor Frank Gannon


Mr Frank O'Brien

EXECUTIVE SUMMARY

Beaumont RCSI Cancer Centre operates through a formal partnership between Beaumont Hospital, The Royal College of Surgeons in Ireland (RCSI) and St Luke's Radiation Oncology Network (SLRON) under a Memorandum of Understanding. Strategic oversight is provided by the Cancer Centre Board, jointly chaired by the CEOs of Beaumont Hospital and RCSI, with representation from all partner organisations, alongside external and patient representatives. Operational leadership is delivered through the Cancer Centre Executive, chaired by the Medical Director. The Research Executive, chaired by the Scientific Director, fosters collaboration between the Centres scientists, clinicians and allied healthcare professionals, providing leadership, coordination and oversight of the Centre's research portfolio. This ensures alignment with strategic priorities and supports the integration of research and innovation into clinical practice. The Cancer Patient Partnership Working Group ensures that the patient voice is embedded within the planning, delivery and evaluation of cancer services and research activity. The Scientific Advisory Board, along with the Patient Partnership Working group, provides expert advice on research strategy, scientific priorities and innovation, strengthening the Centre's commitment to research excellence and the translation of evidence into clinical practice.

Beaumont RCSI Cancer Centre
Cancer Activity and Research Report 2025

STRATEGIC OBJECTIVES

INVESTIGATE new stratification strategies, surgical interventions and smarter, targeted treatments in investigator initiated and collaborative clinical trials

UNDERSTAND the **FUNDAMENTALS** of cancer cells and the influences of the host and metastatic micro-environment to identify new actionable targets

Employ **INNOVATIVE APPROACHES** to determine the significance and potential clinical efficacy of new therapeutic strategies

UNDERSTAND the **PATIENT** in the wider environment, to drive cancer prevention in the community and improve quality of life and survivorship of our patients

Beaumont RCSI Cancer Centre's vision is to provide patient-partnered care informed by cutting edge research, in a rich educational environment. The Centre is at all times patient partnered, collaborative and innovative, with a core goal to be at the frontier of excellent patient care now and in the future.

PATIENT PARTNERSHIP

The Cancer Patient Partnership Working Group plays a central role in ensuring that the patient voice informs the delivery, development and evaluation of cancer services and research across Beaumont RCSI Cancer Centre. The group meets six times per year and comprises of patient partners alongside staff representatives from Beaumont Hospital, St Luke's Radiation Oncology Network, Royal College of Surgeons in Ireland and the Irish Cancer Society. The group is co-chaired by a patient partner and is also represented on the Cancer Centre Board, reflecting the Centre's commitment to meaningful patient partnership.

During 2025, the Cancer Patient Partnership Working Group contributed to a number of service development and research initiatives across the Centre. Working in partnership with clinicians and researchers, patient partners supported the co-design of a survey exploring patients' understanding of clinical trials and collaborated with the Psycho-Oncology Service on the development of a patient wellness booklet. These initiatives reflect the Centre's commitment to embedding patient perspectives in the design and improvement of services and research.

Anne Mynes (Patient Partner, Co-Chair CPPWG); Rachel Harrington (PP); Martin Sweeney, Prostate Cancer Patient Advocate; Caitríona Higgins, Patient Partnership Lead; Mary Hopkins (PP); Dr Petra Jagust, RCSI; Amanda Gillooley (PP); Gerry Doyle (PP)

Beaumont RCSI Cancer Centre
Cancer Activity and Research Report 2025

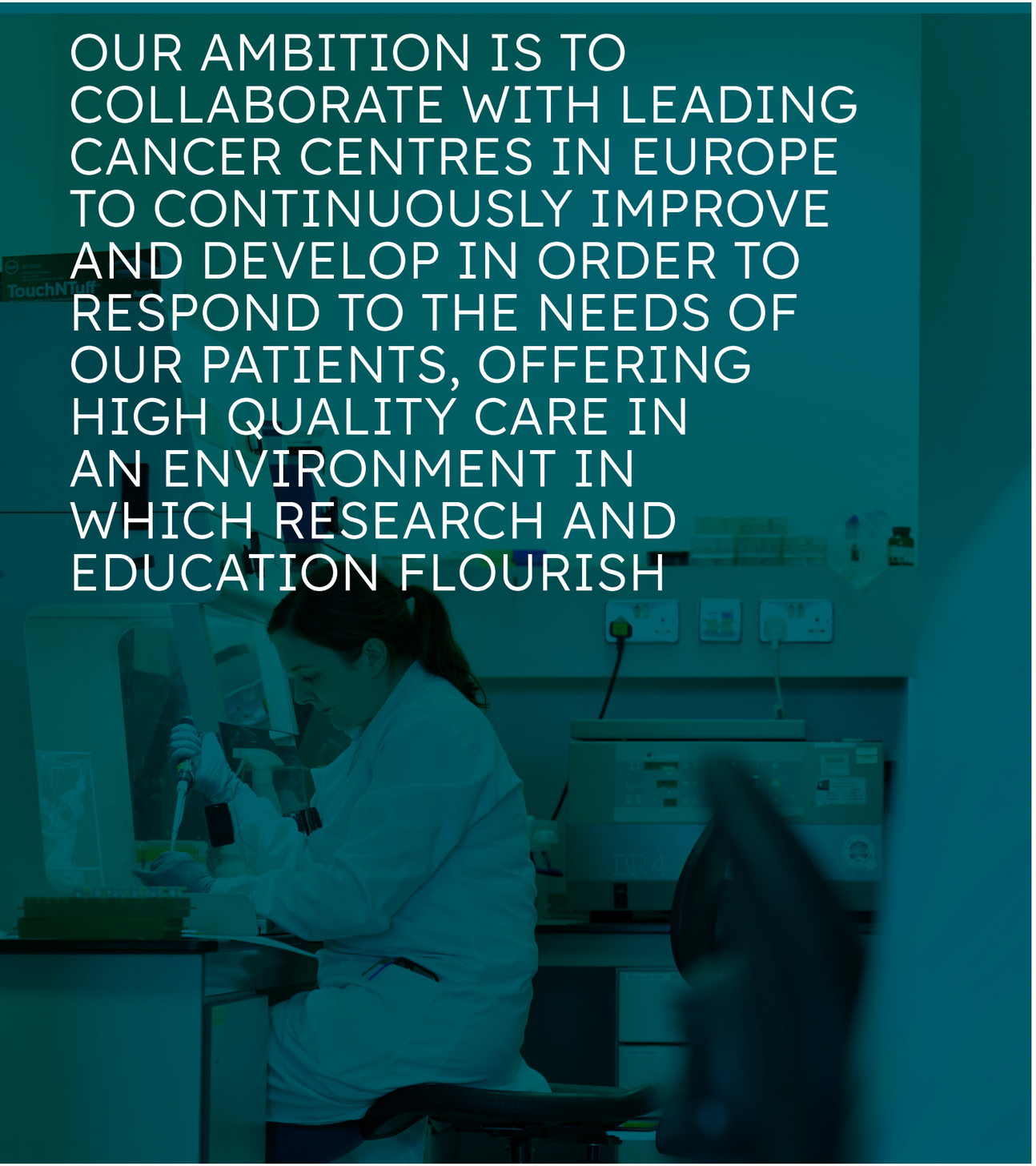
Patient partners delivered talks at the Cancer Centre Conference and at the International Clinical Trials Day Conference in May 2025

Anne Coyle, Chief Executive Officer, Claire Noonan, Chief Operating Officer, and Claire Buckley, CPPWG Patient Partner and Beaumont RCSI Cancer Centre Board Member, at the Cancer Conference, May 2025

Caitriona Higgins, Patient Partnership Lead, Beaumont RCSI Cancer Centre

As the national treatment centre for penile cancer, the Cancer Centre also supported the establishment of a dedicated penile cancer patient support group in November 2025. Developed in collaboration with patient partners, the National Cancer Control Programme and the Irish Cancer Society, the group is chaired by a patient partner and supported by a Clinical Nurse Specialist. Meeting every two months, the group provides peer support, education and access to expert clinical information. Educational sessions delivered during the year included topics such as lymphoedema management, developments in medical oncology and the role of exercise in supporting health and wellbeing.

Patient partners also played an important role in education, advocacy and knowledge sharing activities throughout the year. Through participation in conferences, educational events and research forums, they provided valuable lived experience perspectives that enhanced learning, informed research and promoted patient centred care. A notable contribution was made by Martin Sweeney, prostate cancer survivor, patient advocate and Co-Chief Investigator of the Clinical Trials Ireland PRO-ACT Study, who shared his experience of patient partnership in research at the Centre's International Clinical Trials Day event alongside Sara White, Clinical Nurse Specialist.



Beaumont RCSI Cancer Centre
Cancer Activity and Research Report 2025

CANCER ACTIVITY

CANCER ACTIVITY 2025

Beaumont RCSI Cancer Centre is a tertiary referral cancer centre, which provides complex diagnostic pathways for patients with a possible cancer diagnosis. Following diagnosis, patients are offered all aspects of cancer therapy, including surgery, radiotherapy, and systemic anticancer therapy (SACT) in tandem with research and a range of supportive services including pain medicine, psycho-oncology and specialist palliative care.

Annual cancer activity at our Cancer Centre includes patients who are newly diagnosed and/or treated as well as patients who are on a continuing or evolving treatment pathway or being followed up after treatment. In 2025 over 7,500 patients with cancer were admitted for inpatient or day service care (excluding those who attend for radiotherapy alone).

Of those, 5099 patients were newly diagnosed and/or treated in the cancer centre for the first time in 2025.

Table: **New Cancer Activity vs National Annual Average**

Activity	National Annual Average (2020-2022)	New Cancer Activity Beaumont RCSI Cancer Centre 2023	New Cancer Activity Beaumont RCSI Cancer Centre 2024	New Cancer Activity Beaumont RCSI Cancer Centre 2025
N (%)	41,654	4,639 (11%)	4,737 (12%)	5106 (12.3%)
All invasive cancers (excluding Non-Complex Non-Melanoma Skin Cancer)	24,207	3,018 (12.5%)	3,634 (15%)	3755 (15.5%)

NEW CANCER DIAGNOSIS AND TREATMENT ACTIVITY

Our methodology of reporting cancer activity was introduced in Beaumont RCSI Cancer Centre to meet the requirements of OECI accreditation and to enable deeper insight into the patients who attend our cancer centre for diagnosis, treatment, or both. For clarity, patients who were newly diagnosed may have had their treatment at the Beaumont RCSI Cancer Centre or at another cancer centre. Also, patients who were newly treated represent a patient population who may have received their diagnosis at the Cancer Centre or an alternative location.

The number of Newly Diagnosed patients is defined as: The number of patients who were newly diagnosed for cancer who had at least one aspect of their cancer diagnosis in the Cancer centre for new, recurrent or metastatic cancer. Patients who were categorised as “Newly Diagnosed” in 2025 have never attended the Cancer Centre for that same cancer previously

The number of Newly Treated patients is defined as: The number of patients who were newly treated for cancer. These patients have gone through cancer-directed treatment in the Cancer Centre in 2025 for a new primary, recurrent or metastatic cancer, regardless of treatment type, date or place of the initial cancer diagnosis. Newly treated means the patient has never been treated before in the Cancer Centre for this particular cancer. Treatments include surgery, radiotherapy, SACT, active surveillance or palliative care

Beaumont RCSI Cancer Centre
Cancer Activity and Research Report 2025

Table: **New Cancer Activity Breakdown (2025)**

Cancer Group	A. Number of New Patients 2025	B. Newly Diagnosed and Treated in 2025	C. Newly Diagnosed Only in 2025	D. Newly Treated Only in 2025	E. Total Newly Diagnosed	F. Total Newly Treated (B+D)
01. Breast	583	350	126	107	476	457
02. Colorectal	274	154	18	102	172	256
03. Gynaecological	36	12	22	2	34	14
04. Haematology	292	220	30	42	250	262
05. Head & Neck	252	140	46	66	186	206
06. Lung Cancer	383	188	136	59	324	247
07. Neuro-Oncology	356	288	52	16	340	304
08. Skin Cancer (Melanoma & Complex Non-Melanoma)	484	265	27	192	292	457
08. Skin Cancer (Non-Complex Non-Melanoma)	1351	1376	84	135	1460	1511
09. Upper Gastro-Intestinal	302	131	66	105	196	236
10. Urological	775	352	286	137	637	489
11. Endocrine and Soft Tissue Sarcoma	18	13	0	5	13	18
TOTAL	**5106**	**3489**	**893**	**968**	**4380**	**4457**

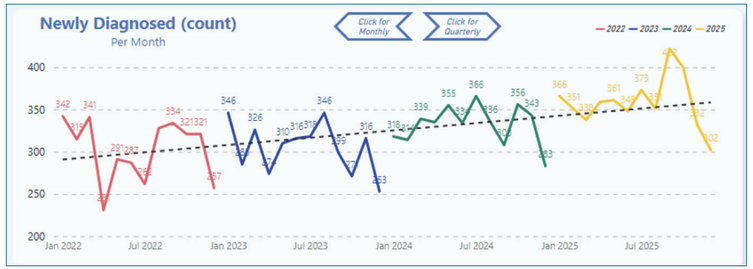
Table: **Newly Diagnosed and Newly Treated Activity (Excluding *NCNMSC)**

Activity	All Newly Diagnosed	All Newly Treated
All New Cancers	4380	4457
New Cancers (excluding NCNMSC)	2920	2946
By Cancer Group (as a % of all new cancers excluding NCNMSC)	N (%)	N (%)
01. Breast	476 (16.4%)	457 (15.5%)
02. Colorectal	172 (5.9%)	256 (8.7%)
03. Gynaecological	34 (1.2%)	14 (0.5%)
04. Haematology	292 (8%)	262 (8.6%)
05. Head & Neck	186 (6.4%)	206 (7.0%)
06. Lung Cancer	324 (11.2%)	247 (8.4%)
07. Neuro-Oncology	340 (11.7%)	304 (10.3%)
08. Skin Cancer (excluding NCNMSC)	292 (10.1%)	457 (15.5%)
09. Upper Gastro Intestinal	196 (6.8%)	236 (8.0%)
10. Urological	637 (22.0%)	489 (16.6%)
11. Endocrine and Soft Tissue Sarcoma	13 (0.4%)	18 (0.6%)

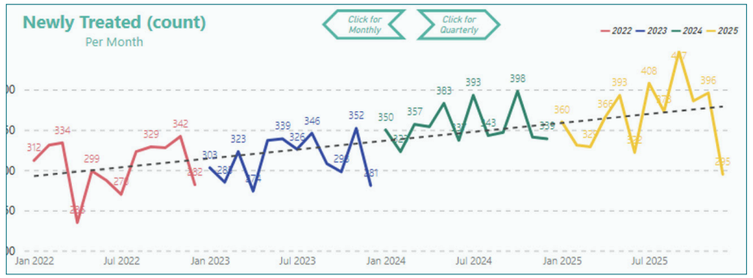
*Non Complex Non Melanoma Skin cancer

For the fourth consecutive year, following the implementation of the pan-cancer Hospital Based Cancer Registry (HBCR) and the development of Cancer Centre metrics, there has been a sustained increase in the volume of newly diagnosed and newly treated cancers.

Year on Year Newly Diagnosed Cancer Activity



Year on Year Newly Treated Cancer Activity



Professor Cathal Kelly, Vice Chancellor and Registrar, RCSI University of Medicine and Health Sciences, Professor Patrick Morris, Medical Director Beaumont RCSI Cancer Centre, Ms. Anne Coyle, CEO Beaumont Hospital

Beaumont RCSI Cancer Centre
Cancer Activity and Research Report 2025

CANCER DEMOGRAPHICS

A comprehensive understanding of patient demographics is fundamental to delivering high-quality, patient-centred cancer care and tailor clinical services to the needs of the populations we serve. As a national and supra-regional referral centre, and part of a model four acute hospital, understanding the wider environment is vital to support the continuous development of responsive, data-driven care.

Table: **Age Range of Newly Diagnosed & Newly Treated Cancer Patients**

Age Range	Newly Diagnosed	Newly Treated
New Cancers (excluding NCNMSC)	2920	2946
	Average Age (Range)	Average Age (Range)
Median	66 (16-99)	66 (16-99)
Female	63 (16-99)	62 (16-99)
Male	67 (16-99)	68 (16-99)

Figure: **Age Range for Newly Diagnosed**

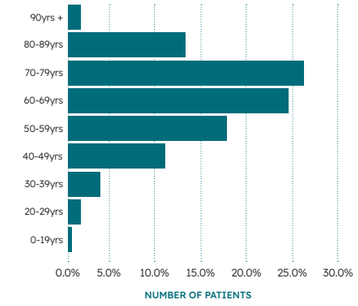
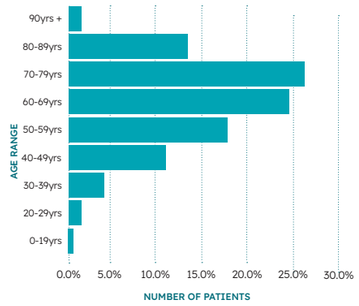


Figure: **Age Range for Newly Treated**



In 2025 the median age at diagnosis for all new cancer patients combined (excluding non-melanoma skin cancers) was 66 years of age. This is the same as the 2023 median and slightly lower than the national median, according to the National Cancer Registry Ireland (NCRI) Key Findings Report

Figure: **Gender Breakdown for Newly Diagnosed**

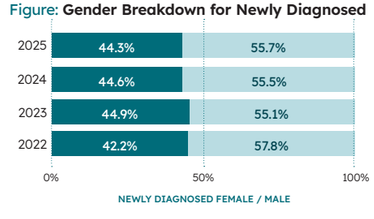
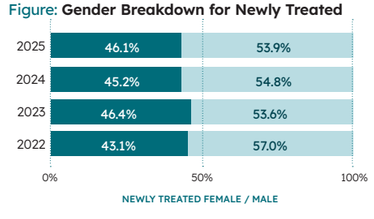


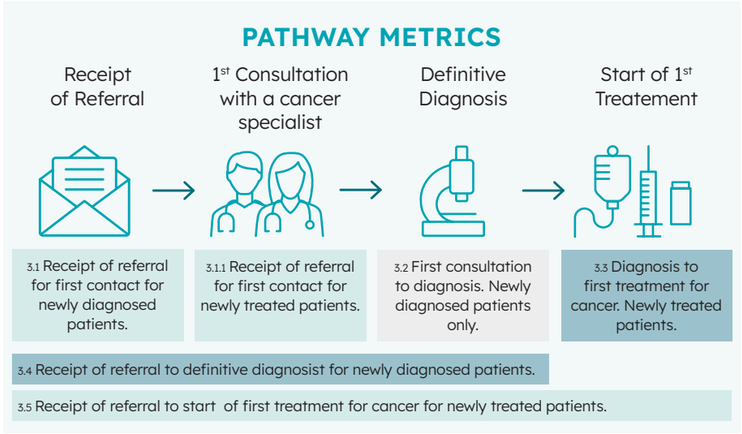
Figure: **Gender Breakdown for Newly Treated**



PATIENT PATHWAY

The patient pathway is complex with many patients undergoing diagnosis and receiving treatment for their cancer in more than one hospital. The most common point of first contact for patients diagnosed with cancer in Beaumont RCSI Cancer Centre was the outpatient department (58%). In order to analyse the patient pathway, a suite of metrics were devised in 2022, and data have been collected.

Figure: Patient Pathway Diagram



A retrospective measurement on the common reasons for prolonged pathway can be reviewed, and whilst no established targets have been applied, grouping of timeframes consistent across all cancer groups can help identify areas for improvement, commonly referred to as Cancer Centre Metrics.

For metrics 3.1, 3.1.1, and 3.2 data are reported in the following groups: 0-10 working days, 11-15 working days, 16-20 working days. Out of Timeframe (OOT) reasons collected for >10 working days.

For metrics 3.3 data are reported in the following groups; 0-20 working days, 21-30 working days, 31-40 working days, 41-50 working days, >50 working days. OOT reasons collected for >20 working days.

For metrics 3.4 and 3.5 data are reported in the following groups; 0-40 working days, 41-50 working days, 51-60 working days, >60 working days. OOT reasons collected for >40 working days.

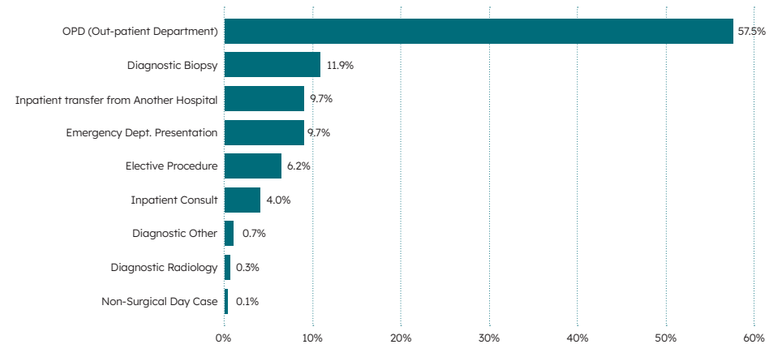
For Length of Stay (LOS) metric data are reported in the following groups; 0-7 calendar days, 8-14 calendar days, 15-21 calendar days, 22-28 calendar days, >28 calendar days. Median and Averge LOS per cancer groups are monitored.

POINT OF 1ST CONTACT

In 2025, 2920 (excluding NCNMSC) patients were newly diagnosed with cancer. To better understand the patient pathway into the Cancer Centre, data are collected on the point of 1st contact for patients newly diagnosed with cancer.

Understanding how our patients first access the service can help identify opportunities for improved care.

Figure: **Point of 1st Contact Breakdown**



FIRST CONTACT TO FIRST CONSULTATION

This metric focuses on the number of working days from first contact with the Cancer Centre to first consultation with a cancer specialist. Of the patients diagnosed in Beaumont RCSI Cancer Centre the majority, 80% were seen within 4 weks of first contact with the Cancer Centre.

