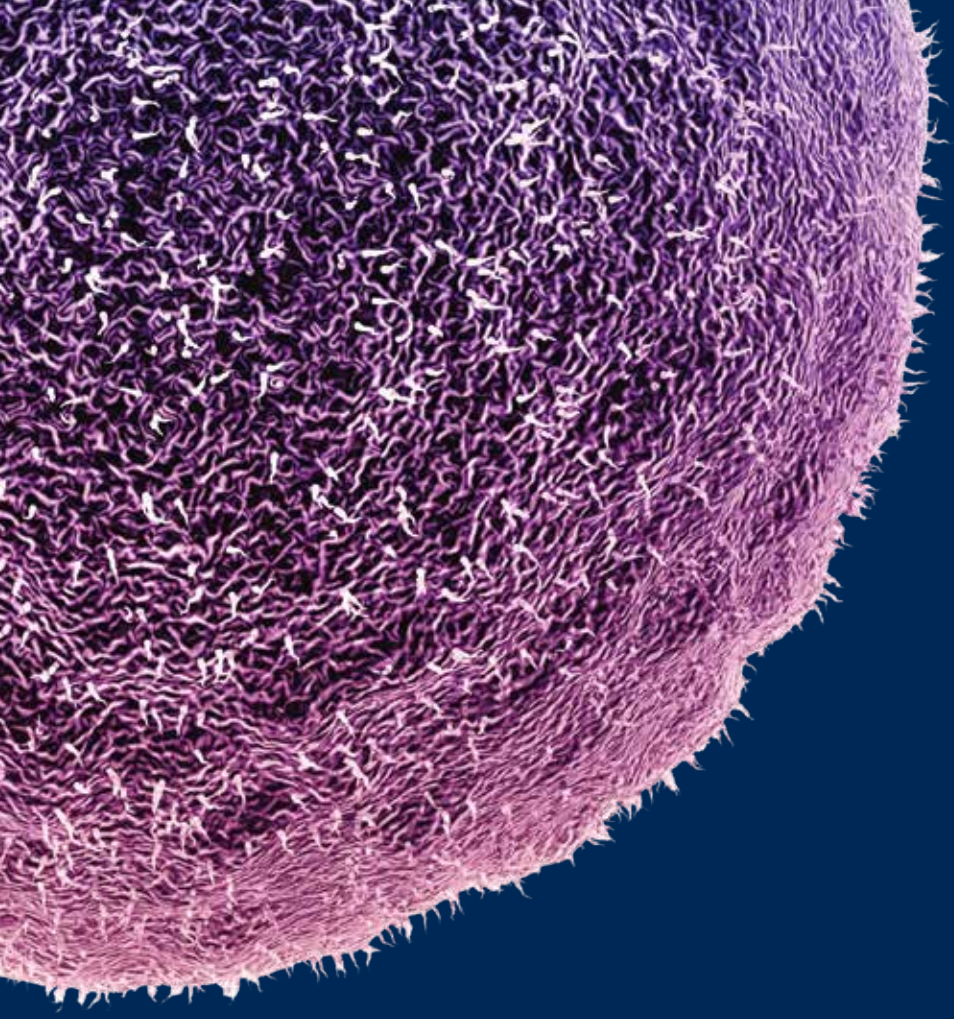


Trinity St James's **Cancer Institute**

ANNUAL REPORT 2020

Trinity College Dublin
Coláiste na Tríonóide, Baile Átha Cliath
The University of Dublin