Out of Timeframe (OOT) refers to patients whose pathway exceeded the defined target time frame for this metric. The most common reason for patients falling outside the target timeframe was hospital capacity (40%), followed by routine booking processes (18%) and patient choice (12%). These findings highlight the ongoing impact of service capacity constraints and referral pathways on timely access to assessment and treatment. Out of Timeframe (OOT) reasons collected for >10 working days. Grouping of timeframes consistent across all cancer groups can help identify areas for improvement

Beaumont RCSI Cancer Centre
Cancer Activity and Research Report 2025

Figure: **1st Contact to 1st Consultation Comparison of timeframes in 2025**

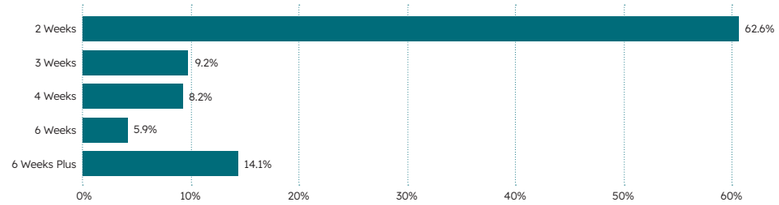


Figure: **1st Contact to 1st Consultation OOT Reasons (>2 weeks)**

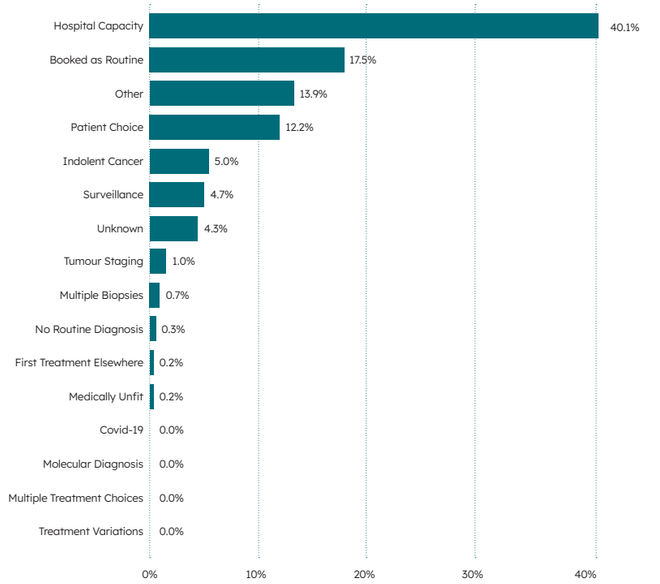


Table: **Principal Contributors to Out of Timeframe from 1st Contact to 1st Consultation**

Reason	%	Description
Hospital Capacity	40%	Lack of availability of a day ward bed, overnight bed, OPD slot, operating list capacity or staffing of relevant services (Nursing, Medical, Surgical, Anaesthesia, Administration etc)
Booked As Routine	18%	The available information led to routine rather than urgent booking and the urgency of the appointment for cancer diagnosis / treatment was not clear.
Patient Choice	12%	The patient was offered one or more appointments but did not attend, deferred, or cancelled

FIRST CONTACT TO DEFINITVE DIAGNOSIS

Out of Timeframe (OOT) refers to patients whose pathway exceeded the established monitoring timeframe of more than 20 working days from definitive diagnosis to first treatment. Extended timeframes were most commonly associated with complex clinical pathways categorised as 'Other' (30%), additional tumour staging requirements (13%), and the need for patients to consider multiple treatment options (10%). These findings reflect the importance of personalised treatment planning, multidisciplinary decision-making, and shared decision-making with patients prior to treatment initiation

Figure: **1st Contact to Definitive Diagnosis Comparison of Timeframes**

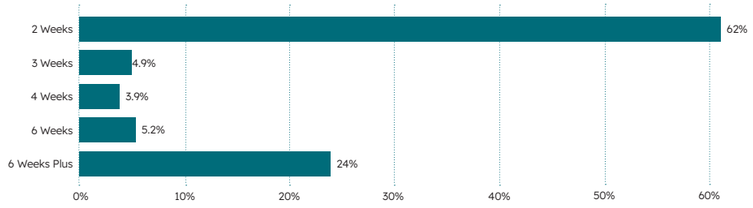
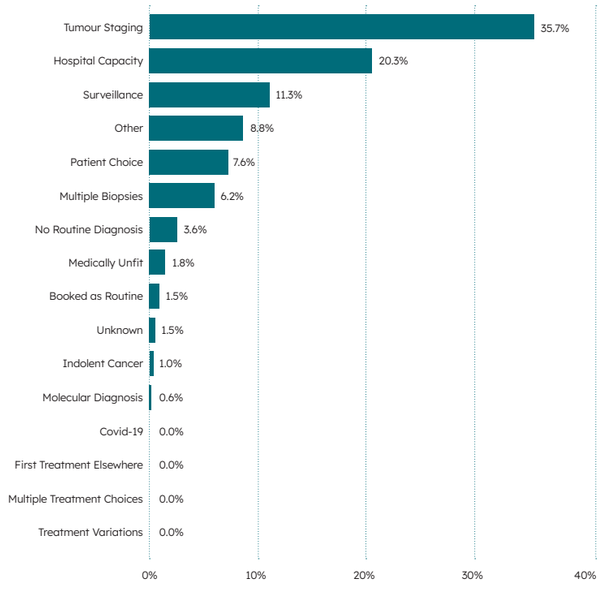


Figure: **1st Contact to Definitive Diagnosis OOT Reasons >20 working days (4 weeks)**



Beaumont RCSI Cancer Centre
Cancer Activity and Research Report 2025

Table: **Principal Contributors to OOT from 1st Contact to Definitive Diagnosis**

Reason	%	Description
Tumour Staging	36%*	Additional Imaging or Staging Investigations were needed to determine the extent of cancer and plan the treatment accordingly. E.g. (4 PET/CT, MRI, EUS
Hospital Capacity	20%	Lack of availability of a day ward bed, overnight bed, OPD slot, operating list capacity or staffing of relevant services (Nursing, Medical, Surgical, Anaesthesia, Administration etc)
Surveillance	11%	The patient was already attending the service for follow up of a prior cancer, pre-invasive cancer, or suspicious finding

*The introduction of a new PET service level agreement has supported improved turnaround times. Remaining delays are largely driven by clinical requirements (36% staging investigations), with additional impacts from hospital capacity constraints (20%) and surveillance pathways (11%), highlighting the need for continued investment in diagnostic capacity and service coordination.

CANCER TREATMENT

SYSTEMIC ANTI-CANCER THERAPY

In 2025, more than 10,000 parental Systemic Anti-cancer Therapy (SACT) continued to grow in 2025, with more than 10,000 parental treatment episodes delivered across the Medical Oncology and Haematology Day wards. Over 20,000 patient attendances were recorded during the year, involving approximatively 2,500 patients, reflecting the high volume and complexity of cancer treatment delivered across both services.

Table: **Systemic Anti-Cancer Therapy Activity**

Activity		Patients (N)	Patient Visits (N)
Haematology Outpatient Clinics	New	1271	1271
	Follow Up	3477	4470
OVERALL		**4748**	**5741**
Medical Oncology Outpatient Clinics	New	1559	1559
	Follow Up	2445	3685
OVERALL		**4004**	**5244**
Haematology and Medical Oncology Outpatient Clinics	New	2830	2830
	Follow Up	5922	8155
OVERALL		**8752**	**10985**
Coleman K Byrne Haematology Day Ward	Parenteral SACT	349	2903
	Oral and Review	941	4817
OVERALL		**1290**	**7720**
Medical Oncology Day Ward	Parenteral SACT	1003	6117
	Oral and Review	1553	6318
OVERALL		**2556**	**12435**
Overall Day Ward Activity	Parenteral SACT	1352	9020
	Oral and Review	2494	11135
OVERALL		**3846**	**20155**

Ms Claire Bolton, ANP
Lung with patient

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Cancer Activity and Research Report 2025

RADIATION ONCOLOGY

In 2025, 1985 new courses of radiotherapy were delivered in St. Luke's Radiation Oncology Network (SLRON) at Beaumont Hospital, over 23,584 radiotherapy fractions. This is similar to the number of courses treated and radiotherapy fractions delivered in 2024.

462 courses of breast radiotherapy treatment started in 2025, with just under 40% receiving deep inspiration breath-hold to protect organs at risk. All were treated using surface guided radiotherapy technology, meaning that breast patients in SLRON at Beaumont no longer require permanent tattoos for treatment setup.

Stereotactic Radiosurgery (SRS), a highly targeted form of radiotherapy delivered as a national service at SLRON Beaumont, continued to expand. In 2025, 331 patients received SRS across 924 fractions, representing an 8.5% increase in patient numbers and a 7.8% increase in fractions delivered compared with 2024.

Figure: **SRS Fractions per year**

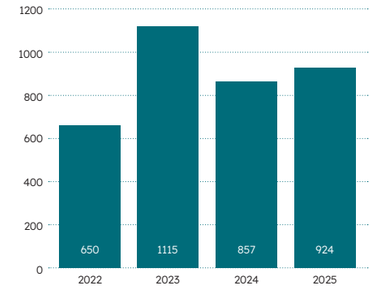
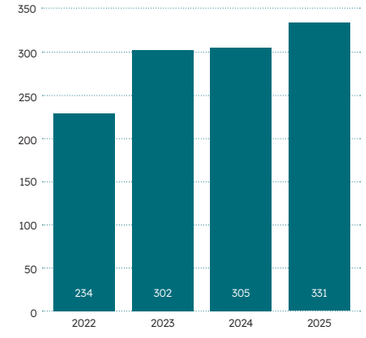


Figure: **SRS Episodes per year**



DEFINITIVE DIAGNOSIS TO FIRST TREATMENT

The number of working days from definitive cancer diagnosis to first treatment for cancer, when the first treatment for cancer was in the Beaumont RCSI Cancer Centre. Patients are included irrespective of the location of their cancer diagnosis. Out of Timeframe (OOT) reasons collected for >20 working days (4 weeks).

Figure: **Definitive Diagnosis to First Treatment Comparison of Timeframes.**

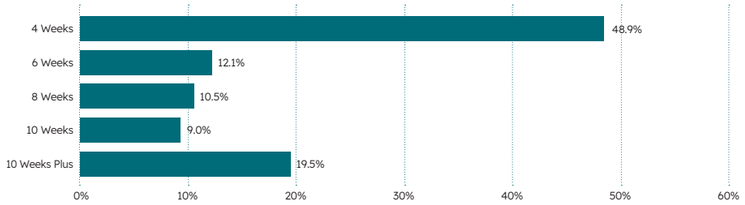


Figure: **Definitve Diagnosis to 1st Treatment OOT Reasons >20 working days (4 weeks)**

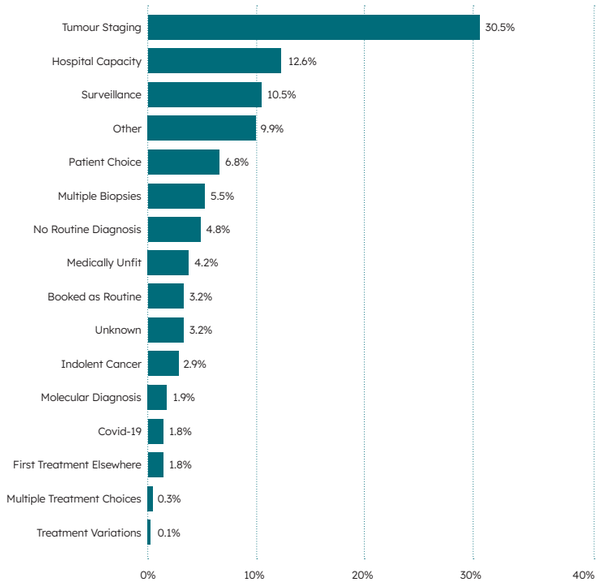


Table: **Principal Contributors to Out of Timeframe from 1st Contact to Definitive Diagnosis**

Reason	%	Description
Tumour Staging	13%	Additional imaging or staging investigations were needed to determine the extent of cancer and plan the treatment accordingly. E.g. PET/CT, MRI, EUS
Multiple Treatment Choices	10%	Several potential treatment options were available. Further time was taken by the patient to consider these
Other	30%	Patients with a greater than 4 week wait, in Skin Oncology, Haematology, and Neuro-Oncology have complex patient pathways across multiple services and are monitored accordingly.

Beaumont RCSI Cancer Centre
Cancer Activity and Research Report 2025

FIRST CONTACT TO DEFINITIVE DIAGNOSIS

When looking at the pathway from a patient perspective, it is essential to consider the total time spent waiting for a diagnosis. The following metric looks at the total time from first contact with the cancer centre through to diagnosis for patients diagnosed in Beaumont RCSI Cancer Centre. The majority of patients were diagnosed within 4 weeks of first contact with the cancer centre. Out of Timeframe (OOT) refers to patients whose pathway exceeded the established monitoring timeframe of more than 40 working days from first contact to definitive diagnosis.

Figure: **1st Contact to Definitive Diagnosis Comparison of Timeframes**

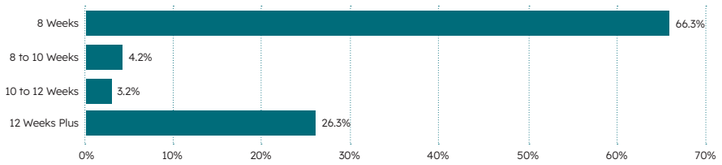


Figure: **1st Contact to Definitive Diagnosis OOT Reasons (8 weeks)**

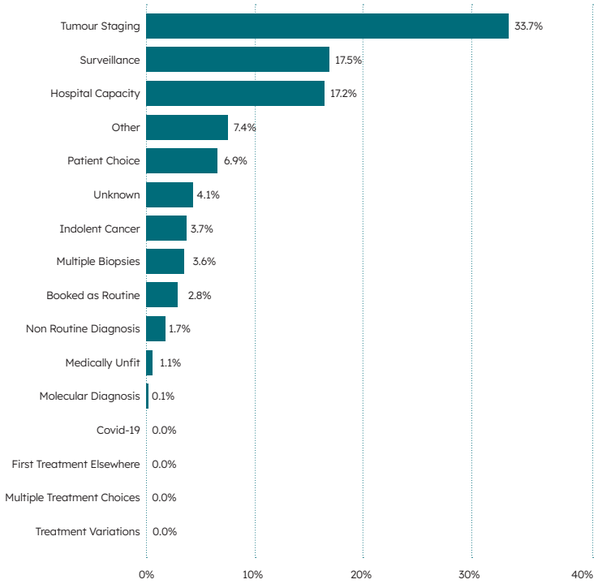


Table: **Principal Contributors to Out of Timeframe from 1st Contact to 1st Consultation**

Reason	%	Description
Tumour Staging	34%	determine the extent of cancer and plan the treatment accordingly. E.g., PET/CT, MRI, EUS
Surveillance	18%	The patient was already attending the service for follow up of a prior cancer, pre-invasive cancer, or suspicious finding
Hospital Capacity	17%	Lack of availability of a day ward bed, overnight bed, operating list capacity or staffing of relevant services (Nursing, Medical, Surgical, Anaesthesia, Administration, etc)

FIRST CONTACT TO FIRST TREATMENT

The pathway to cancer treatment is complex and there are numerous reasons for prolonged timeframes at various stages. The following looks at the total time from first contact with the Cancer Centre through to first treatment for cancer including those who were treated elsewhere. Out of Timeframe (OOT) refers to patients whose pathway exceeded the established monitoring timeframe of more than 40 working days from first contact to first treatment.

Figure: **1st Contact to 1st Treatment Comparison of Timeframes**

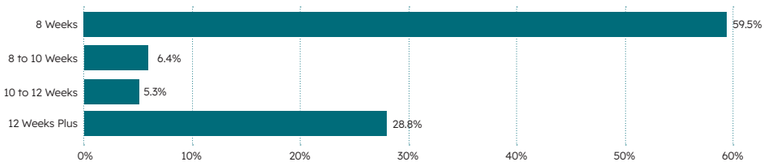


Figure: **1st Contact to 1st Treatment OOT Reasons (>8 weeks)**

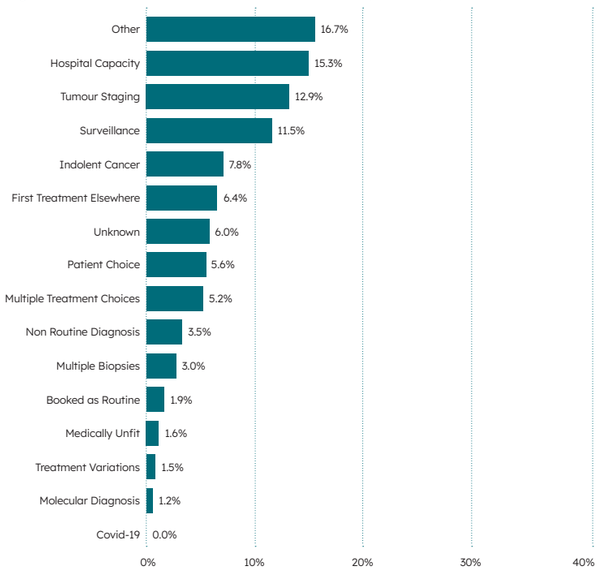


Table: **Principal Contributors to Out of Timeframe from 1st Contact to 1st Treatment**

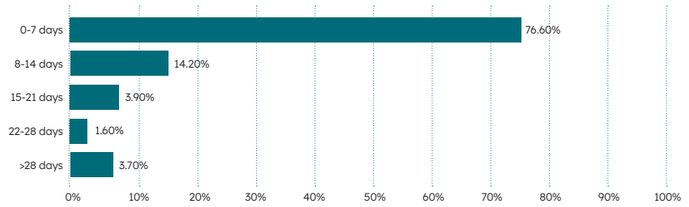
Reason	%	Description
Hospital Capacity	15%	Lack of availability of a day ward bed, overnight bed, operating list capacity or staffing of relevant services (Nursing, Medical, Surgical, Anaesthesia, Administration, etc)
Tumour Staging	13%	Additional Imaging or Staging Investigations were needed to determine the extent of cancer and plan the treatment accordingly. E.g. PET/CT, MRI, EUS
Other	17%	Patients with a greater than 4 week wait, in Skin Oncology, Haematology, and Neuro-Oncology have complex patient pathways across multiple services and are monitored accordingly.

LENGTH OF STAY

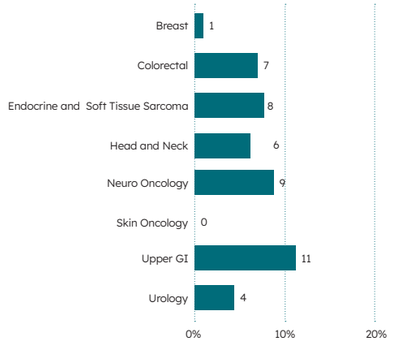
Monitoring post-operative length of stay (LOS) in cancer surgery is essential for assessing recovery, quality of care, and resource use. Reviewing average and median LOS by tumour type helps identify meaningful variation in outcomes and pathways.

Overall, more than three quarters of patients undergoing curative cancer surgery were discharged within seven days, reflecting continued optimisation of perioperative care pathways across the Cancer Centre.

Figure: **Timeframe of Length of Stay (for patients undergoing curative resection)**



Median Length of Stay (for patients undergoing curative resection)



*Not incldued are Gynaecologic

Beaumont RCSI Cancer Centre
Cancer Activity and Research Report 2025

MULTIDISCIPLINARY ACTIVITY

Multidisciplinary Meetings (MDMs) are a cornerstone of high-quality cancer care, bringing together specialists from surgery, medical oncology, radiation oncology, radiology, pathology, nursing and allied health professions to support evidence-based diagnosis, treatment planning and ongoing patient management. Since the implementation of the National Cancer Information System (NCIS) it has provided a streamlined platform for multidisciplinary meeting management. NCIS supports the live recording of outcomes and provides a longitudinal record of all MDMs

In 2025, a dedicated Leukaemia MDM was introduced, further strengthening specialist multidisciplinary collaboration. In parallel, a programme of work to streamline MDM processes across tumour sites, including colorectal and skin cancer services, has been progressed. This has focused on improving efficiency, standardisation, and data capture, supported by enhanced NCIS functionality. These developments have reduced administrative burden, improved case preparation and coordination, and enabled more timely, informed clinical decision-making, ultimately supporting improved patient care. MDM Chairs and Co-Chairs, together with the Clinical Director for Cancer, Clinical Leads for Radiology and Pathology, and the Cancer Directorate management teams, meet biannually to review and evaluate MDM processes, audits, policies and quality improvement initiatives.
These meetings provide a structured forum to assess performance, ensure adherence to national standards, identify areas for improvement, and support the continuous enhancement of multidisciplinary care delivery across the Cancer Centre.

Table: **MDM Discussion Activity**

MDM Discussion Activity 2025							
		Number of MDMs			Number of Discussions		
Cancer Group	MDM Sub-Group	2023	2024	2025	2023	2024	2025
01. Breast Cancer		51	51	52	2896	2893	2686
02. Colorectal Cancer		44	43	45	977	950	737
04. Haematology Cancer	Lymphoma	22	23	23	387	466	558
	Myeloma	4	11	11	38	94	92
	Leukaemia	N/A	N/A	20	N/A	N/A	125
05. Head & Neck Cancer		47	45	44	1014	1014	934
06. Lung Cancer		44	44	44	1229	1314	1192
07. Neuro-Oncology Cancer		51	50	50	1009	972	987
08. Skin Cancer		50	49	51	1191	1324	1171
09. Upper Gastro Intestinal Cancer		50	50	49	1085	1023	943
10. Urological Cancer	Prostate	25	27	26	507	588	631
	Non-Prostate	44	50	50	490	796	717
11. Endocrine and Soft Tissue Sarcoma Cancer	Endocrine	N/A	37	44	N/A	579	662
00. All Cancer	Psycho-oncology	50	48	49	448	403	380

MDM QUALITY

MDMs are audited annually against six quality standards derived from Beaumont RCSI Cancer Centre Standard Operating Procedures (SOPs) and national multidisciplinary meeting guidance. Audit findings are reviewed with clinical teams and reported through Cancer Centre governance structures to support continuous quality improvement.

Table: **MDM Audit Performance per Team**

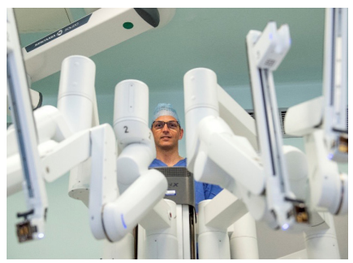
Team	2023 Overall Score	2024 Overall Score	2025 Overall Score
Team A	95%	93%	97%
Team B	91%	84%	96%
Team C	96%	99%	96%
Team D	92%	93%	97%
Team E	93%	95%	97%
Team F	95%	95%	96%
Team G	89%	93%	97%
Team H	95%	96%	96%
Team I	95%	95%	96%
Team J	97%	96%	96%
Team K	96%	96%	96%
Score across all teams	**94%**	**94%**	**96.0%**

MDM Quality Audit is also presented annually to the Cancer executive to ensure quality and governance of the audit outcomes.

Table: **Audit Performance per Standard**

MDM Audit Standards	Statement	Overall Score
Standard 1: Membership & Attendance	Every MDM must have an established core team, and a representative from all relevant specialties in attendance.	100%
Standard 2: Documentation and Guidelines	Each MDM must have an individualised Standard Operating Procedure and Clinical Pathway guidelines which are reviewed biennially.	100%
Standard 3: MDM Infrastructure	Infrastructure should support confidential discussion where all members can hear and see relevant information clearly.	89%
Standard 4: MDM Organisation	MDM organisation should facilitate safe discussion of patients.	100%
Standard 5: Learning and Development	The MDM should be considered a learning event with biannual meetings to review outcomes, quality of procedures, patient pathways and indicators for quality improvement.	50%
Standard 6: GDPR Compliance	All staff will adhere to standards of GPDR in maintaining safe custody of patient information discussed at MDM.	100%

Prof. Deborah McNamara (RCSI President), Prof. Arnold Hill (Chair of Surgery and Dean Medical Programmes, RCSI), and Prof. Leonie Young (Scientific Director, Beaumont RCSI Cancer Centre)



Professor William Robb with the Da Vinci Robot in Theatre

CANCER SURGERY

In 2025, surgery remained the most common first treatment modality at Beaumont RCSI Cancer Centre. Just over 55% of newly treated patients underwent curative intent surgical resections, reflecting the continued central role of surgery in the management of solid tumours across multiple disease sites. The Centre continues to prioritise timely access to surgical care in line with National Cancer Control targets. In 2025, over 87% of patients underwent surgery within 30 working days of the decision to treat, demonstrating sustained performance in delivering prompt, high-quality surgical intervention. In line with the previous trends reported in 2024, the Centre has maintained a high standard of care while accommodating increasing patient volumes and expanding to include more complex surgical procedures. Continued investment in minimally invasive, robotic-assisted and advanced endoscopic techniques has strengthened the Cancer Centre's ability to deliver increasingly complex surgical interventions while supporting improved patient outcomes and recovery.

Dr Daniela Ottaviana, Research Fellow, Endocrine Oncology Research Group, Department of Surgery RCSI

Beaumont RCSI Cancer Centre
Cancer Activity and Research Report 2025

METRICS OVERVIEW

89% of all patients diagnosed with Breast Cancer were seen within 20 working days of 1st contact with the cancer centre. (3.1)

97% of patients diagnosed elsewhere with Breast Cancer were seen within 20 working days of 1st contact with the cancer centre. (3.1.1)

79% of all patients were definitively diagnosed with Breast Cancer within 10 working days of their 1st consultation. (3.2)

72% of all patients diagnosed with Breast Cancer started 1st treatment within 6 weeks of definitive diagnosis. (3.3)

98% of all patients with Breast Cancer were treated within 6 weeks of decision to treat as agreed with the patient, where surgery is the first treatment type. (4.5)

CANCER DISEASE GROUPS

BREAST CANCER CLINICAL PROGRAMME

Table: **Breast Cancer Activity 2025**

Activity	Newly Diagnosed	Newly Treated
All Cancers (excl. NCNMSC)	2920	2946
Breast Cancer	476	457
Breast Cancer as a % of all cancers	16.4%	15.5%
Gender	N	N
Female	472 (99.2%)	454 (99.3%)
Male	4 (0.8%)	3 (0.7%)
Age	Median Age (Range)	Median Age (Range)
Median Age at Diagnosis | Median Age at Treatment	55 (27-94)	53 (27-95)

Figure: **First Contact to Definitive Diagnosis - Breast Cancer**

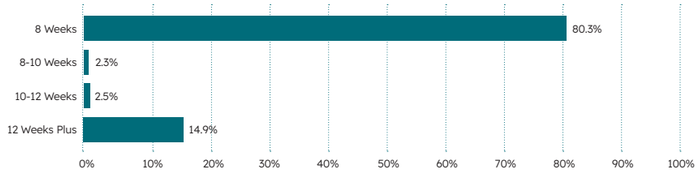
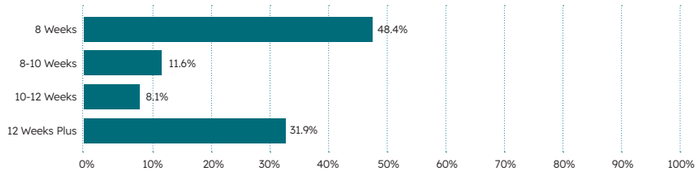
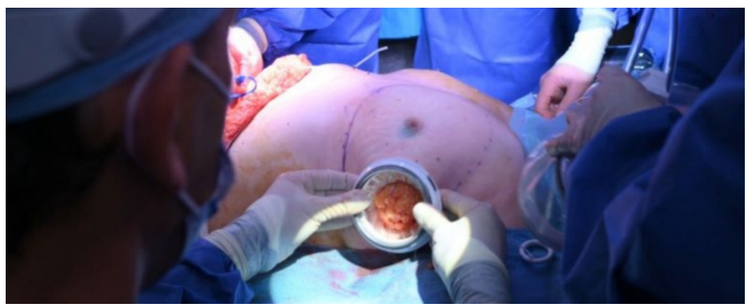


Figure: **First Contact to First Treatment - Breast Cancer**





Robotic mastectomy procedure being performed, a small circular access port is being placed centrally on the chest, through which the surgical instruments will be introduced

BREAST CANCER RESEARCH PROGRAMME

Breast cancer remains a major clinical and research priority, particularly in the context of advanced and metastatic disease, where significant challenges persist. Addressing these challenges requires a deeper understanding of tumour evolution, metastasis, and treatment resistance, alongside the development of more effective, targeted therapies.

The Precision Oncology Research Initiative for Metastatic Breast Cancer (PRISM) continues to be one of the Cancer Centre's flagship translational research programmes. Through a unique integration of molecular pathology, laboratory science and clinical trials, PRISM is creating a comprehensive platform to advance precision medicine for patients with metastatic breast cancer. Recruitment of the first patient to the clinical trial component of the study was celebrated in December 2025, supported through partnerships with Breast Cancer Ireland, Carrick Therapeutics and Research Ireland.

Significant translational advances have emerged from the programme. Research led by Professor Young and Dr Vareslija has identified altered ESR1 DNA methylation status in patients on neoadjuvant HER2 inhibitor therapy, demonstrating clinically relevant changes in ER expression (Dowling et al Cancer Comm, 2025). This discovery highlights the benefit of neoadjuvant HER2 inhibitor therapy and offers the potential benefit of combined therapeutic approaches. Professor Young's election to the European Molecular Biology Organisation (EMBO) further recognises her leadership and contributions to cancer research at an international level.

Clinical trial activity remains a cornerstone of the programme. The collaborative study KATHERINE reported improved overall survival in patients on T-DM1 compared with trastuzumab (Geyer et al N Eng J Med, 2025). Also, in HER2 positive breast cancer, the SHAMROCK trial, led by Professor Bryan Hennessy, continues to evaluate neoadjuvant trastuzumab deruxtecan (T-DXd), with the aim

Beaumont RCSI Cancer Centre
Cancer Activity and Research Report 2025

of reducing treatment-related toxicity while maintaining efficacy. Following protocol refinements informed by emerging international evidence, recruitment and trial delivery progressed throughout 2025. The DESTINY-Breast-15 trial, also investigating T-DXd, remains active, alongside additional studies led by Professor Patrick Morris, including the CAMBRIA-II and EMBER-4 trials, which are evaluating novel endocrine therapies in early-stage oestrogen receptor-positive, HER2-negative breast cancer.

Surgical and radiotherapy research is also advancing. Professor Arnold Hill's work continues to generate important insights into the role of systemic inflammatory markers as predictors of response to neoadjuvant therapy, informing more tailored treatment approaches. A prospective observational study examining the impact of robotic mastectomy on patient outcomes is in development, reflecting ongoing innovation in surgical techniques. In radiation oncology, Professor Orla McArdle is leading the EXPERT trial, which is evaluating the omission of radiotherapy following breast-conserving surgery in patients with low genomic risk, as defined by the Prosigna (PAM50) gene signature assay—an important step towards treatment de-escalation.

The programme also continues to drive innovation in therapeutics. Professor Tríona Ní Chonghaile reported the potential for HDAC inhibitors in targeting tumour metabolism (Roe et al Nat Comm, 2025). Along with Dr Jamie O'Sullivan she has submitted a patent application protecting these emerging therapeutic approaches. This work underlines the Centre's commitment to translating scientific discovery into clinical impact.

Overall, the Breast Cancer Programme in 2025 reflects a highly integrated approach spanning discovery science, translational research, and clinical trials. Through strategic investment, national collaboration, and a strong focus on precision oncology, the programme continues to deliver meaningful advances that improve outcomes for patients.

METRICS OVERVIEW

98.3% of all patients diagnosed with Colorectal Cancer were seen within 20 working days of 1st contact with the cancer centre.

88.8% of patients diagnosed elsewhere with Colorectal Cancer were seen within 20 working days of 1st contact with the cancer centre.

91.8% of all patients were definitively diagnosed with Colorectal Cancer within 20 working days of their 1st consultation.

64% of all patients diagnosed with Colorectal Cancer started 1st treatment within 30 working days of definitive diagnosis.

98.3% of all patients with Colorectal Cancer were treated within 30 working days of decision to treat as agreed with the patient, where surgery is the first treatment type.

CANCER DISEASE GROUPS

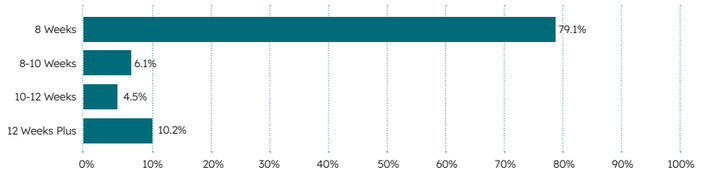
COLORECTAL CANCER CLINICAL PROGRAMME

Table: **Colorectal Cancer Activity 2025**

Activity	Newly Diagnosed	Newly Treated
All Cancers (excl. NCNMSC)	2920	2946
Colorectal Cancer	172	256
Colorectal Cancer as a % of all cancers	5.9%	8.7%
Gender	N	N
Female	68 (39.5%)	106 (41.4%)
Male	104 (60.5%)	150 (58.6%)
Age	Median Age (Range)	Median Age (Range)
Median Age at Diagnosis | Median Age at Treatment	68 (21-96)	67 (21-94)

Figure: **First Contact to Definitive Diagnosis - Colorectal Cancer**

Figure: **First Contact to First Treatment - Colorectal Cancer**



COLORECTAL CANCER RESEARCH PROGRAMME

Colorectal cancer (CRC), encompassing malignancies of the colon and rectum, remains a significant global health challenge. It accounts for approximately 12.7% of all new cancer diagnoses and 12.4% of cancer-related deaths across the European Union, making it the second leading cause of cancer mortality. While incidence rates continue to rise modestly, only limited improvements in mortality have been achieved, underscoring the urgent need for more effective and targeted therapeutic approaches, particularly for treatment-resistant disease.

Beaumont RCSI Cancer Centre
Cancer Activity and Research Report 2025

At the Beaumont RCSI Cancer Centre, the Colorectal Cancer Research Programme is advancing innovative strategies for the classification and treatment of CRC. Leveraging cutting-edge methodologies in systems biology and machine learning, our researchers are integrating bioinformatics, multi-omics data, and AI-driven modelling to develop next-generation prognostic tools and precision therapeutics.

A key research focus is on CRC therapeutic resistance. Professors Jochen Prehn and John Burke have reported that the serine-arginine protein kinase 1 (SRPK1) is under-expressed in mucinous colorectal cancer, and may mediate resistance to oxaliplatin (Duggan et al Pharmacogenomics J, 2025). Additional emphasis is placed on the phosphatidylinositol-3-kinase (PI3K) and mitogen activated protein kinase (MAPK) signalling pathways. Professor Bryan Hennessy and Dr Sinead Toomey have shown that inhibition of these pathways can enhance chemoradiotherapy in locally advanced rectal cancer (Carr et al Cancer Treat Res Commun, 2025).

Clinical research remains a central pillar of the programme. Led by Prof Adrian Murphy, the MOUNTAINEER-03 trial is a pivotal Phase III study evaluating tucatinib in combination with trastuzumab and modified FOLFOX chemotherapy versus standard-of-care treatment in patients with HER2-positive, RAS wild-type metastatic CRC. This study builds on the success of the earlier MOUNTAINEER trial, which supported FDA approval of tucatinib and trastuzumab in previously treated HER2-positive metastatic CRC. HER2-targeted therapies continue to represent a rapidly evolving area, with agents such as trastuzumab deruxtecan and zanidatamab demonstrating promising efficacy in early-phase studies.

In parallel, Dr Karl Ewins is leading the Phase III MAGNOLIA trial, evaluating the novel anticoagulant abelacimab compared with standard low molecular weight heparin in patients with venous thromboembolism associated with gastrointestinal and genitourinary cancers.

METRICS OVERVIEW

100% of all patients diagnosed with Gynaecological Cancer were seen within 20 working days of 1st contact with the cancer centre.

88.3% of all patients were definitively diagnosed with Gynaecological Cancer within 20 working days of their 1st consultation.

70% of all patients diagnosed with Gynaecological Cancer started 1st treatment within 30 working days of definitive diagnosis.

CANCER DISEASE GROUPS

GYNAECOLOGICAL CANCER CLINICAL PROGRAMME

Table: **Gynaecological Cancer Activity 2025**

Activity	Newly Diagnosed	Newly Treated
All Cancers (excl. NCNMSC)	2920	2946
Gynaecological Cancer	34	14
Gynaecological Cancer as a % of all cancers	1.2%	0.5%
Gender	N	N
Female	34	14
Male	-	-
Age	Median Age (Range)	Median Age (Range)
Median Age at Diagnosis | Median Age at Treatment	62 (46-91)	61 (47-82)

Figure: **First Contact to Definitive Diagnosis - Gynaecological Cancer**

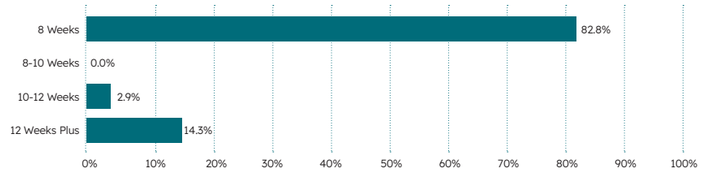
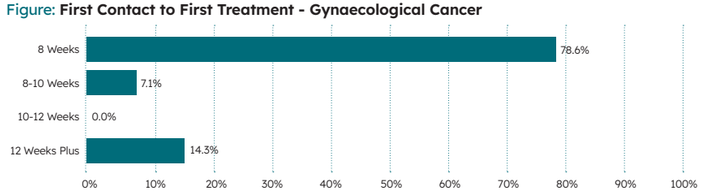


Figure: **First Contact to First Treatment - Gynaecological Cancer**



GYNAECOLOGICAL CANCER RESEARCH PROGRAMME

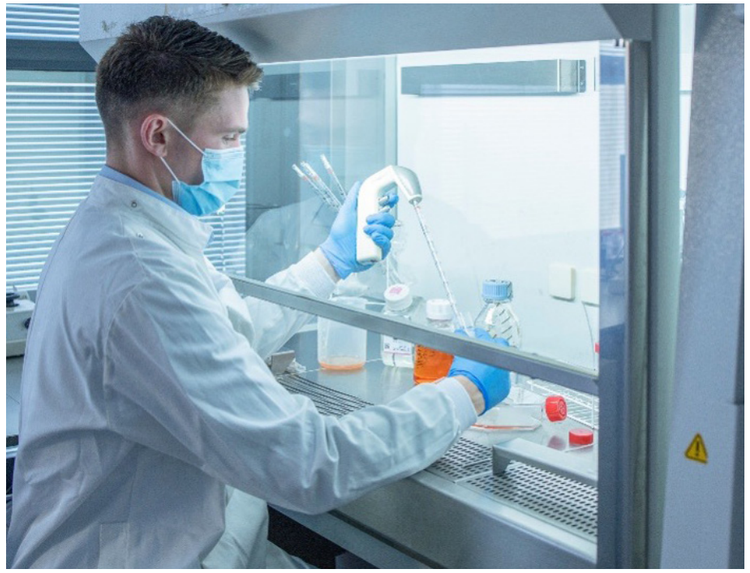
The Gynaecological Cancer Programme, led by Professors Bryan Hennessy and Tracy Robson, integrates translational and clinical research to address critical unmet needs in women's cancers.

Beaumont RCSI Cancer Centre
Cancer Activity and Research Report 2025

Ovarian cancer remains a major cause of cancer-related mortality worldwide, ranking as the eighth leading cause of cancer death in women, with over 324,000 new cases diagnosed each year. Despite advances in treatment, five-year survival rates remain low, ranging from 20% to 40%. High-grade serous ovarian cancer (HGSOC), which accounts for approximately 60–80% of epithelial ovarian cancers, typically demonstrates an initial response to platinum- and taxane-based chemotherapy. However, up to 70% of patients relapse, and recurrent disease is largely incurable, highlighting the urgent need for novel therapeutic strategies.

A key challenge in ovarian cancer research is the accurate modelling of HGSOC. Long-term culture of traditional cell lines can lead to genetic drift, reducing their translational relevance. Addressing this, Prof Hennessy and colleagues have conducted comprehensive analyses of ovarian cancer cell lines, examining mutational profiles, histological origin, and chromosomal copy number variation. Their findings, published in Molecular Biology Reports, emphasise the importance of incorporating chromosomal copy number and mutational profiling alongside standard short tandem repeat (STR) fingerprinting as a new benchmark for cell line validation.

Researchers at the Beaumont RCSI Cancer Centre have played a leading role in the development of novel therapeutics targeting angiogenesis and tumour biology. A first-in-class FKBPL-derived anti-angiogenic peptide, ALM201, has progressed to Phase Ia clinical evaluation and has received FDA Orphan Drug Designation for the treatment of ovarian cancer based on its favourable safety profile and promising efficacy signals. Prof Tracy Robson has received funding under a Research Ireland Partnership Programme, POI 2 to study the role of FKBPL in ovarian cancer. In collaboration with Phion Therapeutics, current work is focused on utilising the full FKBPL protein



Mr Stephen Keelin, SpR Surgery, RCSI Haematological Cancer Clinical Programme

to overcome pharmacokinetic limitations associated with peptide-based therapies. Preclinical studies demonstrate that this gene therapy approach can effectively penetrate difficult-to-access tumour environments, including chemoresistant cell populations within ascitic fluid. Prof Robson was awarded the Irish Association for Cancer Research Outstanding Contribution to Cancer Medicine & Research Award (2025) for this work.

Ongoing research is focused on elucidating the molecular mechanisms underlying these effects and advancing precision medicine approaches. Patient-derived xenograft (PDX) models are currently being established to identify patient subgroups most likely to benefit from this therapy, supporting the development of predictive biomarkers. This innovative approach is supported by granted patents in both Europe and the United States.

Beaumont RCSI Cancer Centre
Cancer Activity and Research Report 2025

METRICS OVERVIEW

77.1% of all patients diagnosed with Haematological Cancer were seen within 20 working days of 1st contact with the cancer centre.

81.7% of patients diagnosed elsewhere with Haematological Cancer were seen within 20 working days of 1st contact with the cancer centre.

90.7% of all patients were definitively diagnosed with Haematological Cancer within 20 working days of their 1st consultation.

68% of all patients diagnosed with Haematological Cancer started 1st treatment within 30 working days of definitive diagnosis.

CANCER DISEASE GROUPS

HAEMATOLOGICAL CANCER CLINICAL PROGRAMME

Table: **Haematological Cancer Activity 2025**

Activity	Newly Diagnosed	Newly Treated
All Cancers (excl. NCNMSC)	2920	2946
Haematological Cancer	250	262
Haematological Cancer as a % of all cancers	8.6%	8.9%
Gender	N (%)	N (%)
Female	99 (39.7%)	110 (42.0%)
Male	151 (60.4%)	152 (58%)
Age	Median Age (Range)	Median Age (Range)
Median Age at Diagnosis | Median Age at Treatment	68 (16-91)	67 (16-94)

Figure: **First Contact to Definitive Diagnosis - Haematological Cancer**

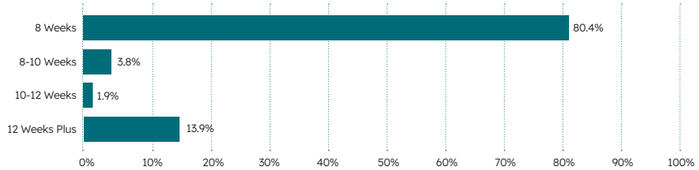
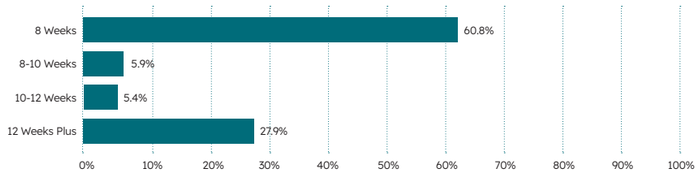


Figure: **First Contact to First Treatment - Haematological Cancer**



HAEMATOLOGICAL CANCER RESEARCH PROGRAMME

Haematological malignancies are cancers originating in blood-forming tissues. There has been a large increase in haematological malignancy clinical trial activity in Beaumont RCSI Cancer Centre in the last number of years. These trials include a study led by Professor Siobhán Glavey, which evaluates genomic risk of Multiple Myeloma (MM) at diagnosis and provides state-of-the-art prognostics testing,

enabling greater planning and facilitating clinical trials in this space in Ireland. There are also open clinical trials in other haematological cancers including CLL and lymphoma.