ST JAMES'S HOSPITAL

OECI

RPMN 0473647634

Certificate of Accreditation and Designation

OECI

Hereby certifies that the

Trinity St James's Cancer Institute

Dublin, Ireland

Meets the quality standards for

Cancer care and research and it is

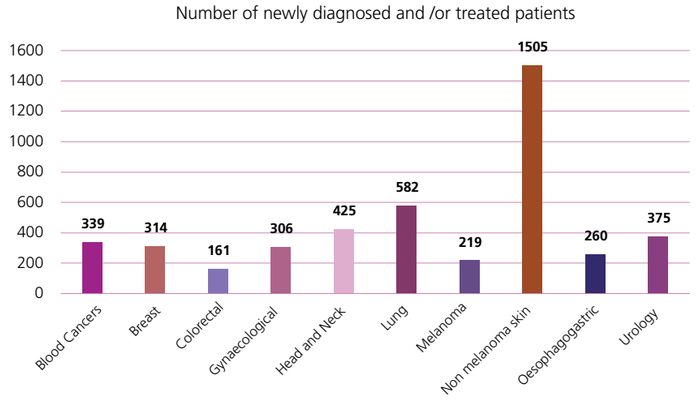
therefore, designated as

OECI

Issued on: 21st August, 2019

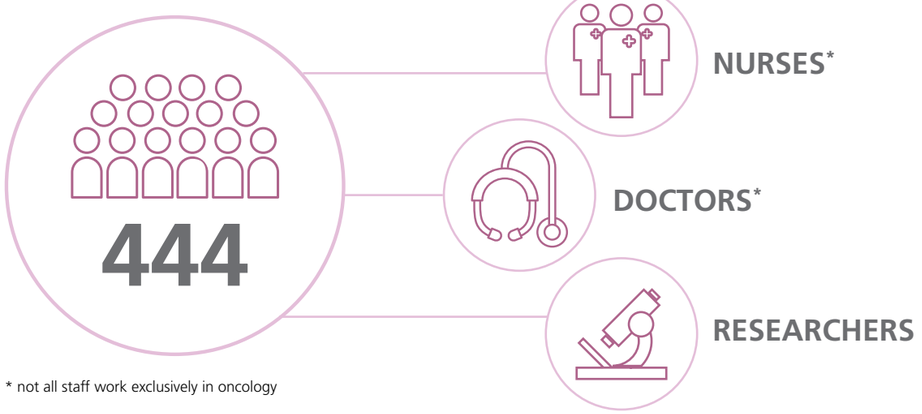
Validity Due: 21st August, 2024

PATIENTS



4,486
NUMBER OF NEWLY DIAGNOSED AND /OR TREATED PATIENTS

PEOPLE



* not all staff work exclusively in oncology

CLINICAL CARE

17,827
NUMBER OF CHEMOTHERAPY VISITS

82
NUMBER OF STEM CELL TRANSPLANTS

19,098
NUMBER OF RADIOTHERAPY FRACTIONS

4,002
NUMBER OF SURGICAL PROCEDURES

RESEARCH

PATHOLOGY

HISTOPATHOLOGY & CYTOLOGY REQUESTS 2020
28,528*

REQUESTS PER DAY
109

CANCER MOLECULAR DIAGNOSTICS REQUESTS 2020
8,842

REQUESTS PER DAY
34

*The figure is for all specimens and not just cancer related ones.