Prof Siobhán Glavey's research team received significant recognition for its research excellence and academic achievements during 2025, including an oral presentation at the European Society of Haematology, Vienna, April 2025. Dr Catherine Duane was invited to present her research at several prestigious national and international meetings throughout 2025, including American Society of Haematology (ASH) Annual Conference Presentation 2025; Irish Multiple Myeloma Society Inaugural National Meeting 2025: Guest speaker. Presentation entitled "Extramedullary Disease in the Era of Cellular and Immunotherapies"; Haematology Association of Ireland National Meeting 2025: President's Symposium Presentation; Oxford University Myeloma Network (OMN) Annual Meeting: Guest Speaker. Dr Catherine Duane received an ICAT Research Award 2025 in recognition of the successful completion of her International Clinical Academic Fellowship training in Cellular Therapies for Haematological Malignancy at Dana-Farber Cancer Institute. At the Haematology Association of Ireland meeting, Dr Duane was presented with the President's Award. This represents the second consecutive year in which the Myeloma Research Group received this prestigious honour, reflecting the team's continued dedication, excellence, and high-quality research output.

Prof Tríona Ní Chonghaile, in collaboration with Prof Glavey, attained funding from Precision Oncology Ireland-02 with financial support from Multiple Myeloma Ireland to investigate sensitivity to antibody drug conjugated drugs in MM. A postdoctoral fellow, Ludovica Di Martino, won the John Fitzpatrick oral presentation prize at the Irish Association of Cancer research meeting 2025. Matthew Hiller, a Fulbright PhD student, joined the lab to work on metabolism in multiple myeloma and recently ran the Paris

Professor Tríona Ní Chonghaile, Associate Professor Department of Physiology and Medical Physics

Marathon to raise funding for Multiple Myeloma Ireland. His research was selected for oral presentation at the Haematology Association of Ireland meeting (Oct 2025). Prof Ní Chonghaile was invited to present at the European Society of Hematology-ALL May 2025; Forebeck Forum in Dublin September 2025 and the BEAT-IT forum in Innsbruck, Austria December 2025.

Research from Professors Ann Hopkins and Siobhán Glavey was invited for oral presentation at the European School of Haematology "How to diagnose and treat multiple myeloma" conference (April 2025, Austria); and was awarded the prize for best scientific oral presentation at the Haematology Association of Ireland annual meeting (Dr Niamh McAuley). Other work was presented at the International Myeloma Society annual meeting (September 2025, Canada), the American Society of Hematology annual meeting (December 2025, Florida) and was shortlisted for the Patrick Johnston Award at the Irish Association for Cancer Research annual meeting. Dr Jamie Sullivan, was recently awarded an Irish Research Council Laureate award to study thrombosis in multiple myeloma in collaboration with Professor Glavey. Findings to date suggest that coagulation activation not only promotes thrombosis but may also contribute to disease progression and drug resistance. The increasing national and international recognition of the programme reflects both the growth of research capacity and the continued expansion of investigator-led clinical and translational research activities within this disease group.

METRICS OVERVIEW

76% of all patients diagnosed with Head & Neck Cancer were seen within 20 working days of 1st contact with the cancer centre.

93% of patients diagnosed elsewhere with Head & Neck Cancer were seen within 20 working days of 1st contact with the cancer centre.

73% of all patients were definitively diagnosed with Head & Neck Cancer within 20 working days of their 1st consultation.

30% of all patients diagnosed with Head & Neck Cancer started 1st treatment within 6 weeks of definitive diagnosis.

77% of all patients with Head & Neck Cancer were treated within 6 weeks of decision to treat as agreed with the patient, where surgery is the first treatment type.

CANCER DISEASE GROUPS

HEAD AND NECK CANCER CLINICAL PROGRAMME

Table: **Head and Neck Cancers Activity 2025**

Activity	Newly Diagnosed	Newly Treated
All Cancers (excl. NCNMSC)	2920	2946
Head and Neck Cancers	186	206
Head and Neck Cancers as a % of all cancers	6.4%	7.0%
Gender	N (%)	N (%)
Female	57 (30.7%)	59 (28.6%)
Male	129 (69.3%)	147 (71.4%)
Age	Median Age (Range)	Median Age (Range)
Median Age at Diagnosis | Median Age at Treatment	63 (21-95)	62 (21-95)

Figure: **First Contact to Definitive Diagnosis - Head & Neck Cancers**

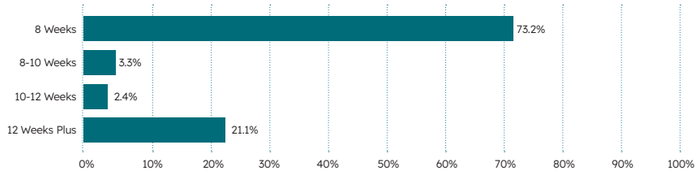
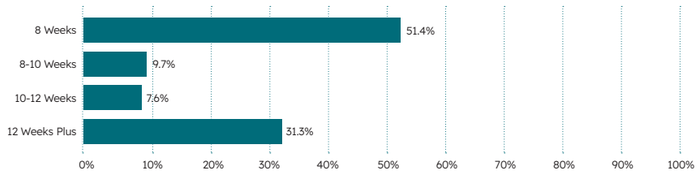


Figure: **First Contact to Definitive Diagnosis - Head & Neck Cancers**



HEAD AND NECK CANCER RESEARCH PROGRAMME

Head and neck cancer encompasses a diverse group of diseases affecting various anatomical sites, including the nasopharynx, oropharynx, hypopharynx, larynx, oral cavity, salivary glands, nasal cavity and paranasal sinuses. Over 90% of these cancers are squamous cell carcinomas, with less common pathologies such as adenocarcinomas, sarcomas, and mucosal melanomas. The multidisciplinary team is highly developed and serves as a major referral hub for a large geographical area. Beaumont Hospital is also the NCCP designated National Skull Base Cancer Centre, receiving national referrals for skull base pathologies, both benign and malignant. Key to these capabilities is the active plastic surgery group and Beaumont Hospital's status as the National Neurosurgical Department. Patients receive high-quality nursing care through Clinical Nurse Specialists Emma Devoy Flood and Kelsey Waters.

Complex surgeries at the centre are facilitated by close collaboration between head and neck, plastic, and neurosurgeons in the operating theatre. On-site complex and specialised radiotherapy is delivered alongside systemic anticancer therapies. The complex head and cancer work is also facilitated by the multidisciplinary input from highly skilled and subspecialised neuroradiology and histopathology. In recent years, there has been a significant rise in cancers related to the human papillomavirus (HPV). Patients with HPV-related cancers tend to be younger, have fewer comorbidities, and generally have a better prognosis. Given the important role of immunotherapy in many head and neck cancers, clinical trials focusing on immunotherapy alongside other targeted therapies are being actively pursued. Despite these recent therapeutic advances however, Professors Robbie Woods and James P O'Neill reported on the continuing challenges in the treatment of Merkel cell carcinoma (Holley et al Head and Neck, 2025).

Professor James P O'Neill organised the International Federation of Head & Neck Oncologic Societies (IFHNOS) Summit at RCSI in September 2025, the largest gathering of head and neck specialists ever in Ireland, with leading world experts meeting to discuss the latest advancements in head and neck cancer care. The event was opened by the Minister of Health Jennifer Carroll McNeill and President of RCSI Professor Deborah McNamara.

Beaumont RCSI Cancer Centre
Cancer Activity and Research Report 2025

Dr Sudipto Das and Professor Robbie Woods continue international collaboration on an EU-funded TRANSCAN-3 grant, SPELCASTER, to develop and validate an epigenetic classifier to improve speed and accuracy of diagnosis in sinonasal cancers and seek better understanding of tumour progression. Further grant funding has also been awarded to carry out research on HPV-related oropharyngeal cancer, HPV-related sinonasal cancer, and HPV awareness. In December 2025, the head and neck team were also awarded SPARK Access Accelerator funding to purchase channelled scopes and biopsy forceps to perform office-based biopsies on patients, thus removing them from, and thereby reducing, inpatient surgical waiting lists.

In radiation oncology, results from the highly successful OPEN randomised trial were reported and have guided a significant practice change – an open face immobilisation mask is now offered to all patients, with 3mm planning target volume (PTV) and daily cone-beam computed tomography (CBCT) during treatment. A large number of patients in the Centre took part in the trial and improved patient reported outcomes are the primary reason for implementing this change in practice. The trial has garnered international attention as the first of its kind – Professor Sineád Brennan, National PI, Prof. Orla McArdle, local lead investigators. We continue to investigate the outcomes of AI based contouring, the use of individualised patient margins for intrafraction motion and the impact of contouring workshops on target delineation confidence in radiation oncology trainees. Quality improvement initiatives include the development of a rapid 5 day turnaround pathway for radical head and neck cancer treatment with a pilot initiative successfully implemented for eligible patients. Ongoing work on the referral care pathway aims to increase the percentage of patients eligible for this rapid turnaround pathway. Pharyngeal constrictor sparing has also been implemented in the planning protocols with a view to optimising long term swallow function for patients.

Beaumont RCSI Cancer Centre
Cancer Activity and Research Report 2025

METRICS OVERVIEW

95% of all patients diagnosed with Lung Cancer were seen within 20 working days of 1st contact with the cancer centre.

89% of patients diagnosed elsewhere with Lung Cancer were seen within 20 working days of 1st contact with the cancer centre.

70% of all patients were definitively diagnosed with Lung Cancer within 20 working days of their 1st consultation.

63% of all patients diagnosed with Lung Cancer started 1st treatment within 30 working days of definitive diagnosis.

CANCER DISEASE GROUPS

LUNG CANCER CLINICAL PROGRAMME

Table: **Lung Cancer Activity 2025**

Activity	Newly Diagnosed	Newly Treated
All Cancers (excl. NCNMSC)	2920	2946
Lung Cancer	324	247
Lung Cancer as a % of all cancers	11.2%	8.4%
Gender	N (%)	N (%)
Female	163 (50.3%)	123 (49.8%)
Male	161 (49.7%)	124 (50.2%)
Age	Median Age (Range)	Median Age (Range)
Median Age at Diagnosis | Median Age at Treatment	71 (39-96)	71 (39-96)

Figure: **First Contact to Definitive Diagnosis - Lung Cancer**

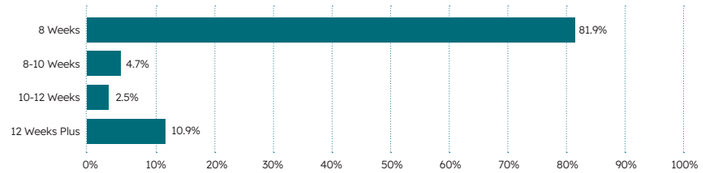
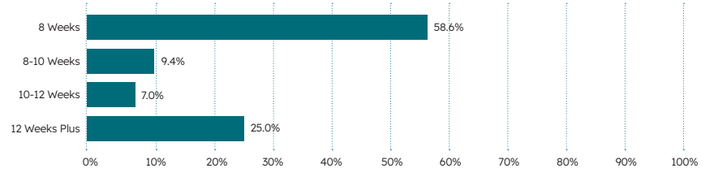


Figure: **First Contact to First Treatment - Lung Cancer**



LUNG CANCER RESEARCH PROGRAMME

The Lung Cancer Research Programme at Beaumont RCSI Cancer Centre has continued to expand significantly into 2025, now comprising a highly collaborative network of over 20 principal investigators. The programme spans basic, translational, and clinical research, with key thematic areas including early detection, biomarker discovery in non-small cell lung cancer (NSCLC), KRAS-mutant NSCLC, immunotherapy, microbiome research, and primary care integration.

Professor Dan Ryan, Professor Jarushka Naidoo, Dr James Ryan, Ms Claire Noonan, Dr Anne Marie Baird, Professor Seamus Cotter, Dr Sandra Roche, Professor Catriona Dowling, Dr Malcolm Herron, Dr David O'Reilly, Professor Emmet O'Brien

Professor Jarushka Naidoo, Consultant Medical Oncologist

The programme has demonstrated strong success in securing competitive research funding. Notably, Professor Imran Sulaiman was awarded a prestigious Health Research Board (HRB) Emerging Investigator Award. In parallel, Dr David O'Reilly has received significant international recognition, including both the American Society of Clinical Oncology (ASCO) Young Investigator Award and the International Association for the Study of Lung Cancer (IASLC) Young Investigator Award.

Professor Jarushka Naidoo, in her role as National Chair for Lung Cancer Clinical Trials through Cancer Trials Ireland, continues to lead the expansion of the national trial portfolio. As of 2025, this includes over a dozen active clinical trials, with more than 250 patients enrolled, reflecting strong national engagement and patient access to innovative therapies. The opening of and ongoing recruitment to neoadjuvant NSCLC trials signals a shift towards earlier, potentially curative treatment strategies. The investigator-initiated ADEPPT trial, evaluating the targeted therapy adagrasib for patients with KRAS G12C-mutant NSCLC, has successfully completed accrual. The investigator-initiated PLAN trial, evaluating the utility of liquid biopsy in NSCLC, completed accrual and enrolled 36 patients (O'Reilly D et al., Eur J Cancer, 2025). This work has received national recognition, including the British Thoracic Oncology Group (BTOG) first prize award for Dr

Beaumont RCSI Cancer Centre
Cancer Activity and Research Report 2025

David O'Reilly. A major development has been the continued expansion of the Beaumont RCSI Irish Cancer Society Lung Health Check programme, launched in 2024 (O'Reilly D et al., BMJ Open Respiratory Research, 2025). As one of Ireland's first large-scale initiatives focused on lung cancer screening and early detection, the programme is helping to identify cancers at an earlier, more treatable stage while generating valuable evidence to inform future national screening policy.

Laboratory-based research continues to complement clinical innovation. Dedicated lung cancer research is being conducted within the Dowling, Hennessy/Toomey, and Sulaiman laboratories, along with the Piskareva and Coppinger laboratories. In particular the Hennessy laboratory is advancing work in exhaled breath biomarkers, contributing to the development of non-invasive diagnostic tools.

Dr. Dowling's research group developed the first lung cancer patient information booklet, Navigating Lung Cancer. This patient led resource was co-created with the Irish Lung Cancer Community, ensuring lived experience shaped its content. A dedicated research programme in lung cancer screening and primary care-based risk modelling, led by Professor Patrick Redmond and colleagues, is strengthening the integration of primary care into early detection pathways and population-level cancer control strategies.

The programme has maintained a strong international presence, with research presented at leading conferences, including IASLC World Conference on Lung Cancer, ESMO, and ASCO. Collectively, the team has produced more than 15 peer-reviewed publications in thoracic oncology, reinforcing the Centre's position as a leader in lung cancer research. Overall, the Lung Cancer Programme in 2025 reflects a dynamic and integrated research environment, delivering advances across early detection, precision medicine, and clinical trials, while continuing to expand national and international impact.

METRICS OVERVIEW

97% of all patients diagnosed with Neuro-oncology were seen within 20 working days of 1st contact with the cancer centre.

90% of patients diagnosed elsewhere with Neuro-oncology were seen within 20 working days of 1st contact with the cancer centre.

92% of all patients were definitively diagnosed with Neuro-oncology within 20 working days of their 1st consultation.

85% of all patients with Neuro-oncology started 1st treatment within 30 working days of definitive diagnosis.

85% of all patients with Neuro-oncology were treated within 30 working days of decision to treat as agreed with the patient, where surgery is the first treatment type.

The median length of stay (LOS) of all patients with Neuro-oncology was 9 days, where surgery is the first treatment type.

CANCER DISEASE GROUPS

NEURO-ONCOLOGY CLINICAL PROGRAMME

Table: **Neuro-oncology Activity 2025**

Activity	Newly Diagnosed	Newly Treated
All Cancers (excl. NCNMSC)	2720	2946
Neuro-oncology	362	328
Neuro-oncology as a % of all cancers	13.2%	11.4%
Gender	N (%)	N (%)
Female	155 (45.6%)	140 (46.1%)
Male	185 (54.4%)	164 (53.9%)
Age	Median Age (Range)	Median Age (Range)
Median Age at Diagnosis | Median Age at Treatment	60 (16-91)	58 (16-91)

Figure: **First Contact to Definitive Diagnosis – Neuro-Oncology**

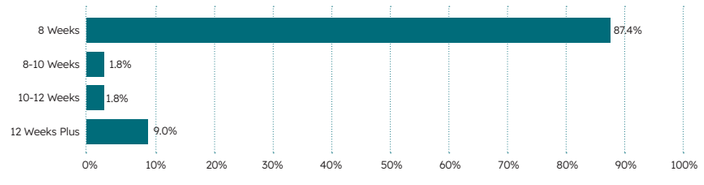
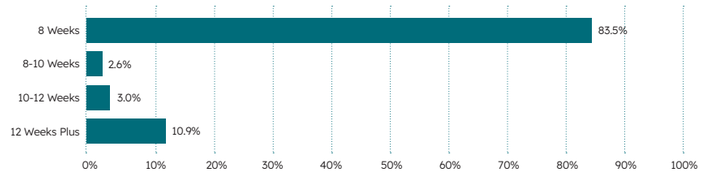


Figure: **First Contact to First Treatment - Neuro-Oncology**



NEURO-ONCOLOGY RESEARCH PROGRAMME

The Neuro-Oncology Programme at Beaumont RCSI Cancer Centre focuses on both primary and secondary brain tumours, delivering an integrated model of translational and clinical research. The programme brings together a multidisciplinary team of basic scientists, neuro-oncologists, neurosurgeons, and neuropathologists within the National Neurosurgical Centre at Beaumont Hospital, enabling seamless translation of research into clinical practice.

The research portfolio has continued to expand into 2025, with a strong emphasis on innovative clinical trials and precision oncology approaches. A key investigator-initiated study, the SABR Spine Trial led by Professor Clare Faul, is advancing national expertise in stereotactic radiotherapy for the central nervous system. This study is evaluating the role of stereotactic ablative radiotherapy (SABR) in the management of spinal tumours, supporting the development of highly targeted treatment strategies. The Blood–Brain Barrier Biomarker Study, led by Professor Donncha O'Brien, continues to progress, integrating advanced MRI imaging, neurocognitive assessment, and biomarker analysis to characterise blood–brain barrier integrity in patients with high-grade glioma. This work aims to improve both diagnostic precision and therapeutic delivery, with strong patient recruitment sustained into 2025.

The programme is a key contributor to major European research initiatives. GLIORESOLVE (www.glioresolve.eu), led by Professor Annette Byrne, is a flagship EU-funded MSCA Doctoral Network focused on developing precision medicine approaches targeting the tumour microenvironment (TME) in glioblastoma. This collaborative effort brings together leading European institutions and early-stage researchers to investigate TME subtype-specific immunotherapies, develop advanced laboratory models, and analyse treatment response using integrated clinical, preclinical, and computational data. Complementing this work, the HRB-funded multi-omics programme led by Prof Byrne, with support from Brain Tumour Ireland, continues to employ integrative modelling approaches to better define glioblastoma TME subtypes. This research is informing next-generation, biomarker-driven clinical trial design. In parallel, Mr Kieron Sweeney is advancing a novel intracranial drug delivery platform aimed at improving targeted therapeutic delivery in glioblastoma, with plans to support a future Phase Ib/II clinical trial incorporating TME-based patient stratification. The programme is also actively involved

Ms Eloise Cowie, CNM3
Neuro-oncology Nurse
Specialist

in international collaborative research, including the EU TRANSCAN-3 PLASTIG project led by Professor Jochen Prehn. This initiative focuses on understanding and overcoming treatment resistance in glioblastoma through multidisciplinary approaches spanning clinical research, bioinformatics, and translational science across multiple European centres.

Engagement with patient advocacy groups remains a core priority. Brain Tumour Ireland continues to play a vital role in supporting research activity and public engagement and continues to support and advise the Brain Tumour Biobank of the BRCC (https://www.rcsi.com/dublin/research-and-innovation/research/resources-and-facilities/biobank/brain-tumour-ireland-biobank). Ongoing collaboration continues to highlight Irish-led research on brain tumour-associated epilepsy, rehabilitation, and patient-centred care pathways.

Clinical capacity within the programme has been further strengthened with the appointment of Consultant Medical Oncologist Dr Min Yuen Teo. Efforts are underway to expand the clinical trials portfolio, including the development of investigator-initiated studies in glioblastoma. Several feasibility assessments for molecularly stratified therapies in glioma have been completed, with new trials anticipated to open in 2026.

Overall, the Neuro-Oncology Programme in 2025 reflects a highly collaborative and innovation-driven environment, advancing precision medicine, strengthening international partnerships, and enhancing clinical trial access for patients with complex brain tumours.

Beaumont RCSI Cancer Centre
Cancer Activity and Research Report 2025

METRICS OVERVIEW

41.8% of all patients diagnosed with Skin Cancer were seen within 20 working days of 1st contact with the cancer centre.

87.4% of patients diagnosed elsewhere with Skin Cancer were seen within 20 working days of 1st contact with the cancer centre.

72.5% of all patients were definitively diagnosed with Skin Cancer within 20 working days of their 1st consultation.

55% of all patients diagnosed with Skin Cancer started 1st treatment within 30 working days of definitive diagnosis.

89.2% of all patients with Skin Cancer were treated within 30 working days of decision to treat as agreed with the patient, where surgery is the first treatment type.

CANCER DISEASE GROUPS

SKIN CANCER CLINICAL PROGRAMME

Table: **Skin Cancer Activity 2025**

Activity	Newly Diagnosed	Newly Treated
All Cancers (excl. NCNMSC)	2920	2946
Skin Cancer	292	457
Skin Cancer as a % of all cancers	10.1%	15.5%
Gender	N (%)	N (%)
Female	118 (40.4%)	199 (43.5%)
Male	174 (59.6%)	258 (56.5%)
Age	Median Age (Range)	Median Age (Range)
Median Age at Diagnosis | Median Age at Treatment	73 (22-99)	72 (19-99)

Figure: **First Contact to Definitive Diagnosis – Skin Cancer**

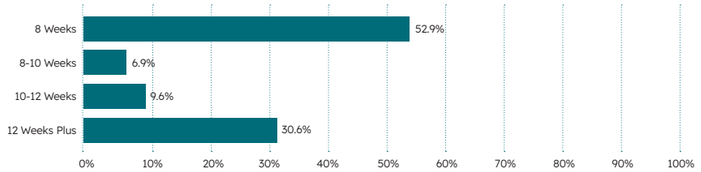
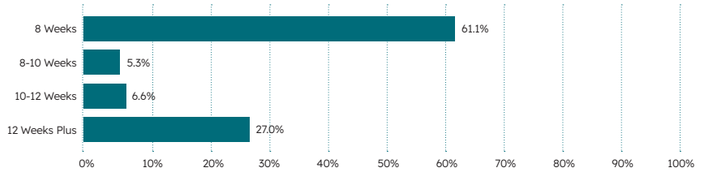


Figure: **First Contact to First Treatment – Skin Cancer**



SKIN CANCER RESEARCH PROGRAMME

The Skin Cancer Programme at Beaumont RCSI Cancer Centre continues to advance both clinical and translational research, with a strong focus on improving outcomes for patients receiving immunotherapy.

The median length of stay (LOS) of all patients with Skin Cancer was 0 days, where surgery is the first treatment type. Many of these cancers are surgically treated as day cases and do not require an overnight stay in the hospital

Beaumont RCSI Cancer Centre
Cancer Activity and Research Report 2025

A central area of investigation is the identification and management of cutaneous immune-related adverse events (irAEs) in patients with malignant melanoma treated with immune checkpoint inhibitors (ICIs). While ICIs have transformed cancer care, their use can be associated with a spectrum of immune-mediated toxicities that significantly impact patient quality of life and, in severe cases, may necessitate treatment interruption or discontinuation. Building on developments in 2024, biologic therapies such as dupilumab are increasingly being evaluated in 2025 as effective steroid-sparing options for patients with moderate to severe or treatment-resistant cutaneous irAEs.

The programme's research extends beyond melanoma to include patients with a range of malignancies receiving ICI therapy. A comprehensive immunotherapy database has been established and continues to expand, capturing detailed information on treatment regimens, timelines, progression-free and overall survival, as well as the incidence and characteristics of cutaneous irAEs. As of 2025, this database includes over 300 patients, including more than 120 with malignant melanoma. This resource is enabling detailed retrospective analyses to identify patterns, risk factors, and potential predictors of irAEs. Emerging findings highlight the importance of specialist dermatological input and standardised reporting frameworks to improve diagnostic accuracy and optimise patient management. Supported by an educational grant from the Irish Association of Dermatologists, this work aims to inform future strategies through the identification of clinically relevant biomarkers and predictive factors.

Professor Jarushka Naidoo continues to lead GAMBIT, an observational study investigating the interplay between host microbiome, genomic and immunological factors, and clinical outcomes in patients treated with ICIs. Recruitment to this study has continued into 2025, building on initial enrolment across patients with melanoma and other tumour

types, and contributing to a deeper understanding of response and toxicity to immunotherapy.

The clinical trials portfolio in skin cancer remains active and evolving. Professor Jarushka Naidoo reported on the implementation of neoadjuvant immunotherapy in stage III melanoma, in a modified Delphi consensus study (Cronin et al., Oncologist, 2025). The Regeneron 2055 trial, evaluating the combination of the anti-LAG-3 monoclonal antibody fianlimab with the anti–PD-1 agent pembrolizumab, achieved its recruitment targets, reflecting strong patient engagement and trial delivery. Insights from this and similar studies are contributing to the optimisation of combination immunotherapy strategies.

The KEYVIBE-010 trial, which examined vibostolimab (an anti-TIGIT antibody) in combination with pembrolizumab, was discontinued in 2024 following interim analysis indicating a low likelihood of meeting its primary endpoint of recurrence-free survival. Despite this, TIGIT-targeted therapies remain an area of active investigation, with ongoing studies in other tumour types, including lung cancer.

Overall, the Skin Cancer Programme in 2025 demonstrates a strong integration of clinical research, translational science, and patient-focused innovation, with a particular emphasis on improving the safety, effectiveness, and personalisation of immunotherapy.

Beaumont RCSI Cancer Centre
Cancer Activity and Research Report 2025

METRICS OVERVIEW

87% of all patients diagnosed with Upper GI Cancer were seen within 20 working days of 1st contact with the cancer centre.

91% of patients diagnosed elsewhere with Upper GI Cancer were seen within 20 working days of 1st contact with the cancer centre.

87% of all patients were definitively diagnosed with Upper GI Cancer within 20 working days of their 1st consultation.

30% of all patients diagnosed with Upper GI Cancer started 1st treatment within 30 working days of definitive diagnosis.

96% of all patients with Upper GI Cancer were treated within 30 working day of decision to treat as agreed with the patient, where surgery is the first treatment type.

The median length of stay (LOS) of all patients with Upper GI Cancer was 11 days, where surgery is the first treatment type.

CANCER DISEASE GROUPS

UPPER GASTROINTESTINAL CANCER CLINICAL PROGRAMME

Table: **Upper Gastro-intestinal (UGI) Cancer Activity 2025**

Activity	Newly Diagnosed	Newly Treated
All Cancers (excl. NCNMSC)	2920	2946
Upper GI Cancer	196	236
Upper GI Cancer as a % of all cancers	6.8%	8.0%
Gender	N (%)	N (%)
Female	62 (31.6%)	82 (34.8%)
Male	134 (68.4%)	154 (62.2%)
Age	Median Age (Range)	Median Age (Range)
Median Age at Diagnosis | Median Age at Treatment	68 (20-90)	68 (30-91)

Figure: **First Contact to Definitive Diagnosis Timeframes**

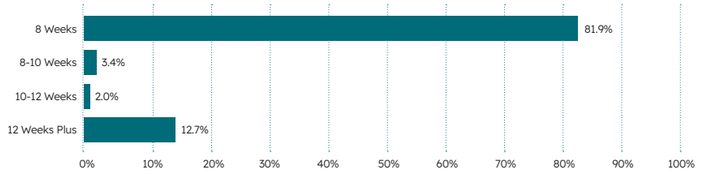
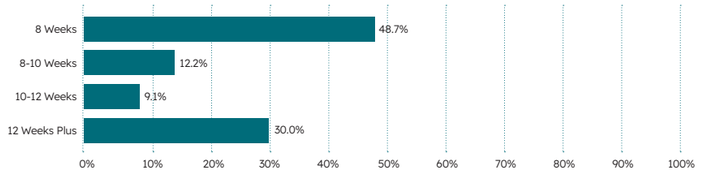


Figure: **First Contact to First Treatment Timeframes**



UPPER GASTROINTESTINAL CANCER CLINICAL PROGRAMME

Upper gastrointestinal (GI) cancers encompass malignancies of the oesophagus, stomach, liver, biliary tract, and pancreas, and remain a significant clinical challenge due to their complexity and often late presentation. At the Beaumont RCSI Cancer Centre, the Upper GI Cancer Programme integrates translational research, surgical innovation, and clinical trials to improve outcomes for these patients.

Research led by Professor Tracy Robson and Dr Stephanie Annett continues to focus on the molecular mechanisms linking immunophilins, obesity, and oesophageal cancer, advancing understanding of disease development and progression. Parallel work is exploring the role of immunophilins in hepatocellular carcinoma, contributing to broader insights into liver cancer biology and potential therapeutic targets.

The Centre continues to lead impactful clinical research in perioperative care (Barman et al., Cancers (Basel), 2025). The PERIOPOG trial, investigating prehabilitation and rehabilitation strategies in patients undergoing surgery for oesophageal and gastric cancers, has demonstrated significant benefits of structured preoperative exercise programmes. These findings were combined with outcomes from three other RCTs in the UK, with results published in Cancers. This further strengthens the evidence base for prehabilitation in oesophagogastric malignancy.

Clinical capacity and surgical innovation have been further strengthened following the appointment of Professor Jarlath Bolger, who joined the Centre from the University Health Network and the University of Toronto. His expertise in minimally invasive and robotic-assisted oesophagogastric surgery has supported the continued expansion of the Centre's robotic surgery programme—the first and largest of its kind in Ireland (Davey et al., Eur J Surg Oncol, 2025). By 2025, more than 100 patients have benefitted from robotic-assisted upper GI cancer surgery, reflecting the Centre's leadership in adopting advanced surgical techniques to improve patient outcomes. Prof Bolger was selected to give the prestigious 48th Millin Lecture in the RCSI on the theme of personalisation of therapies in oesophageal cancer.

Service development remains a key priority with the appointment of Advanced Nurse Practitioner Ms Wendy Hickey and Professor Danny Cheriyan. The clinical programme has now delivered over 60 endoscopic

Beaumont RCSI Cancer Centre
Cancer Activity and Research Report 2025

Professor Danny Cheriyan, Consultant Gastroenterologist

submucosal resections, enabling organ-preserving treatment approaches and reducing the need for more invasive surgical interventions in selected patients. The clinical trials portfolio remains active across upper GI malignancies. The DESTINY-Gastric04 trial, led by Professor Patrick Morris, continues to evaluate trastuzumab deruxtecan (T-DXd) in gastric cancer, contributing to the evolving landscape of targeted therapies. In addition, Dr Karl Ewins leads the Phase III MAGNOLIA trial, investigating the novel anticoagulant abelacimab compared with standard low molecular weight heparin in patients with cancer-associated venous thromboembolism, including those with gastrointestinal cancers.

Looking ahead, the programme continues to prioritise the development of interventional studies focused on surgery, prehabilitation, and rehabilitation, further strengthening its integrated and patient-centred approach.

Overall, the Upper Gastrointestinal Cancer Programme in 2025 reflects a dynamic and multidisciplinary effort, combining scientific discovery, technical innovation, and clinical excellence to improve outcomes for patients with complex GI malignancies.

METRICS OVERVIEW

71% (inc. Prostate) and **66%** (exc. Prostate) of all patients diagnosed with Urological Cancers were seen within 20 working days of 1st contact with the cancer centre.

70% (inc. Prostate) and **82%** (exc. Prostate) of all patients diagnosed elsewhere with Urological Cancers were seen within 20 working days of 1st contact with the cancer centre.

29% (inc. Prostate) and **58%** (exc. Prostate) of all patients were definitively diagnosed with Urological Cancers within 20 working days of their 1st consultation.

53% (inc. Prostate) and **87%** (exc. Prostate) of all patients diagnosed with Urological Cancers started 1st treatment within 30 working days of definitive diagnosis.

The median length of stay (LOS) of all patients with Urological Cancers was 5 days (inc. Prostate) and 2 days (exc. Prostate), where surgery is the first treatment type.

CANCER DISEASE GROUPS

UROLOGICAL CANCER CLINICAL PROGRAMME

Table: **Urological Cancer Activity 2025**

Activity	Newly Diagnosed	Newly Treated
All Cancers (excl. NCNMSC)	2920	2946
Urological Cancers	637	489
Urological Cancers as a % of all cancers	22.0%	16.6%
Gender	N (%)	N (%)
Female	58 (9.1%)	64 (13.1%)
Male	579 (90.9%)	425 (86.9%)
Age	Median Age (Range)	Median Age (Range)
Median Age at Diagnosis | Median Age at Treatment	67 (19-92)	68 (19-92)

Figure: **First Contact to Definitive Diagnosis – Urological Cancers**

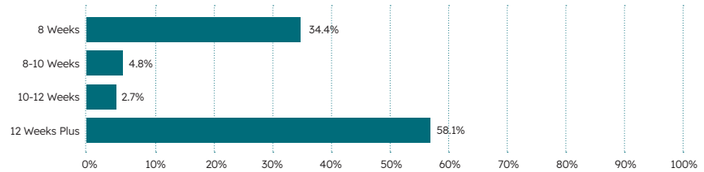
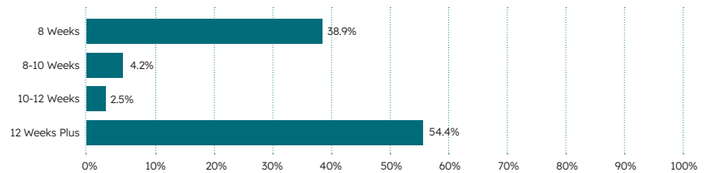


Figure: **First Contact to First Treatment – Urological Cancers**



UROLOGICAL CANCERS CLINICAL PROGRAMME

Urological cancers encompass a diverse group of malignancies originating in the kidney, bladder, renal pelvis, prostate, testis, and penis. The Urological Cancer Research Programme at the Beaumont RCSI Cancer Centre continues to lead efforts across this spectrum, integrating advanced diagnostics, radiotherapy, and clinical trials.

A key development was the appointment of Dr Min Yuen Teo as a medical oncologist with special interest in urological cancer. Dr Teo returns to Ireland after 10 years in Memorial Sloan Kettering with a wealth of experience and particular subspecialty expertise in bladder cancer. He is actively pursuing grant opportunities to develop the research portfolio. Key feasibilities have been completed for trials in prostate cancer involving novel androgen receptor pathway inhibitors and antibody drug conjugates. In 2025, he opened the phase III ReCHARGE trial, which is examining a novel androgen receptor pathway inhibitor in prostate cancer. In addition, he is leading the SGNDV-001 trial, which is a Phase III study evaluating the combination of the antibody drug conjugate disitamab vedotin with pembrolizumab as a first-line treatment for locally advanced or metastatic HER2-positive urothelial cancer. This is an important study as it represents the first clinical trial of an investigational medicinal product in prostate cancer.

Dr Min Yuen Teo , Consultant Medical Oncologist, Beaumont Hospital

The Prostate Advances in Comparative Evidence (PACE) trial is a landmark series of 4 international, multicentre, Phase III randomised controlled studies evaluating hypofractionated Stereotactic Ablative Radiotherapy (SABR) for localised prostate cancer. At the Beaumont RCSI Cancer Centre, this trial is led by Professor Brian O'Neill, with a focus on organ-confined disease.

Key 2025 updates include the PACE-B trial which has confirmed that five-fraction SABR is non-inferior to conventional radiotherapy in terms of cancer control, with 95.8% of patients remaining free from biochemical or clinical failure at five years, (Tree et al., Lancet Oncology, 2025). Now this schedule is available as a standard a care for localised prostate cancer.

The PACE-NODES trial has now completed recruitment. This trial compares SABR to the prostate alone versus SABR to both the prostate and pelvic lymph nodes for patients with high-risk localised prostate cancer. Initial toxicity results are expected in 2026.

Prostate SABR offers a shorter treatment duration, improving patient convenience and reducing healthcare system burden, though it is associated with slightly higher genitourinary toxicity. A new All-Ireland trial, the 'INSPIRE' trial will be open for recruitment in 2026. Professor O'Neill is co-Chief Investigator. This trial will recruit 136 patients. All patients will receive prostate SABR with a focus on reduction in side-effects, especially urinary but also bowel and sexual. A gel spacer between the prostate and rectum is implanted pre-treatment under local anaesthetic for all patients, this greatly reduces risks of GI side-effects such as bleeding.

Beaumont RCSI Cancer Centre
Cancer Activity and Research Report 2025

METRICS OVERVIEW

90% of all patients diagnosed with Endocrine Cancer or Soft Tissue Sarcoma were seen within 20 working days of 1st contact with the cancer centre.

100% of patients diagnosed elsewhere with Endocrine Cancer or Soft Tissue Sarcoma were seen within 20 working days of 1st contact with the cancer centre.

82% of all patients were definitively diagnosed with Endocrine Cancer or Soft Tissue Sarcoma within 20 working days of their 1st consultation.

70% of all patients diagnosed with Endocrine Cancer or Soft Tissue Sarcoma started 1st treatment within 30 working days of definitive diagnosis.

100% of all patients with Endocrine Cancer or Soft Tissue Sarcoma were treated within 30 working days of decision to treat as agreed with the patient, where surgery is the first treatment type.

CANCER DISEASE GROUPS

ENDOCRINE CANCER AND SOFT TISSUE SARCOMA CLINICAL PROGRAMME

Table: **Endocrine Cancer & Soft Tissue Sarcoma Activity 2025**

Activity	Newly Diagnosed	Newly Treated
All Cancers (excl. NCNMSC)	2920	2946
Endocrine Cancer & Soft Tissue Sarcoma	13	18
Endocrine Cancer & Soft Tissue Sarcoma as a % of all cancers	0.4%	0.6%
Gender	N (%)	N (%)
Female	5 (38.5%)	8 (44.4%)
Male	8 (61.5%)	10 (55.6%)
Age	Median Age (Range)	Median Age (Range)
Median Age at Diagnosis | Median Age at Treatment	65 (27-83)	64 (27-83)

Figure: **First Contact to Definitive Diagnosis – Endocrine and Soft Tissue Sarcoma**

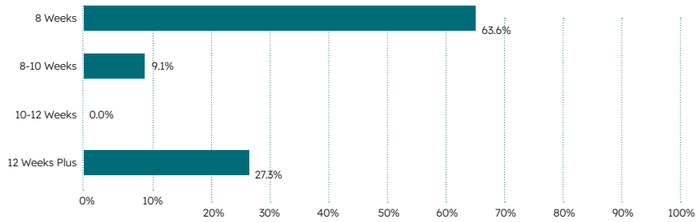
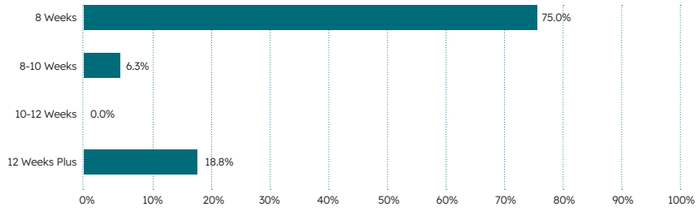


Figure: **First Contact to First Treatment – Endocrine and Soft Tissue Sarcoma**



CANCER DISEASE GROUPS

ENDOCRINE AND PAN CANCER RESEARCH PROGRAMME

The Androgens in Health and Disease working group (https://androgensinhealthanddisease.eu/) at Beaumont RCSI Cancer Centre delivers a cohesive translational research programme spanning a range of endocrine and metabolic disorders, with a significant cancer research component focused on endocrine resistance in breast cancer, integrating mechanistic laboratory studies with clinically relevant models and patient-linked datasets. A central theme of recent activity has been the redefinition of androgen receptor (AR) biology beyond its classical nuclear role, with a review in The Journal of Steroid Biochemistry and Molecular Biology highlighting the importance of extra-nuclear and cytoplasmic steroid receptor signalling in driving tumour progression and therapeutic escape. Building on this, subsequent work has shown that subcellular localisation of AR is a critical determinant of outcome, with enrichment of cytoplasmic AR associated with adverse

Beaumont RCSI Cancer Centre
Cancer Activity and Research Report 2025

prognosis and metabolic adaptation in endocrine-resistant disease reported in npj Breast Cancer. These findings collectively represent a significant conceptual advance, highlighting non-genomic signalling and tumour metabolic reprogramming as key mechanisms underpinning resistance to endocrine therapy.

In parallel, the group has strengthened its translational pipeline through the development of innovative experimental platforms, including the application of 3D bioprinting approaches to model breast cancer in physiologically relevant contexts (Agbana et al, Endocrinologist, 2025). These models enable detailed interrogation of androgen-driven tumour biology, incorporating structural and steroid receptor complexity that more closely reflects the in vivo setting, thereby enhancing the clinical relevance of experimental findings. This work has been recognised through recent awards and featured research outputs, reflecting both the impact of the programme and the contribution of early-career investigators to advancing cancer modelling and therapeutic discovery.

CANCER DISEASE GROUPS

EPIDEMIOLOGY AND PUBLIC HEALTH RESEARCH PROGRAMME

The Epidemiology and Public Health Programme at Beaumont RCSI Cancer Centre continues to play a central role in advancing early cancer detection, screening, and population-level cancer control. Through the Primary Care Research in Cancer (PRiCAN) group, the Centre is leading an applied research programme focused on strengthening cancer detection pathways within primary care settings.

Throughout 2024 and into 2025, several major initiatives have progressed from development to implementation. A key priority has been preparatory work for the Lung Health Check (LHC) clinical trial, supported by funding from the Irish Cancer Society and EU4Health. This innovative study will evaluate the feasibility of delivering low-dose CT screening through mobile units in community settings. In preparation for its 2025 launch, the research team collaborated with general practices within the Centric Health network to assess eligibility among over 30,000 individuals aged 55–74, while also finalising operational and logistical frameworks for screening delivery.

Complementary work in cancer screening includes collaboration with the National Cancer Control Programme (NCCP) to systematically evaluate interventions aimed at improving public awareness of cancer symptoms and encouraging earlier presentation. In parallel, the CRISP-Cancer project has advanced, focusing on the development of structured referral pathways for patients presenting in primary care with non-specific symptoms suggestive of cancer. Co-design workshops and protocol development were completed in late 2024, with participant recruitment commencing in 2025.

Beaumont RCSI Cancer Centre
Cancer Activity and Research Report 2025

PRiCAN continues to contribute to national and European initiatives aimed at strengthening cancer screening programmes. The EU4Health-funded EUCanScreen project, active since mid-2024, supports coordinated implementation of population-based cancer screening strategies across EU member states. Within Ireland, this work is informing the development of risk-based screening approaches and promoting equitable access to early detection services.

In addition, a Health Research Board (HRB)-funded project, Tailoring Lung Cancer Screening for Ireland, commenced in late 2024 and continues into 2025. This study focuses on secondary data analysis to inform policy-relevant modelling of screening eligibility criteria and the anticipated impact on the Irish healthcare system.