RADIOLOGY

CANCER AND NON CANCER:
178,049
OVERALL ACTIVITY

CANCER:
6,172 MAMMOGRAPHY
2,944 PET/CT

CANCER AND NON CANCER:
37,584 CT
18,024 ULTRASOUND
10,718 MRI

EDUCATION

NURSING STUDENTS
294**

RESIDENTS
8

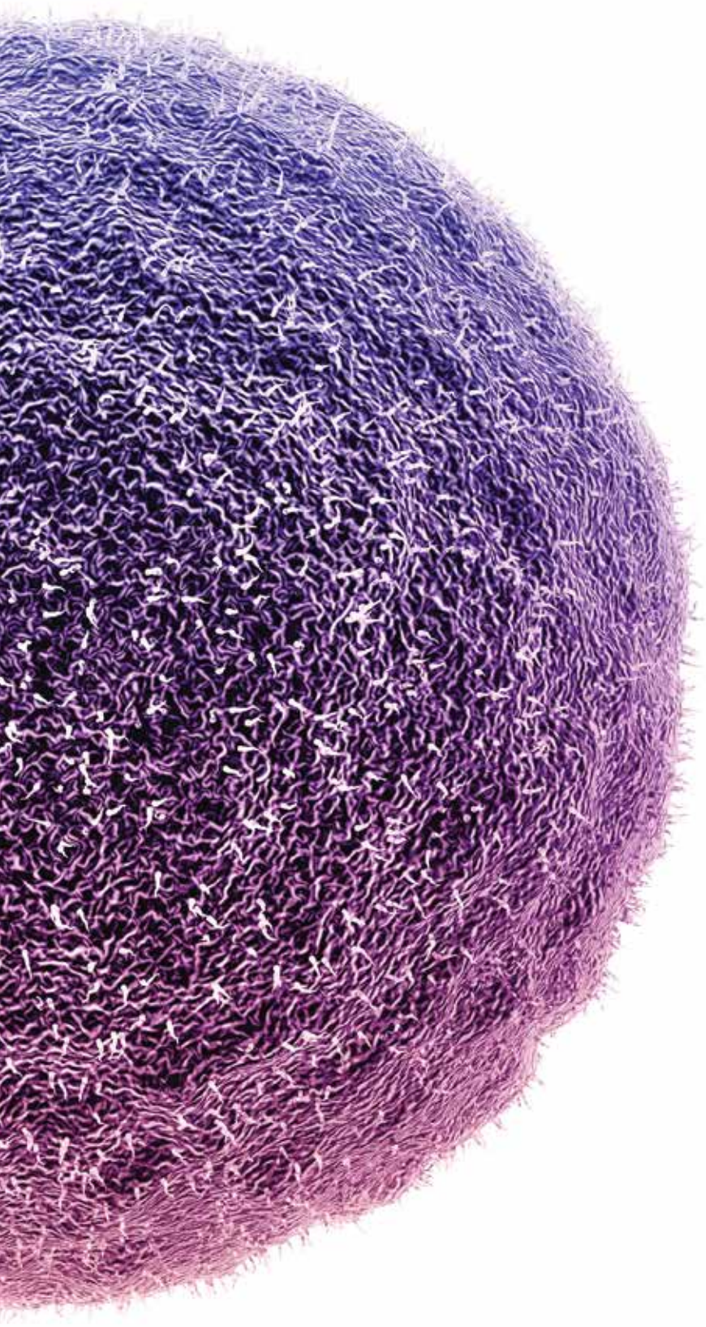
HEALTH PROFESSIONS STUDENTS
4

FELLOWS
4

RESEARCH TRAINEES
MSc **3**
PhD **19**

MD
2

** This number is for general undergraduate nursing.



Contents

INTRODUCTION BY DIRECTOR

Prof Paul Browne
Director

On behalf of all the members, collaborators, staff, supporters and colleagues of the Trinity St James's Cancer Institute it is my pleasure to introduce our annual report for 2020. This has been a very different and challenging year due to the COVID-19 pandemic which has had such a profound impact on all aspects of Irish society but most notably on healthcare. Nonetheless, we have endeavored under these new circumstances to advance our mission of integrating and improving patient care, research and education in the screening, diagnosis, treatment and support of patients with cancer.

In 2019 we brought to a successful conclusion our application for Organisation of European Cancer Institutes (OECI) accreditation and designation and became Ireland's first and thus far only OECI accredited Cancer Centre. In 2020 we further advanced this project with the challenging goal of achieving accreditation as a Comprehensive Cancer Center by 2024. With this in mind reorganization of the governance structures under a formal agreement by TCD and St James's will in 2021 see further crystallization of priorities and deliverables in the arenas of patient care, research agendas (clinical, translational and basic), philanthropic funding, links with government and industry partners and the comprehensive delivery of educational programmes. We believe a solid foundation has been laid for these ambitious goals.

The COVID-19 pandemic has profoundly affected all our activities in 2020. Patients were suddenly faced with restricted access to screening, primary care, diagnostic (including rapid access) and follow-up services. Most distressingly, treatment services were disrupted and some briefly stopped. However, due to coordinated leadership, heroic staff effort and rapid action the worst effects of the pandemic on cancer services were swiftly mitigated. This was the result of adjustment of facilities, staff disposition and treatment pathways to allow therapy to continue. Some surgical services were temporarily moved off-site, multidisciplinary conferences switched to virtual platforms, and telemedicine was facilitated. Nonetheless, the COVID-19 pandemic has exposed both strengths and vulnerabilities in the health services, particularly as they relate to groups such as the elderly, those with fragile mental health, and those whose circumstances create barriers to accessible healthcare. Rapidity of diagnosis, follow-up care, access to novel therapies in clinical trials, and quality of life for cancer patients have all clearly been negatively affected. There will undoubtedly be significant lingering consequences.

COVID-19 has highlighted the importance of our mission. Robust facilities and focused programmes, resilient and specialized staff, digital medicine, novel technologies, research based therapies, therapeutic pathways and quality improvement will all be of critical importance when the next pandemic arrives. Our ambitious plan to develop a fully comprehensive cancer center will enable us to confidently address these and other challenges for the benefit of our patients.