Engagement and knowledge dissemination remain core pillars of the programme. Building on the success of the inaugural PRiCAN Symposium hosted at RCSI in 2024, the group continues to foster collaboration between academic, clinical, and community stakeholders, with a strong emphasis on public and patient involvement in research design and implementation. These activities directly support national priorities in early cancer diagnosis, evidence-based screening, and integrated care delivery.

Professor Bennett and colleagues in the School of Population Health conduct cancer research in a number of areas including cancer screening, cancer incidence, survival and cancer survivorship. One initiative focused on the rehabilitation needs of brain tumour survivors which was highlighted at a World Café event in Oct 2025 (www.brainrestore.eu).

Professor Patrick Redmond

The School of Population Health is also active in cancer screening research, working with Bowelcheck and Breastcheck on several projects. A recent study with colleagues in the Centre examined patient perceptions and attitudes towards the use of artificial intelligence (AI) in the symptomatic breast unit. Of over 1500 participants, there were generally favourable views towards the use of AI in healthcare. Participants welcome the use of AI as an adjunct for radiologists, but not as the only tool for reading mammograms (Sing et al., European Radiology, 2025).

The School of Population Health continue to collaborate with colleagues in the National Cancer Registry Ireland (NCRI), Northern Ireland Cancer Registry, and AllCan (All-island oesophageal cancer network). Studies included the examination of the impact of Covid-19 on cancer care and outcomes in Ireland using data from the NCRI and pharmacy claims data from the HSE (Darragh et al., Pharmacoepidemiol Drug Saf., 2025). Most changes in care during Covid-19 were associated with aspects of healthcare disruption and decision making to help mitigate adverse outcome for cancer patients.

Overall, the Epidemiology and Public Health Programme in 2025 reflects a strong, policy-relevant research agenda, delivering actionable evidence to support earlier cancer detection, optimise screening strategies, and improve integration between primary care, public health, and specialist cancer services.

Beaumont RCSI Cancer Centre
Cancer Activity and Research Report 2025

SPOTLIGHT

Professor Arnold Hill, Professor of Surgery and Dean of Medical Programmes, RCSI University of Medicine and Health Sciences, and Consultant Breast Surgeon, Beaumont Hospital.

PROFESSOR ARNOLD HILL

Professor Arnold Hill is one of Ireland's most distinguished general and breast surgeons, serving as Professor and Chair of Surgery at the Royal College of Surgeons in Ireland (RCSI) and Consultant General and Breast Surgeon at Beaumont Hospital. He graduated from University College Dublin in 1988 and completed surgical training in Dublin and London, followed by advanced fellowships in the United States at the Hospital of the University of Pennsylvania and New York Hospital/Cornell Medical Centre. He subsequently completed a Clinical Fellowship in Surgical Oncology at Memorial Sloan Kettering Cancer Centre. This international training established his expertise in breast cancer surgery and underpins his long-standing commitment to integrating translational research with clinical excellence.

Professor Hill is integral to the Beaumont Hospital Breast Service, which diagnoses and treats over 450 new breast cancer cases annually. His clinical and research interests focus on the management of breast cancer, and he has played a central role in the development of the Beaumont RCSI Cancer Centre as a nationally and internationally recognised institution. He serves as National Advisor for Surgical Oncology to the National Cancer Control Programme and is Chairman of Breast Cancer Ireland.

He has supervised over 50 research fellows through their higher degrees. In close collaboration with Professor Leonie Young and the RCSI Endocrine Oncology Research Group, Professor Hill has co-led a national clinical study, the Proteomics and Molecular Heterogeneity study, established in 2006, registered on ClinicalTrials.gov and sponsored by Cancer Trials Ireland, which has recruited more than 4,000 patients. This study underpins cutting-edge research into breast cancer metastasis, including brain metastasis, for which there remain few targeted therapeutic options.

Beaumont RCSI Cancer Centre
Cancer Activity and Research Report 2025

> "Robotic mastectomy represents a transformative step in breast cancer care. Our goal is not only to treat cancer safely, but to fundamentally improve how patients experience that treatment. By combining oncological excellence with minimally invasive robotic techniques, we can preserve form, function, and dignity for our patients in a way that was not previously possible."
>
> Professor Arnold Hill

Professor Hill was instrumental in establishing Ireland's first National Breast Cancer Tissue Bioresource, bringing together leading clinicians and scientists with Cancer Trials Ireland to enable more personalised and targeted treatments. "As a small country we recognise the need for collaborative research in order to gain maximum benefit," he has said. "This initiative will bring together leading national clinicians and scientists, enabling speedier discoveries and ultimately more effective and personalised treatments for patients." Beyond his clinical and research roles, Professor Hill has made a significant impact on surgical education as Dean of Medical Programmes at RCSI. He has championed a new innovative curriculum in RCSI, known as the THEP Program. His work bridges the traditional gap between bench and bedside, and he remains a mentor to a generation of surgical trainees at Beaumont Hospital.

More recently, Professor Hill has led a major advance in Irish breast surgery through the introduction of the first robotic mastectomy programme in Ireland. This pioneering initiative represents a significant step towards minimally invasive breast cancer surgery, positioning Beaumont RCSI Cancer Centre at the forefront of innovation in Europe. To date, over 50 robotic mastectomies have been successfully performed, enabling carefully selected patients with breast cancer and high-risk mutation carriers to undergo mastectomy and axillary surgery through a small, concealed 4 cm incision. This robotic approach allows for unparalleled precision and offers transformative benefits, including preservation of the skin and nipple–areolar complex, improved cosmetic outcomes, and the potential for enhanced postoperative sensation. Thanks to this technique, Women no longer need to suffer the psychological trauma of a mastectomy when they can now preserve their own skin and nipple areolar complex of their breast, while benefiting from an abdominoplasty for their reconstruction.

CLINICAL TRIALS

Mr Keith Egan, Programme Manager and Prof. Patrick Morris, Medical Director Beaumont RCSI Cancer Centre and Medical Director Cancer Clinical Trials Unit

CLINICAL TRIAL ACTIVITY

Clinical trial activity at the Cancer Centre has grown steadily over the past number of years. In 2025 there were 81 open studies, 66 interventional trials and 15 observational studies, with 11.3% of the newly treated patient population on interventional trials. This represents a substantial increase in trial activity over the past number of years. In January 2025, the Centre set up a clinical trial task force under the Cancer Research Executive with the ambition of increasing the number of trials, the number of patients on trial and the breath of trial portfolio within the Centre. Although activity in investigational medicinal products (IMP) trials and radiation studies increased over the year, the vast growth in the number of trials was in academic prospective interventional studies, which emanated from clinical and basic research conducted within the Centre and through national and international collaborations. Enhanced clinical trial activity is largely due to increased scientific – clinical researcher engagement, support for academic studies through mentorship programmes, interaction with the patient partnership programme, streamlining of processes within Contracts, Legal and Ethics departments in the hospital and university, as well as real-time reporting to the Cancer Research Executive through a dedicated cancer research tracker. Clinical trial activity supported by the Cancer Research Executive takes place across disease groups within the Centre. The Cancer Clinical Trials & Research Unit is responsible for IMP studies and radiation studies are conducted in the Radiation Clinical Trials Unit in St Luke's Radiation Oncology Network (SLRON).

All clinical trials are registered on clinicaltrials.gov and have a corresponding NCT number.

Beaumont RCSI Cancer Centre
Cancer Activity and Research Report 2025

CANCER CLINICAL TRIALS & RESEARCH UNIT

The Cancer Clinical Trials and Research Unit (CCTU) remained central to the delivery of high quality cancer clinical trials in 2025, continuing its leadership in investigational medicinal product research across breast, haematological, coagulation and lung cancer in particular. As the fourth year of the HRB clinical research programme grant progressed, a comprehensive gap analysis highlighted strong performance in clinical trial activity, quality improvement and education, while identifying diversity in trial participation as an area requiring targeted action. In response, the clinical trial task force broadened the trial portfolio, supported by new PIs and strengthened academic partnerships, including studies from the CLL German Group and the Dutch Hovon Group. The lung cancer portfolio expanded significantly under Professor Naidoo, with 12 active studies and increasing national referrals linked to her leadership within Cancer Trials Ireland.

A major development in 2025 was the deepening of external collaborations and modernisation of trial infrastructure. In Q1, the academic trials group MEDSIR visited the site, initiating a relationship that progressed to a formal preferred site agreement in late 2025. The CCTU also advanced its transition to electronic site files through Florence e Binders, supported by the appointment of Louise Coleman to the role of Grade VII Clinical Data Management Lead/Quality Improvement Officer in June. Louise has significant experience as clinical data manager and has led the shift away from paper investigator site files. By year end, 17 studies were live on Florence—more than any other Irish site.

In November 2025, another new post of Grade VI Senior Clinical Data Manager was established with a dedicated remit to become a "Study Close Out Specialist." Karl Browne was promoted into this role and brings a wealth of

experience within the CCTU and from previous roles. His newly established role is focusing on streamlining close out processes, improving archiving and archive destruction workflows, and ensuring a seamless transition of studies from active to inactive status. These developments, combined with strengthened collaboration with the Clinical Research Centre (CRC), positioned the unit strongly for the next HRB grant call and supported the cancer centre's progress toward OECI comprehensive cancer centre accreditation.

Throughout 2025, the CCTU reinforced its role as a hub for clinical and translational research on campus, supporting studies across diagnostics, screening, surgical oncology and nurse and HSCP led research. The unit also invested in future workforce development, submitting a proposal for a Grade III Research Intern to commence a six month placement in 2026, with the intention of establishing an annual undergraduate internship. Growth and success across the year were underpinned by the commitment of the entire team—six Clinical Research Nurse Coordinators, five Data Management staff, the Research Assistant and administrative colleagues—whose collective efforts ensured the delivery of high quality research data and an expanding, diverse clinical trials portfolio. Finally, there are plans to develop another Grade VI Data Manager role with focus on study activation in 2026.

CANCER RESEARCH EXECUTIVE

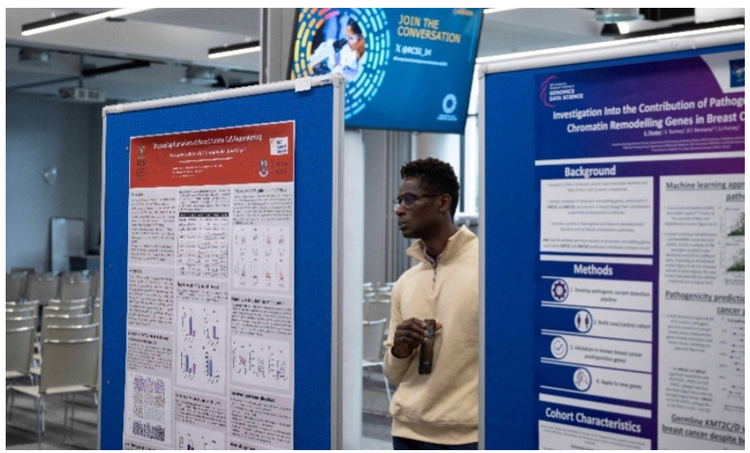
The Cancer Research Executive is responsible for the development and promotion of cancer research at the Beaumont RCSI Cancer Centre. The executive promotes collaboration between researchers in Beaumont Hospital, St. Luke's Radiation Oncology Network (SLRON) and the Royal College of Surgeons in Ireland (RCSI). The multi-disciplinary team identifies barriers to the development of cancer research in the centre and instigates creative

Beaumont RCSI Cancer Centre
Cancer Activity and Research Report 2025

solutions. The ultimate goal of the executive is to ensure the cancer centre meets and develops the OECI research standards, placing the centre in a competitive position for comprehensive status. The group has a strategic aim to expand the scope of research to include investigators who have not traditionally participated in research. A significant marker of success of increased collaboration is the finding that the percentage of newly treated patients enrolled on interventional trials rose from 4.5% in 2024 to 11.3% in 2025. This equates to 327 patients recruited to interventional trials in 2025. Importantly, these interventional trials span the scope of trials from phase Ib to III. Of the 66 open interventional trials in 2025, 38 were academically initiated and in 20 trials a Principal Investigator from the Beaumont RCSI Cancer Centre held a leadership role.

CLINICAL CANCER RESEARCH EXECUTIVE

The Clinical Cancer Research Executive provides oversight of clinical trial research related to the Cancer Centre and aims to expedite the process of interventional clinical trials. All members of the clinical cancer research executive are members of the cancer research executive, which has increasingly taken on the role of research development and promotion in 2025.



Dr Frank Lincoln, Central Bioinformatician PRISM Study

The clinical cancer research executive continues to ensure rapid approval of trial contracts. In 2025 the Cancer Research Executive Committee signed off on 35 studies. The majority of these (28) were new trials, 7 related to contract amendments (the trials were primarily interventional IMP studies but the some were observational studies). The average turnaround time for CREC review and sign off was 6.6 days. During the same reference year, the turnaround time for legal review was 7 days and the average turnaround time by Finance office was 5 days. External sponsors have been very impressed at the institutions ability to achieve where many other sites struggle. The timelines are excellent and thanks must go out to all involved.

CLINICAL RESEARCH CENTRE

The RCSI Clinical Research Centre (RCSI-CRC) was established in 2000 at Beaumont Hospital as the first purpose-built CRC in Ireland. The current Clinical Director of the CRC is Prof Ger Curley. The CRC supports research in core clinical areas, and serves as a hub for seven hospitals in the Dublin North - North East Region. RCSI-CRC and its investigators fulfil key leadership roles and are key sites in all HRB Clinical Trial Networks. A key strategic goal is to strengthen the links with clinical cancer research groups at the cancer centre. In addition, RCSI-CRC plays a lead national role in clinical research nurse education.

Professor Ger Curley, CRC Clinical Director and members of the CRC Clinical Research Team

Image: The OPEN Trial The largest prospective study comparing setup accuracy and patient experience across three head and neck radiotherapy masks (closed 5-point, open 3-point, and open 5-point), recruiting 230 patients (Jan 2024–Jun 2025). Awarded Best of ESTRO 2025 the trial demonstrated that open-face masks improve patient experience.

RADIATION CLINICAL TRIALS RESEARCH UNIT

The Radiation Clinical Trials Unit supports clinical research conducted in St Luke's Radiation Oncology Network (SLRON). The current portfolio includes trials in prostate, lung, spinal cord compression, head and neck, and breast cancer. Observational / Translational studies are investigating combined hormonal and radiation therapy in prostate cancer and pan cancer.

Professor Clare Faul, Consultant radiation oncologist, National Clinical advisor in radiation oncology NCCP

CANCER DIRECTORATE

The directorate continues to develop and expand with ongoing quality improvement work on the collection of cancer data and organisation of multidisciplinary meetings. Dr. Aisling Hegarty was appointed as Accreditation Lead in 2025 and brings a wealth of experience to the team, with particular expertise and experience in clinical trials. Paul Cully was recently appointed the Deputy Accreditation Lead, with particular knowledge of quality data management and socio-technical systems. Paul is responsible for the creation and development of the clinical trial tracker, reporting real-time clinical trial activity to the Research Executive. The

Cancer Directorate Team L-R: Karen Coote , Amy Lewis, Blathnaid O'Sullivan, Joy Bennett, Rachel Murphy, Robert Dooley, Caitriona Higgins, Maria Carr, Emma Fitzpatrick, Jordan Murphy, Patrick Morris, Caroline Perry, Alan Carter, Yvonne O'Hannigan, Stephen Boylan, Aisling Hegarty, Anthony McNamara, Eithne Downey, Elaine McLoughlin

Data Management Team ensures accurate data capture, validation, and KPI reporting, enabling real-time audit, performance monitoring, and research. The Multidisciplinary Meeting (MDM) Team plays a central role in organising MDMs, ensuring all cases are prepared and discussed in a timely manner, with outcomes clearly documented and communicated across clinical teams.

Open Studies

Studies	2021	2022	2023	2024	2025
Observational	7	6	9	9	15
Interventional					
Phase I and IIa	1	1	1	1	2
Phase IIb	6	9	11	10	11
Phase III	24	26	29	23	33
Prospective interventional trials (without Phase I-III classification)	0	0	0	0	20
Total Interventional	**31**	**36**	**41**	**34**	**66**

Beaumont RCSI Cancer Centre
Cancer Activity and Research Report 2025

Clinical Trial Activity

Studies	2021	2022	2023	2024	2025
a. Multi-centre study with international participation	29	31	32	26	46
b. Multi-centre study with Beaumont RCSI CI (nation-wide or international trials)	17	17	17	15	20
c. Investigator Initiated Multi-Centre Trial with PI from Beaumont-RCSI Cancer Centre	2	1	2	5	7
d. Industry Sponsored		23	29	22	28
e. Academically Initiated		13	9	12	38

Accruals

Accruals	2021	2022	2023	2024	2025
Observational	229	268	376	446	918
Interventional					
Phase I and IIa	1	3	1	2	6
Phase IIb	57	37	13	65	62
Phase III	38	54	38	62	54
Prospective interventional trials (without Phase I-III classification)	0	0	0	0	208
Total Interventional	**96**	**94**	**52**	**129**	**330**

Percentage of Newly Treated Patients Accrued to Studies

	2022	2023	2024	2025
Newly Treated	3,682	3,772	4,259	4457
Newly Treated (excl. NCNMSC)	2,316	2,379	2,868	2946
% of Newly Treated (excl. NCNMSC)	4.1%	2.2%	4.5%	11.2%

Lance Hudson, Senior Lab Technician, Beaumont RCSI Cancer Centre

TRANSLATIONAL TRIALS

All translational research studies at Beaumont RCSI Comprehensive Cancer Centre are conducted under the sponsorship of the National Cancer Clinical Trials Network, Cancer Trials Ireland, with many of the trials open at multiple national sites. As of 2025, over 2,000 patients are enrolled in active translational research studies within the Centre, reflecting continued growth in patient participation and research capacity. The biobank represents a nationally integrated resource, housing fresh frozen (FF) and formalin-fixed paraffin-embedded (FFPE) tissue, DNA and RNA specimens, serial blood samples (plasma and serum) as well as patient-derived xenograft (PDX) models. These materials are linked to comprehensive clinical datasets from

Beaumont RCSI Cancer Centre
Cancer Activity and Research Report 2025

over 9,000 cases across designated cancer centres and are managed through a robust inventory and sample tracking system.

In 2025 a total of 918 patients were recruited to observational/translational clinical trials at the centre across a diverse range of disease groups - Breast: Proteomic Breast, Primrose, Robomast and Cady-Sub Study; Colorectal: Crosstalk Between Exposure to Environmental Toxins and Gut Microbiome Dysregulation; Haematological: MRD and EMD; Head and Neck: Spelcaster; Lung: Brand; Neurooncology, NK4GBM and Brain Bank; Upper Gastrointestinal: CLEARER and Endocrine and Pan Cancers: Immuno-Fertility, Gambit and Gut Microbiome.

The translational biobank has achieved compliance with ISO 20387 standards, an internationally recognised benchmark for biobanking quality and governance, which was officially awarded in November 2025. Beaumont RCSI Cancer Centre is the first national biobank to undergo this rigorous accreditation process. This achievement represents a major step forward in strengthening Ireland's position in cancer research and reinforces Beaumont RCSI Cancer Centre's role as a leader in delivering integrated, high quality, research drive cancer care.

Ms Sinead Cocchiglia and Dr Ben Doherty, Endocrine Oncology Research Group, RCSI

PRECLINICAL MODELS AND IMAGING

Beaumont RCSI Cancer Centre continues to lead in the development of best practices for in vivo cancer research. In collaboration with EurOPDX and INFRAFRONTIER, Professor Annette Byrne developed the OBSERVE (Oncology Best-practices: Signs, Endpoints and Refinements for in Vivo Experiments) guidelines. OBSERVE provides a robust framework for improving the reproducibility, refinement, and ethical standards of oncology animal studies. In an adaptation of this initiative Professor Byrne has developed orthotopic xenograft models to recapitulate clinical disease scenario including post-resection micro -metastatic dissemination observed in patients (Connor et al., Nature Reviews Cancer, 2025).

The Centre is a key partner in the National Preclinical Imaging Centre (NPIC; www.npic.ie), a Research Ireland-

funded infrastructure spanning UCD, University of Galway, and RCSI. Within this network, Beaumont hosts a state-of-the-art micro-computed tomography (micro-CT) and optical imaging facility.

Key capabilities include, the Quantum GX micro-CT system, enabling ultra-high-resolution imaging with scan times as fast as 3.9 seconds with longitudinal in vivo and ex vivo imaging across multiple disease models. The technology has applications in colorectal cancer, bone regeneration, and cardiac remodelling

In 2025 Professor Byrne's group established a CT radiomics pipeline for preclinical glioblastoma, demonstrating that radiomic features can detect tumour development earlier than conventional visual assessment. Complementing this, the IVIS Spectrum optical imaging system provides advanced 2D and 3D bioluminescence and fluorescence imaging with high sensitivity and spectral unmixing capabilities. This platform has been extensively utilised by Dr Vareslija to evaluate novel therapeutics in advanced breast cancer models.

Dr Damir Vareslija, Senior Lecturer, RCSI

PATIENT-DERIVED MODELS

Researchers at Beaumont RCSI Cancer Centre have established Ireland's first fully integrated patient-derived tumour model platform, encompassing xenografts, organoids, and ex vivo tumour explants. Leveraging extensive expertise in biobanking and molecular annotation, these platforms enable advanced drug target discovery and precision oncology research.