Prof Paul Browne
Director

INTRODUCTION BY PILLAR LEADS

Prof John Reynolds
Professor of Clinical Surgery at St. James's Hospital and Trinity College Dublin.
Clinical Care Lead, Trinity St James's Cancer Institute

Clinical Care
Prof John Reynolds

The Institute focuses on aligning excellence in the clinical care of all cancer patients with advances in science and research, in particular genomics and tumour immunology, and clinical trials. High-volume national, supra-regional and regional teams and structures exist for the clinical care of haematological malignancies and bone marrow transplantation, and in lung, oesophageal, gastric, head and neck, skin, gynaecological, breast, colorectal and urological cancers. The structure of these teams, and processes arising from multidisciplinary team conferences, and the patient pathway, have all been evaluated and reconstructed where gaps existed, one generic initiative being the creation of a completely electronic MDT process linked to the EPR.

The development of specialist nursing posts, as highlighted by Ms Sharon Slattery (below), is another key development that will optimise team structures and improve the patient pathway. New posts developed for tumour immunology, and work to protect academic sessions for research and clinical trial development within some current and new posts, are also testament to the actions underpinning the ambition of the Institute. Finally, patient involvement in strategic committees and governance, and an increasing focus on research in patient reported outcomes, has already been activated.

Ms Sharon Slattery
Director of Nursing, St James's Hospital, Nursing Lead, Trinity St James's Cancer Institute

Nursing
Ms Sharon Slattery

The St James's Hospital (SJH) Cancer Nursing Team engage with patients at many points along their cancer journey. These include: screening, diagnosis, recruitment onto clinical trials, surgery, radiotherapy, chemotherapy, survivorship and specialist palliative care. At the core of our practice is the delivery of an evidence-based approach to care with the patient at the centre of all our activities. The Nursing Team is competent, progressive, and advocates on behalf of the patient within the multidisciplinary team setting. Their skillset, decision making capabilities and dedication ensure that high-quality care is afforded to every patient across all Clinical Directorates which include Medical, Surgical, Oncology and Haematology and the Care of the Elderly and include both inpatient and ambulatory care services.

We believe that the development of the nursing profession is built on the cornerstones of research, education and professional development. Our organisation provides ample opportunity for nurses to engage with all of these activities. Advancing nursing practice within the Cancer Nursing team is of the upmost importance to our organisation and we have the highest number of nurses in the country working in advanced nursing positions such as Clinical Nurse Specialists, Registered Nurse Prescribers and Registered Advanced Nurse Practitioners.

Prof Maeve Lowery
Professor of Translational Cancer Medicine at St James's Hospital and Trinity College Dublin.
Academic Director and Cancer Clinical Trials Lead, Trinity St James's Cancer Institute

Cancer Clinical Trials
Prof Maeve Lowery

The availability of safe, innovative clinical trials is essential to the provision of excellent cancer care and to improving survival and quality of life for patients with cancer. Our vision for cancer clinical trials at TSJCI is that of a comprehensive cancer trial infrastructure facilitating innovation and addressing crucial areas of need in cancer care. By uniting expertise, infrastructure and resources across the university and hospital campuses we will create an integrated clinical research facility recognized internationally for excellence. TSJCI cancer clinical trials strategy focuses on 4 key pillars to achieve this; creation of structured education and training of key medical, nursing and administrative staff in cancer clinical research, innovation in investigator-led cancer trial development through securing competitive research funding, ensuring delivery of cancer trials to highest international standards and leveraging our key areas of international and national leadership to achieve a broad clinical trial portfolio capable of transformative impact on patient care.

On the St James Hospital Campus, the Cancer Clinical Trials Unit (CCTU), led by Prof Elisabeth Vandenberghe and the Welcome-HRB Clinical Research Facility, led by Prof Martina Hennessy are working together to deliver the next generation of cancer clinical trials including Advanced Therapeutic Medicinal Products (ATMPs). Ultimately, we look to inform healthcare policy and influence clinical practice and to ensure equal and timely access both locally and nationally for patients with cancer to high quality clinical trials

Prof Jacintha O'Sullivan
Prof in Translational Oncology, Education Lead, Trinity St James's Cancer Institute

Education
Prof Jacintha O'Sullivan

The Trinity St James's Cancer Institute (TSJCI) provides world class training and education across all disciplines connected with cancer care and cancer research. Our mission is to educate and train the next generation of cancer researchers, health care professionals and allied health care workers and through flexible designed oncology programmes allow them to tailor their cancer education needs. Importantly, TSJCI will respond to the evolving training needs of these trainees, providing the best training platforms. Under education, we have 4 structured programmes addressing the education needs along the career development pathway of scientific and medical trainees and other health care professionals.