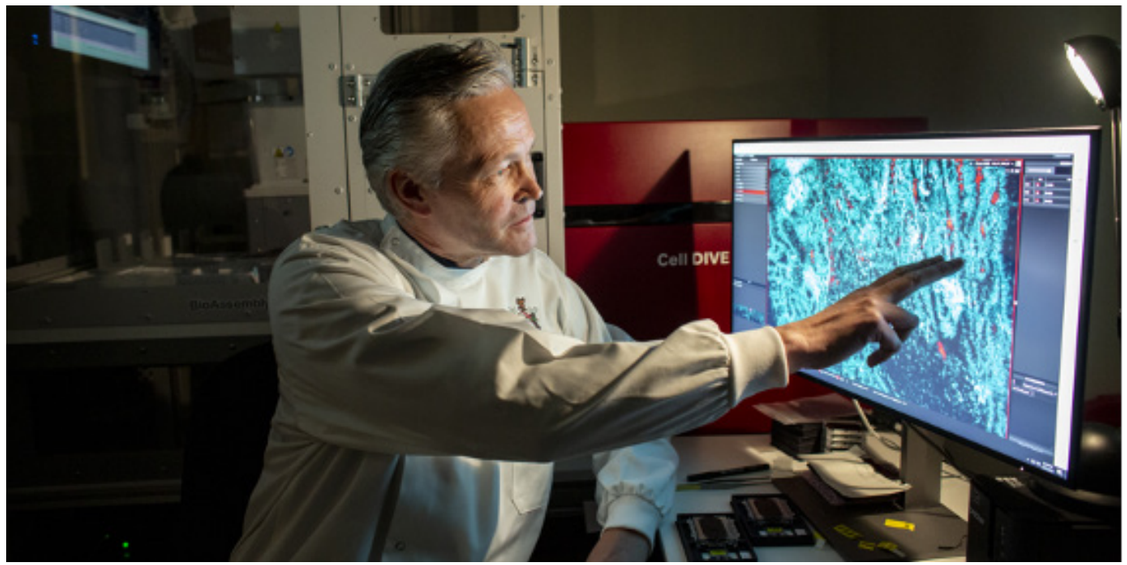
Innovative technologies, including 3D bioprinting of tissue-specific microenvironments, further enhance the translational research ecosystem. The Centre has developed clinically relevant, multimodal cohorts of cancer models that closely replicate disease biology, strengthening the linkage between laboratory discovery and clinical application.

The PDX and organoid biobank includes advanced metastatic models generated through cardiac injection

Beaumont RCSI Cancer Centre
Cancer Activity and Research Report 2025

techniques, modelling disease progression to brain, bone, and liver sites. These models are fully genetically and clinically characterised in collaboration with industry partners and are accessible to both national and international researchers.

Notably, Dr Toomey and Professor Hennessy are leveraging this resource to advance research in HER2-positive breast cancer, supporting the development of targeted therapeutic strategies. Additionally, Professor Leonie Young and Dr Damir Vareslija are creating multi-cellular complex breast cancer brain metastatic models using patient derived tumour tissue.



Professor Jochen H.M. Prehn, Professor and Chair of the Department of Physiology and Medical Physics, and Director of the Centre for Systems Medicine, RCSI University of Medicine and Health Sciences.

IMAGING AND SPATIAL GENOMICS

The Imaging and Spatial Genomics Platform, led by Professor Jochen Prehn, provides cutting-edge capabilities in high-resolution imaging, laser microdissection, and spatial genomics. This infrastructure has been further enhanced through Research Ireland funding of the National Spatial Proteomics Platform (NaSPro). This integrated platform enables multiplexed spatial proteomics and transcriptomics, single-cell resolution analysis of tumour and brain models as well as high-dimensional molecular profiling within intact tissue architecture.

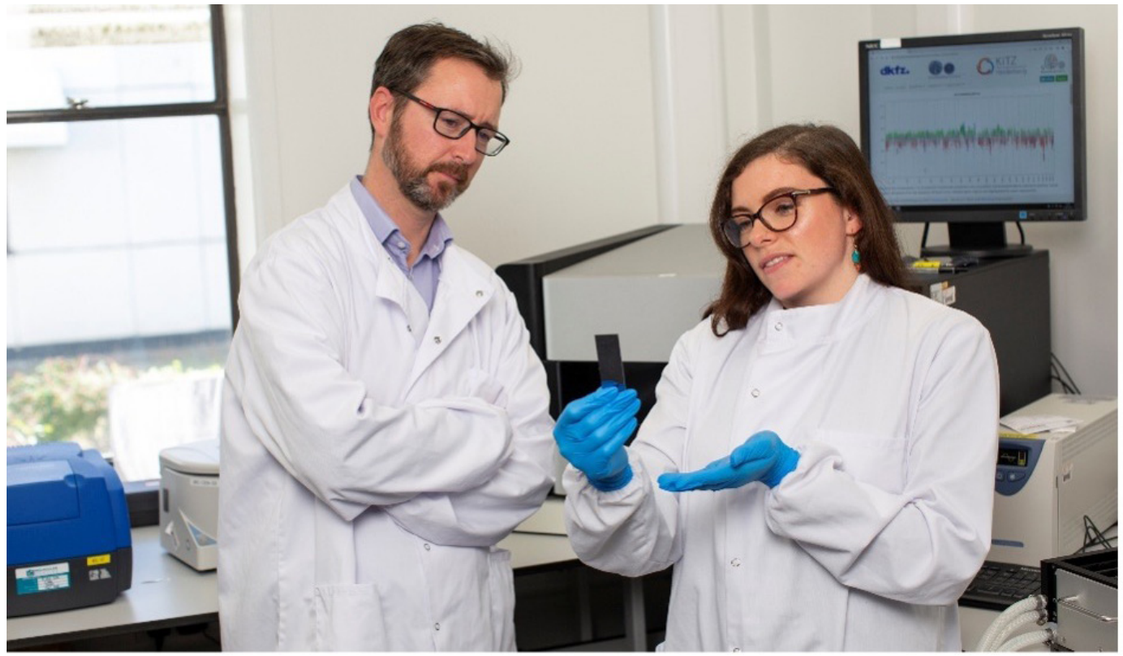
These technologies are transforming understanding of tumour heterogeneity and the tumour microenvironment, supporting the development of precision medicine approaches, novel diagnostics, and targeted therapeutics. Ongoing work led by Professor Young and Dr Vareslija, is applying spatial transcriptomics to breast cancer brain metastasis, with the goal of generating a comprehensive molecular atlas of metastatic disease within the brain.

Beaumont RCSI Cancer Centre
Cancer Activity and Research Report 2025

MOLECULAR PATHOLOGY

The Molecular Pathology Laboratory at Beaumont RCSI Cancer Centre is a state-of-the-art multidisciplinary facility that provides a wide range of services to oncologists and patients. Clinical Lead, Professor Brendan Doyle, and Chief Medical Scientist, Teresa Loftus, lead a team of scientists and clinicians who utilise cutting-edge technology to inform the diagnosis, prognosis and treatment decisions for patients. The laboratory analyses of a wide variety of cancer types including lung, skin, breast, colon, ovarian and blood cancers. In 2025 Molecular Pathology are delivering on two new omic projects, PRISM a multi-centre study lead by Professor Leonie Young, which plans to recruit 1,600 breast cancer patients nation-wide and will determine the molecular profile of patients with brain metastatic disease and Lung Health Check under Professor Jarushka Naidoo, which is profiling molecular markers in liquid biopsies from lung cancer patients.

Prof Brendan Doyle and Ms Teresa Loftus



Professor Deborah McNamara (RCSI President) and Professor Barry McGuire (RCSI Professor of Postgraduate Surgical Education and Academic Development) pictured at the publication of a new RCSI framework to support the safe and effective use of robotic-assisted surgery in February 2025.

RESEARCH EDUCATION AND PROFESSIONAL DEVELOPMENT

There was a strong start to the educational mission of the Beaumont RCSI Cancer Centre in 2025, with the publication of Robotic Surgery Governance in Ireland: A Guide to Good Practice, launched during the opening of Ireland's first-ever Robotic Learning Village at the annual Charter Day meeting. Led by Professor Barry McGuire (RCSI Professor of Postgraduate Surgical Education and

Beaumont RCSI Cancer Centre
Cancer Activity and Research Report 2025

Academic Development) in collaboration with National Leads on the Robotic Surgery Committee and the Irish Surgical Postgraduate Training Committee, the guide provides a roadmap for the safe and timely implementation of precision robotic surgery for cancer patients. Building on the success of Ireland's first bilateral robotic mastectomy (performed in the Cancer Centre by Professor Arnold Hill in December 2024) and alongside the early-stage development of Ireland's first National Robotic Surgery curriculum during 2025, it is an exciting time for the education of trainee surgical oncologists within the Centre.

Interprofessional education was also to the fore in the Cancer Centre in 2025, with 5 trainers and 8 trainees commencing the INTERACT-EUROPE-100 inter-specialty training curriculum (funded by the EU4Health programme under Europe's Beating Cancer Plan). The pioneer cohort comprised staff from radiation oncology, cancer nursing, medical oncology, radiology, nutrition and dietetics, cancer physiotherapy and occupational therapy; all of whom immersed themselves in a blend of online, self-guided and team-based learning towards the goal of improving cancer patient care. With the Europe-wide online curriculum also featuring teaching material from several Cancer Centre staff, and the designation of the Cancer Centre as one of three leading Cancer Centres in the programme, it speaks volumes about the commitment of the Centre towards professional staff education and training.

Finally, doctoral education within the Cancer Centre continues at a healthy level, with 24 new Level 10 (MD or PhD) registrations and 20 graduations during 2025. Spanning topics as diverse as medicinal chemistry, translational research, population and health services research, fundamental cancer biology, surgical practice and survivorship; the high quality of this research was illustrated by a large number of publications and prizes won during the year.

FEATURED CANCER RESEARCH SCHOLAR DR. DAVID O'REILLY

David graduated in Medicine from the National University of Ireland, Galway in 2016. After completion of internal medicine and medical oncology specialist training, he joined the Cancer Centre in 2022 as a clinical research fellow and PhD candidate under Profs. Jarushka Naidoo, Bryan Hennessy and Dr. Sinead Toomey.

During his PhD, he led an Irish clinical trial exploring the utility of circulating tumour DNA to aid diagnosis of advanced non-small cell lung cancer (published in European Journal of Cancer, awarded Best Poster at the 2025 British Thoracic Oncology Group Conference); and developed methods to use exhaled breath as a novel liquid biopsy for detecting circulating tumour DNA. Other publications in Journal of Immunotherapy in Cancer, Journal of Thoracic Oncology and Lung Cancer followed, with support from the Charitable Infirmary Charitable Trust, Irish Cancer Society and the American Society of Clinical Oncology (ASCO).

Since completing his PhD work in late 2025, David has stayed in the Cancer Centre as an advanced thoracic oncology fellow, securing funding through the International Association for the Study of Lung Cancer to explore immunotherapy in non-small cell lung cancer. His journey will next take him to Johns Hopkins University to undertake advanced fellowship training in liquid biopsy research under Prof. Valsalmo Anagnostou.

Beaumont RCSI Cancer Centre
Cancer Activity and Research Report 2025

Linda Sharpe and Arsela Prelaj on the 22nd May 2025, Cancer experts from across the country and Europe gathered at the 4th Annual Beaumont RCSI Cancer Conference.

CANCER CONFERENCES, EDUCATION & AWARENESS

BEAUMONT RCSI CANCER CONFERENCE 2025 "MODERNISING THE LANDSCAPE OF CANCER CARE"

This year's theme, "Modernising The Landscape of Cancer Care" highlighted cutting edge approaches to diagnosis and treatment of cancer while reinforcing the importance of access for all. The opening keynote address was presented by Professor Linda Sharpe, Professor of Cancer Epidemiology at the University of Newcastle. Leader of the research programme at the National Cancer Registry Ireland for ten years she was also Senior Lecturer in Epidemiology at the University of Aberdeen.

The other keynote speaker presenting at the event was Professor Arsela Prelaj, who is a Consultant Oncologist in Fondazione IRCCS Istituto Nazionale dei Tumori di Milano, specialising in thoracic malignancies. She is head of the hospital's Artificial Intelligence for Oncology Lab and President of the European Interdisciplinary Society of AI for Cancer Research of AI in Cancer Research.

The event's other distinguished speakers included Professor Gerry Hanna, Consultant Radiation Oncologist, Marie Curie Chair of Clinical Oncology, Trinity St James' and St Luke's Radiation Oncology Network; Dr Helen Greally, National Clinical Lead in Psycho-Oncology, Director of Psychology and Psychosocial supports at Cancer Care West; Opens in new window. Dr Sudipto Das, Deputy Dean, Senior Lecturer, School of Pharmacy and Biomolecular Sciences, RCSI; Professor William Robb; Consultant Upper GI Surgeon, Robotic Surgery, Beaumont RCSI; and Professor Brendan Doyle, Consultant Histopathologist, Digital Pathology, Beaumont RCSI.

Claire Noonan, Chief Operations Officer Beaumont Hospital, Dr. Seamus Browne Head of Strategic Research Initiatives & Industry Partnerships at RCSI and Prof Jochen Prehn Professor and Chairman of the Department of Physiology & edical Physics at the RCSI and is Director of the Centre for Systems Medicine

Claire Noonan, Chief Operations Officer of Beaumont, said: “The Beaumont RCSI Cancer Conference provides an important space for experts to convene and discuss the latest innovations and technological advances in cancer treatment. This conference serves as a key forum to share insights and exchange ideas that will not only advance cancer care, but also ensure it is accessible and equitable for all.”

The Beaumont RCSI Cancer Conference continues to serve as a collaborative platform for academic and clinical leaders to influence national and international policy and practice.

The 2025 programme built on the momentum of previous years by expanding its focus to encompass digital innovation, global health equity, and the role of interdisciplinary collaboration in transforming outcomes.

Beaumont RCSI Cancer Centre
Cancer Activity and Research Report 2025

Keynote Speak 2025: Professor Arsela Prelaj, Consultant medical oncologist at Fondazione IRCCS Istituto Nazionale dei Tumori di Milano, Head of the AI-O-Lab

Martin Sweeney, Patient Partner and Sara White, ANP Prostate

BITE SIZED BRIEFINGS ON CANCER

The Bite-Sized Briefings series offers concise, accessible updates on important updates in cancer care, research and education in a lunch and learn style event. Designed to support busy healthcare professionals, researchers and educators, as well as those working in non-cancer environments, these sessions deliver focused insights into clinical advancements, emerging evidence and best practice. These sessions are delivered by a diverse range of staff working within the Cancer Centre, including consultants, senior academic professors, PhD students, postdoctoral researchers, nursing staff, allied health professionals, and essential support staff such as portering teams as well as well as our patient partners who both attend and actively contribute as presenters.

In 2025 Beaumont RCSI Cancer Centre hosted six Bite-Sized Briefings covering topics such as Testicular Cancer, Managing Patient Distress, Radiotherapy, Colorectal Cancer, Advanced Imaging, Melanoma and Skin Cancer, Haematological Malignancies, Breast Cancer, Survivorship, Cancer Screening, and Endocrine and Pituitary Cancers.

Beaumont RCSI Cancer Centre
Cancer Activity and Research Report 2025

Co-funded by the European Union

INTERACT EUROPE 100

Beaumont RCSI Cancer Centre Launched its first Participants on the INTERACT Europe 100 Programme in 2025. Cancer patients in Europe are treated by an array of different specialties and professions: medical oncologists, radiation oncologists, surgical oncologists, cancer nurses and many others. For cancer care to be delivered optimally, close collaboration among these professionals is essential. But that requires a thorough knowledge of each other's roles and goals in treating any patient.

The INTERACT-EUROPE 100 project is a flagship initiative of Europe's Beating Cancer Plan to provide new standards in teamwork in every cancer centre in Europe. This EU co-funded initiative allows various professional specialties across Europe to train together, improving collaboration and patient care through the implementation of an Inter-Specialty Cancer Training Programme (ISCTP).

As one of three leading cancer centres across Europe, Beaumont RCSI Cancer Centre is responsible for supporting and coordinating the ISCTP across more than 40 cancer centres, in over 20 countries across Europe and is jointly coordinated by Professor Ann Hopkins, and Mr. Paul Cully.

Mr Paul Cully, Deputy Operations Lead, Cancer Directorate, Beaumont Hospital

Professor Ann Hopkins, Education Lead Beaumont RCSI Cancer Centre and Professor Kevin Barry Director of National Surgical Programme at RCSI.

INTERNATIONAL FEDERATION OF HEAD NECK ONCOLOGIC SOCIETIES (IFHNOS) SYMPOSIUM 2025

IFHNOS Head and Neck Symposium took place on 12th & 13th September 2025. The event aimed to raise awareness of head and neck cancer as well as highlighting its risks and promoting early detection and prevention of such cancers. A number of leading international medical and surgical consultant oncologists contributed to the lecture, as well as a head and neck cancer survivor who gave a patient perspective. The symposium was opened by Mr Declan J. Magee, RCSI President, and chaired by Professor James Paul O'Neill, Head of the Department of Otolaryngology and Consultant Otolaryngology / Head and Neck Surgeon.

A free screening clinic was held at Beaumont RCSI Cancer Centre prior to the event, providing free cancer screening as well as promoting early detection and prevention of head and neck cancers.

In Ireland there are more than 600 new cases of head and neck cancer reported each year. Ireland joined the international movement of 53 countries who observed World Head and Neck Cancer Day to increase awareness, and promote education and training in the diagnosis, treatment, outcomes, and research of head and neck cancer.

Mr Matthew Davey, SpR in General Surgery at RCSI

NEW STRATEGIC APPOINTMENTS

DR. AISLING HEGARTY

Dr. Aisling Hegarty has been appointed as Cancer Accreditation and Directorate manager. Dr. Hegarty graduated from Trinity College Dublin with a degree in General Nursing in 2009. She was awarded a master's degree in healthcare Ethics and law in 2015 and subsequently completed her PhD in 2025 with the Endocrine Oncology Research Group at RCSI. Dr. Hegarty has a strong background in accreditation and quality improvement and served as Quality Manager for Ireland's first ISO20387 accredited biobank at Beaumont RCSI Cancer Centre in 2025. In the same year, she was appointed to the National Research Ethics Committee, reflecting her expertise in research governance and ethical oversight. Her current role focuses on advancing cancer accreditation, governance and quality improvement initiatives in line with OECI and national standards.

DR.RONAN MCLAUGHLIN

Dr. McLaughlin graduated from Queens University Belfast in 2014 and subsequently undertook specialist training in Medical Oncology. He completed an international fellowship in gastrointestinal medical oncology at the Princess Margaret Cancer Centre, University Health Network Toronto, between 2023 and 2025, where he also served as Chief Fellow. Dr. McLaughlin has a particular clinical and research interest in gastrointestinal malignancies and systemic therapies, including targeted and novel treatments. His experience includes involvement in translational research and clinical trials, and his work has been recognised through the award of three ASCO Merit Awards and two Canadian Young Investigator Awards. In 2025 he commenced as a Consultant Medical Oncologist at Beaumont Hospital and became an active member of the Research Executive at Beaumont RCSI Cancer Centre.

Beaumont RCSI Cancer Centre
Cancer Activity and Research Report 2025

DR. SINÉAD KINSELLA

Dr. Sinéad Kinsella is an immunologist and immunotherapy researcher in the Dept of Physiology and Medical Physics. Dr. Kinsella completed her PhD in RCSI which focused on identifying novel molecular mechanisms driving inflammation in neurodegenerative disease, before undertaking Postdoctoral training in Immune Regeneration at the Fred Hutchinson Cancer Centre in Seattle, USA, and was awarded a New Investigator Award from the American Society of Transplantation and Cellular Therapies. Dr. Kinsella further trained in Immunotherapy and TCR therapies and was promoted to the role of Staff Scientist in Immunotherapy in the Translational Sciences and Therapeutics Division at the Fred Hutchinson Cancer Centre. During this time Dr. Kinsella was awarded competitive NIH funding from the National Cancer Institute to further study immunosuppression in the solid tumour, before returning to RCSI in 2026 to establish her own research group. Dr. Kinsella also has vast experience working in the biotech start-up space, with industry-collaborators, and is a co-inventor on several patents. Dr. Kinsella's research focuses on examining immunosuppression networks in the solid tumour microenvironment and identifying therapeutic targets to refine and enhance the efficacy of T cell therapies in the solid tumour.

PROFESSOR OSAMA SOLIMAN

Professor Osama Soliman pioneers precision cardiovascular medicine by integrating advanced imaging, artificial intelligence, and digital twin technology to transform how we predict, prevent, and treat heart disease. His work bridges the gap between cutting-edge research and clinical application, translating complex data into personalized patient care strategies. He leads €10+ million in active research programs developing next-generation precision therapies.

With 27 years of clinical and academic excellence, Professor Soliman has authored 400+ peer-reviewed publications (H-index: 55, 11,000+ citations) and established world-class imaging Core Labs across three countries. He designed and leads landmark international registries including EuroEchoVAD, UCARE, and the INCEPTION cardio-oncology studies. His innovations have directly influenced clinical practice guidelines and device development for Abbott, Boston Scientific, and Medtronic. Professor Soliman currently directs the Precision Cardiovascular Medicine and Innovation at CVRI Dublin, building the world's first comprehensive cardiovascular digital twin platform. His team combines state-of-the-art imaging, genomics, AI, and continuous monitoring to create personalized treatment pathways for heart failure, structural heart disease, and cancer therapy-related cardiac complications. This work is supported by recent competitive awards including the €2.5M EIC Transition Grant for the HeartWise revolutionary right ventricular assist device and €7.1M DTIF DUO MAX Grant. Professor Soliman welcomes collaborations with clinicians, researchers, industry partners, and funding bodies interested in advancing precision cardiovascular medicine through innovative imaging, AI applications, and digital health technologies.

Beaumont RCSI Cancer Centre
Cancer Activity and Research Report 2025

STRATEGIC ACADEMIC, NETWORK AND INDUSTRY PARTNERS

THE IRISH CANCER EPIDEMIOLOGY NETWORK (ICEN)

The Irish Cancer Epidemiology Network (ICEN) was established in 2018 to provide a platform for cross-functional, population-based cancer research in Ireland. It brings together researchers from a wide range of disciplines including epidemiology, health services research, statistics, health economics, public health, policy, clinical practice, and patient advocacy.

ICEN aims to strengthen cancer epidemiological research activity in Ireland. Cancer epidemiology plays a critical role in generating evidence to inform cancer control strategies and requires multidisciplinary collaboration across molecular and clinical epidemiology, environmental and geophysical epidemiology, pharmacoepidemiology, as well as expertise in statistics, data science, psycho-oncology, health economics, and public health.

Cancer accounts for approximately one quarter of all deaths in Ireland, with incidence projected to double by 2045. The National Cancer Strategy seeks to reduce the cancer burden through earlier diagnosis, optimal treatment, and improved survivorship care. There remains an urgent need to enhance cancer epidemiology research capacity in Ireland to support these initiatives.

CANCER TRIALS IRELAND (CTI) – NATIONAL CANCER CLINICAL TRIALS NETWORK

Cancer Trials Ireland (CTI), in partnership with RCSI, forms a national investigator-led network that provides cancer patients with access to high-quality clinical trials. CTI is the only cancer trials organisation in Ireland accredited and underwritten by the State Claims Agency to act as a clinical trial sponsor. Through this partnership, CTI supports investigator-led national and international trials across all clinical cancer sites. Since its establishment in 1996, CTI has recruited over 20,000 patients to more than 450 clinical trials.

CTI brings extensive expertise in study sponsorship, pharmacovigilance, and collaboration with international trial organisations to attract and retain clinical trial opportunities. Beaumont RCSI Cancer Centre researchers—Patrick Morris, Jarushka Naidoo, Patrick Thornton, and Leonie Young—hold leadership roles within CTI, serving as chairs and co-chairs of breast, haematology, and lung disease groups, as well as board membership. The CTI–RCSI partnership also supports education and training initiatives for research staff, ensuring sustained national clinical trial capacity and maintaining regulatory expertise in a landscape shaped by Brexit and GDPR.

Angela Clayton Lee, CEO Cancer Trials Ireland

ALL ISLAND CANCER RESEARCH INSTITUTE (AICRI)

The All Island Cancer Research Institute (AICRI) provides an overarching framework for cancer research across the island of Ireland, spanning discovery through to implementation for the benefit of patients and wider society. AICRI brings together the collective strengths of cancer researchers, including those at Beaumont RCSI Cancer Centre, and fosters collaboration with US and international partners. The initiative actively engages stakeholders from academia, industry, government, and health services, with strong emphasis on patient involvement in shaping its activities.

Beaumont RCSI Cancer Centre
Cancer Activity and Research Report 2025

BLOOD CANCER NETWORK IRELAND (BCNI)

Blood Cancer Network Ireland (BCNI) is a national collaborative network of clinicians, scientists, and population health experts, working closely with the National Cancer Registry Ireland and Cancer Trials Ireland. Since 2014, BCNI has enabled Irish patients to access innovative therapies through early-phase clinical trials at cancer centres in Galway, Cork, and Dublin. Beaumont RCSI researcher Professor Philip Murphy serves as co-chair of BCNI.

PRECISION ONCOLOGY IRELAND (POI) – RESEARCH IRELAND STRATEGIC PARTNERSHIP

Precision Oncology Ireland (POI) is a national consortium comprising five Irish universities, six charities, and nine industry partners, focused on developing novel diagnostics and therapeutics for personalised cancer treatment. POI leverages cutting-edge technologies to generate detailed genetic and molecular profiles of individual cancers.
A key strength of the programme lies in its advanced computational approaches to interpret these data and identify the drivers of disease at an individual level.

POI 2 is the second phase of Ireland's national Precision Oncology Ireland programme, a €28 million Research Ireland Strategic Partnership which commenced in October 2025. The Cancer Centre lead for the programme is Professor Leonie Young. The partnership is set to accelerate personalised cancer diagnostics and treatments by integrating advanced molecular profiling, computational analysis, and clinical translation across a nationwide collaborative network.

Launch of PRISM, multi-omic profiling trial for patients with breast cancer brain metastasis, September 2024. **Dr Damir Vareslija, Prof Leonie Young, Minister Patrick O'Donovan, Claire Noonan and Dr Seamus Browne**

PRISM – RESEARCH IRELAND STRATEGIC PARTNERSHIP

PRISM is a national partnership involving four universities and three hospitals, with key collaborators including University College Dublin, University College Cork, the University of Galway, Cancer Trials Ireland, and Carrick Therapeutics. PRISM brings together clinicians and researchers to deliver Ireland's first national longitudinal multi-omic clinical trial focused on advanced breast cancer. The programme aims to better understand and target the mechanisms underlying brain metastasis and to develop more effective treatments. The clinical trial arm of PRISM, set to detect clinically actionable mutations in primary and brain metastatic breast cancer, opened in December 2025.

Dr Damir Vareslija, PRISM Co-Director; Prof. Leonie Young, Scientific Director of the Beaumont RCSI Cancer Centre and PRISM Director; Minister Patrick O'Donovan TD; Claire Noonan, Chief Operation Officer, Beaumont Hospital; and Dr. Seamus Browne, Head of Industry Partnerships at RCSI.

Pictured at the launch of the ARC Hub for Therapeutics are: Prof. William Gallagher (UCD), Deputy Academic Director; Prof. Leonie Young (RCSI), Deputy Academic Director and Prof. Vincent Kelly (Trinity), Academic Director. Credit – Paul Sharp/Sharppix.

RESEARCH IRELAND ARC HUB FOR THERAPEUTICS

The Research Ireland ARC Hub for Therapeutics is a national strategic partnership under the Accelerating Research to Commercialisation (ARC) programme, designed to translate high-quality academic biomedical research into real-world therapies, products, and spin-out companies. Led Professor Vincent Kelly, Trinity College Dublin in collaboration with Professor William Gallagher, University College Dublin and Professor Leonie Young, RCSI, the Hub brings together researchers, clinicians, industry partners, and investors within a coordinated ecosystem that supports projects from early discovery through validation and commercial development. Officially launched in December 2025, the focus of the programme spans areas such as small molecules, biologics, gene and RNA therapies, and advanced therapy medicinal products, with the overarching aim of accelerating innovation, improving patient outcomes, and strengthening Ireland's life sciences sector through enhanced translational and entrepreneurial capacity.

INDUSTRY ENGAGEMENT AND COMMERCIALISATION

Beaumont RCSI Cancer Centre continues to expand its commercialisation and industry engagement activities. Its patent portfolio now includes six patent families spanning therapeutics, diagnostics, drug delivery, and imaging technologies. In 2025, a new patent was filed for an AI-based diagnostic tool for breast cancer.

INDUSTRY ENGAGEMENT

Collaborations with industry partners have grown significantly, encompassing multinational pharmaceutical companies such as AstraZeneca, Roche, Amgen, and Novartis, alongside indigenous biotech firms including Carrick Therapeutics, Phion Therapeutics, and RemedyBio. New partnerships have been established with GE Healthcare and Oncolize, alongside ongoing collaborations with Carrick Therapeutics and AstraZeneca. These projects span the full spectrum of the Centre's expertise, from early-stage target discovery through to late-phase clinical trials. The Centre also maintains a long-standing collaboration with Ximbio, the research tools repository and commercial arm of Cancer Research UK, and has licensed multiple cancer-related research tools through this partnership.

SPIN-OUT COMPANIES

Spin-out activity continues to grow within the cancer research ecosystem.

- Oncolize: Following its licence agreement with RCSI, Oncolize has advanced the development of Chemogel, a novel chemotherapy drug delivery platform. The company previously secured €1.7 million in seed funding, with preclinical studies ongoing at RCSI and Leiden University, and additional fundraising in progress.
- Probmet: Led by Professor Leonie Young and Dr Damir Varešlija, Probmet is developing innovative therapeutics targeting brain metastases in metastatic breast cancer—an area of high unmet clinical need. The company is supported by the BioInnovation Institute (BII) Venture Lab in Copenhagen and has secured additional non-dilutive funding through the Danish Innobooster programme.

RESEARCH PROGRAMME DISEASE GROUP RESEARCH LEADS

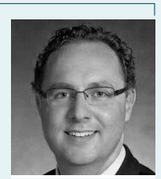
Breast Cancer


Damir Varešlija


Patrick Morris

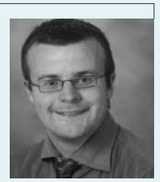
Colorectal Cancer


John Burke


Adrian Murphy

Gynaecological Cancer


Tracy Robson


Bryan Hennessy

Haematological Cancer


Triona NiChonghaile


Siobhan Glavey

Head and Neck Cancer


Robbie Woods


Sudipto Das

Lung Cancer


Jarushka Naidoo


Catriona Dowling

Neuro-Oncology

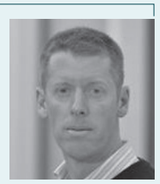

Brona Murphy


Stephen MacNally


Jochen Prehn

Skin Cancers


Fiachra Martin


Simon Furney

Upper GI Cancer


Will Robb


Jarlath Bolger

Urological Cancer


Niall Davis


Brian O'Neill

Endocrine/Pan Cancers & Epidemiology/Public Health


Marie McIlroy


Kathleen Bennett


Patrick Redmond


Michael O'Reilly

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Cancer Activity and Research Report 2025

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SCIENTIFIC ADVISORY BOARD SITE VISIT AND REVIEW

The Scientific Advisory Board conducted a comprehensive two-day onsite review of the Beaumont RCSI Cancer Centre on 1-2 December 2025. The visit included formal presentations highlighting key strategic, clinical and translational research programmes across the Cancer Centre. Presentations were delivered by Professor Leonie Young on the Cancer Centre's OECI accreditation journey, Professor Jarushka Naidoo on the Lung Health Check Programme, Professor Siobhan Glavey on new therapeutic strategies in haematology, and Dr Damir Vareslija on PRISM, a research programme focused on breast cancer brain metastasis. The SAB also toured facilities at RCSI and Beaumont Hospital, including clinical services, clinical trials, biobanking, molecular pathology and radiotherapy. The review panel comprised Professor Alastair Thompson (Baylor College of Medicine, Houston), Professor Geoffrey Greene (University of Chicago), Virginia and D.K. Ludwig Professor and Chair of the Ben May Department for Cancer Research, and Professor Róisín O'Dwyer, Vice-Dean for Research and Innovation at the University of Galway. Together, the panel brought internationally recognised expertise in translational cancer research, cancer strategy and research leadership. The Board commended the strong integration of clinicians and scientists, recognised the research programme as world-class in both quality and impact, and highlighted the Centre's success in securing competitive research funding and producing high-quality, influential publications.

Beaumont RCSI Cancer Centre
Cancer Activity and Research Report 2025

MAJOR AWARDS

RESEARCH IRELAND, Strategic Partnerships Programme, Precision Oncology Ireland-2 (POI2). National award led by UCD, RCSI lead Professor Leonie Young. Investigators, Professors Darren O'Connor, Leonie Young, Jochen Prehn, Tracy Robson, Bryan Hennessy and Dr Catriona Dowling, €2.53M

HEALTH RESEARCH BOARD, EU Joint Programmes, INvolving underserved Screening Invitees in DEcision-making and Research on cancer Screening (INSIDERS). Professor Patrick Redmond, €412,850

EU4HEALTH, Action Grant, Joint Action on Networks of Expertise on Cancer - JANE-2. Professor Patrick Redmond, €309,000

PHILANTHROPIC AWARD, Breast cancer research, including AI research and contrast enhance mammography. Professor Nuala Healy, €300,000

EU HORIZON EUROPE, MSCA – Postdoctoral Fellow, NANO-ADJUVANT: Engineered Nanomaterials as Adjuvants to Boost Neuroblastoma Vaccine Efficacy, Dr Olga Piskareva, €268,6000

HEALTH RESEARCH BOARD, Secondary Data Analysis Projects (SDAP), The Precision Cardio-Oncology Research Enterprise (P-CORE) - Development and validation of a risk stratification tool to assess cardiovascular risk in patients treated for Breast Cancer, Professor Osama Soliman, €239, 300

PHILANTHROPIC AWARD, Characterisation of Oesophageal Cancer and Treatment Responses: The CLEARER Study. Professor Jarlath Bolger, €300,000

RESEARCH IRELAND, ARC for Therapeutics in collaboration with Trinity College Dublin and University College Dublin, RCSI lead Professor Leonie Young, €25M. Investigators, Professors Darren O'Connor, Tracy Robson, Helena Kelly and Darren Griffith, RCSI award, €1.3M

BREAST CANCER IRELAND, Programme Grant, Targeted treatment resistance in metastatic breast cancer - Phase 2, Professor Leonie Young, €1M

Professor Leonie Young, Beaumont RCSI Scientific Director, named winner of the Women in STEM Award for Science at the annual Business Post women in STEM Awards.

Professor Tracy Robson, Deputy Vice Chancellor for Academic Affairs (DVCAA) at RCSI University of Medicine and Health Sciences, has been awarded the Irish Association for Cancer Research (IACR) Outstanding Contribution to Cancer Medicine Research Award at the IACR Annual Conference 2025.

CANCER CENTRE PUBLICATIONS 2025

Summary: Total number 307

Impact factor >10, 43: Impact Factor 5-10, 75

1. Abdin, A., Bauersachs, J., Abdelhamid, M. et al. (2025). Pharmacologic pitfalls in heart failure: A guide to drugs that may cause or exacerbate heart failure. A European Journal of Heart Failure expert consensus document. European Journal of Heart Failure, 27(12)

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Beaumont RCSI Cancer Centre
Cancer Activity and Research Report 2025

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Cancer Activity and Research Report 2025

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CLINICAL TRIALS TABLE

Name, Phase, PI, Disease Group.

Open Observational Studies 2025			
Cancer Group	Study Name	Beaumont RCSI cancer Centre PI	Total Number of Patients Accrued
01. Breast	Proteomic Breast	B. Hennessy	446
01. Breast	Primrose	P. Morris	3
01. Breast	ROBOMAST	A. Hill	14
01. Breast	Cady Sub Study	P. Morris	49
02. Colorectal	Investigating the Mechanisms of the Crosstalk Between Exposure to Environmental Toxins and Gut Microbiome Dysregulation	N. McCawley	0
04. Haematological Cancer	MRD	S. Glavey	201
04. Haematological Cancer	EMD	S. Glavey	7
05. Head & Neck	Spelcaster	R. Woods	105
06. Lung Cancer	BRAND	J. Naidoo	6
07. Neuro-Oncology	NK4GBM	S. MacNally	25
07. Neuro-Oncology	Brain Tumour Biobank		4
09. Upper Gastro Intestinal	CLEARER	J. Bolger	1
11. Endocrine & Pan Cancers	Immuno-Fertility	J. Naidoo	1
11. Endocrine & Pan Cancers	Gambit	J. Naidoo	51
11. Endocrine & Pan Cancers	Gut Microbiome	B. Hennessy	8
11. Endocrine & Pan Cancers	Immunofertility	J. Naidoo	
	Total: 16		**Total: 921**

Open Interventional Studies 2025					
Cancer Group	Study Name	Beaumont RCSI cancer Centre PI	Phase of Clinical Trial	No of Patients Accrued	Public Study Registration Number
01. Breast	EPIK B5	P. Morris	III	0	NCT05038735
01. Breast	Shamrock	B. Hennessy	II	0	NCT05710666
01. Breast	Ember 4	P. Morris	III	8	NCT04188548
01. Breast	Destiny Breast 15	P. Morris	III	2	NCT07371585
01. Breast	Expert BIG 19-03 (breast)	S. Brennan	III	9	NCT02889874
01. Breast	IORT Breast	O. McArdle	II	0	CTRIAL-IE-1569
01. Breast	Cambria 2	P. Morris	III	9	NCT05952557
01. Breast	Fourlight 3	P. Morris	III	1	NCT06760637
01. Breast	22-16 TAORMINA	O. McArdle	III	1	NCT05377047
01. Breast	Ascent-05	P. Morris	III	0	NCT05633654
01. Breast	PRISM	L. Young/ P. Morris	Non-phased I.T.	8	NCT07425002
01. Breast	SURVEY-CNS	L. Young/ A. Hill	Non-phased I.T.	0	NCT07503717
01. Breast	Exercise DIEP	A. Hill	Non-phased I.T.	24	NCT07672392
01. Breast	REBORN	A. Hill	Non-phased I.T.	1	NCT07230535
01. Breast	De-Escalation (clinical breast)	A. Hill	Non-phased I.T.	5	NCT07616258
01. Breast	ATNEC	A. Hill	Non-phased I.T.	0	NCT04109079
01. Breast	MOZART	A. Hill	Non-phased I.T.	0	NCT07426809
02. Colorectal	Mountaineer-03	A. Murphy	III	0	NCT05253651
03. Gynaecological Cancer	Gloriosa	P. Morris	III	0	NCT05445778
03. Gynaecological Cancer	IMGN853-0424	P. Morris	II	1	NCT05445778

Open Interventional Studies 2025					
Cancer Group	Study Name	Beaumont RCSI cancer Centre PI	Phase of Clinical Trial	No of Patients Accrued	Public Study Registration Number
03. Gynaecological Cancer	Micro GI Endo-metrial	O. Boychak	Non-phased I.T.	1	CTRI-AL-IE-25-63
04. Haematological Cancer	Isa RVD	S. Glavey	II	0	NCT05123131
04. Haematological Cancer	Affirm-AL	J. Quinn	III	0	NCT04973137
04. Haematological Cancer	MajesTEC-4	S. Glavey	III	2	NCT05243797
04. Haematological Cancer	Dreamm 10	J. Quinn	III	0	NCT06679101
04. Haematological Cancer	Renew	P. Murphy	III	1	NCT06499285
04. Haematological Cancer	Hovon 177	J. Quinn	III	0	NCT06652438
04. Haematological Cancer	CLL 18	P. Thornton	III	0	NCT05197192
04. Haematological Cancer	BellWave 003	P. Thornton	II	1	NCT05673460
05. Head & Neck	Open Face Mask	S. Brennan	Non-phased I.T.	82	NCT04079595
05. Head & Neck	Development, Implementation and Valuation of an eHealth Tool to enhance quality of life (Stage 1)	E. Devoy Flood	Non-phased I.T.	5	NCT07426874
05. Head & Neck	Development, Implementation and Evaluation of an EHealth Support Tool Head and Neck (Stage 2)	E. Devoy Flood	Non-phased I.T.	30	NCT07426874
06. Lung Cancer	Krystal 7	J. Naidoo	II	1	NCT04613596

Open Interventional Studies 2025					
Cancer Group	Study Name	Beaumont RCSI cancer Centre PI	Phase of Clinical Trial	No of Patients Accrued	Public Study Registration Number
06. Lung Cancer	NeoCoast	J. Naidoo	II	1	NCT03794544
06. Lung Cancer	Adeppt	J. Naidoo	II	0	NCT05673187
06. Lung Cancer	Harmoni-3	J. Naidoo	III	6	NCT05899608
06. Lung Cancer	Dellphi-305	J. Naidoo	III	1	NCT06211036
06. Lung Cancer	Abbil1ty	J. Naidoo	III	2	NCT06635824
06. Lung Cancer	TACTI-004	J. Naidoo	III	1	NCT06726265
06. Lung Cancer	Lung Health Check	J. Naidoo	Non-phased I.T.	1756*	NCT07099027
06. Lung Cancer	18-33 Source Lung	J. Armstrong	II	4	NCT04375904
06. Lung Cancer	Krystal 4	J. Naidoo	III	0	NCT06875310
06. Lung Cancer	Adoppt	J. Naidoo	III	0	NCT06284317
06. Lung Cancer	RASolve	J. Naidoo	III	0	NCT06881784
06. Lung Cancer	Artemide Lung	J. Naidoo	III	1	NCT06868277
06. Lung Cancer	Arch	J. Naidoo	III	0	NCT06931717
07. Neuro-Oncology	Spine SABR	C. Faul	I/II	4	NCT06078813
07. Neuro-Oncology	Blood Brain Barrier	D. O'Brien	II	54	NCT07426848
07. Neuro-Oncology	OT SMILE	C'O'Donovan	Non-phased I.T.	0	NCT07426848
08. Skin Cancers	Regn 2055	J. Naidoo	III	3	NCT05608291
09. Upper Gastro Intestinal	20-36 NEEDS	M. Cunningham	III	0	NCT04460352
09. Upper Gastro Intestinal	17-12 IMRT Pancreas	R. McVey & keys	I/II	2	NCT06024824

Open Interventional Studies 2025					
Cancer Group	Study Name	Beaumont RCSI cancer Centre PI	Phase of Clinical Trial	No of Patients Accrued	Public Study Registration Number
09. Upper Gastro Intestinal	Impact of enteral feeding approaches on chyle leaks in oesophageal cancer surgery	J. Bolger	Non-phased I.T.	3	NCT06965205
09. Upper Gastro Intestinal	PHARO	J Bolger	Non-phased I.T.	0	NCT07426835
10. Urological Cancers	PACE-NODES	B. O'Neil	III	2	NCT05613023
10. Urological Cancers	ReCharge	M.Y. Teo	III	3	NCT06764485
10. Urological Cancers	22-17 Samurai	P. Thirion	II	0	NCT05327686
10. Urological Cancers	SGNDV-001	M.Y. Teo	III	0	NCT04879329
10. Urological Cancers	PRO ACT	S White	Non-phased I.T.	1	NCT07426861
11. Endocrine & Pan Cancers	Aster	K. Ewins	III	0	NCT05171049
11. Endocrine & Pan Cancers	Magnolia	K. Ewins	III	1	NCT05171075
11. Endocrine & Pan Cancers	SABR COMET 3	J. Armstrong	III	1	NCT03862911
11. Endocrine & Pan Cancers	E2 Radiate CTRIAL IE 21 28	O. McArdle	Non-phased I.T.	9	NCT03818503
11. Endocrine & Pan Cancers	EU Navigate	S. Brennan	Non-phased I.T.	2	NCT06110312
11. Endocrine & Pan Cancers	Propel II	A. Hill	Non-phased I.T.	36	NCT05977816
11. Endocrine & Pan Cancers	Simplify SABR Comet CTRI-AL-IE 24-09	C. Faul	Non-phased I.T.	1	NCT05784428
	Total: 66			**Total: 330***	

*Screening population study not included in Newly Treated Patients Accrued to Interventional Studies

Beaumont RCSI Cancer Centre
Cancer Activity and Research Report 2025

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