Our education strategy is also closely mapped to our research thematic strengths, forming a tight integration between these pillars. Engaging with other cancer institute's globally through education mobility programmes is very important to us, in addition to partnering with industry. These partnerships with TSJCI in education will enhance our global network. Under education, we also embrace working closely with the public, schools and patients to disseminate our work and educational opportunities in cancer within the Trinity St James's Cancer Institute, ultimately positioning the Institute as a hub for cancer education both nationally and internationally.

Prof Orla Sheils
Dean, Faculty of Health Sciences/Professor of Molecular Diagnostics, Trinity College Dublin, Research Lead, TSJCI

Research
Prof Orla Sheils

The research vision of the Trinity St James's Cancer Institute (TSJCI) is to advance cancer care and outcomes through internationally recognised translational research. Our research strategy builds on existing strengths and integrates key research areas across 4 main themes, namely cancer prevention, molecular and precision oncology, cancer immunology and cancer survivorship and supportive care. Our themes are led by basic, translational and clinician scientists across different schools and institutes affiliated with TSJCI. The Cancer Prevention theme is led by Prof John O'Leary and Dr Cara Martin (Cancer Screening) and Prof Karen Cadoo (Genetic predisposition). Molecular and Precision Oncology is led by Prof Lorraine O'Driscoll (School of Pharmacy and Pharmaceutical Sciences) and Prof Adrian Bracken (Smurfit Institute of Genetics). Our Cancer Immunology theme is being led by Prof Clair Gardiner (School of Biochemistry and Immunology) and Prof Joanne Lysaght (School of Medicine).

Finally, the cancer survivorship and wellbeing theme is led by Prof Juliette Hussey (School of Medicine). Clinical research, encompassing cancer clinical trials, radiation oncology research, nursing research and a broad spectrum of allied health professional research fields, spans the breadth of these 4 themes and results in a horizontally and vertically interwoven, multidisciplinary, vibrant cancer research network. At present there are over 180 scientists actively working on cancer projects as part of a vibrant interdisciplinary research community. They have a track record of high-quality cancer research, greatly strengthened by Trinity as an acknowledged international leader in research in biochemistry, immunology, genetics and neurosciences. TSJCI's research programme covers the full value chain, ranging from new scientific discoveries to the translation of these discoveries into new treatments and therapies, with the patient at the centre of all that we do.

SECTION 1 Clinical Care Services

Breast Care Service

Breast Care Service

Introduction to MDT Team

In 2007 the NCCP designated St James's Hospital (SJH) as one of the eight specialist centres for treating Symptomatic Breast Disease in Ireland.

The multidisciplinary team (MDT) includes:

- Breast Surgeons
- Radiologists
- Pathologists
- Medical oncology
- Radiation oncology
- Advanced Nurse Practitioner (ANP) in Breast cancer
- Advanced Nurse Practitioner in Breast Radiology
- Clinical Nurse Specialists (CNS) in Breast cancer
- Clinical Nurse Specialist in Breast family risk
- Clinical Nurse Specialists in Breast Radiology

Summary overview of service

The Breast Care Unit at SJH currently provides services for patients with all forms of symptomatic breast disease including breast cancer, breast infections, and benign (non-cancerous) breast diseases. In addition to the Symptomatic Breast Service, the Breast Care Unit provides a high risk surveillance service to women with an increased risk of breast cancer due to a family history of the disease and/or a genetic predisposition to breast cancer (diagnosed with BRCA1/2).

Symptomatic service:
Patients are referred to the service by their GP or other medical teams. Triple Assessment Clinics (TAC) are run three times a week, where patients are assessed clinically and referred for breast imaging as appropriate.
A weekly multidisciplinary meeting discusses the diagnosis and management of patients treated at SJH. Staffing at this meeting includes all members of the MDT. Diagnosis clinics, treatment plan clinics, review clinics and nursing clinics take place throughout the week in an effort to provide patients with optimum care and support from presentation to diagnosis to surgery/treatment and postoperatively.

Family Risk Service:
The family risk service is now nurse led by the ANP and Family Risk CNS. Patients are seen for a clinical examination, management of breast surveillance and if appropriate risk reduction prophylactic surgery is discussed.

A family risk MDT meeting with input from breast surgeons, radiologists, a geneticist, genetic counsellors and the breast care nursing team takes place monthly.

Key Data on Services

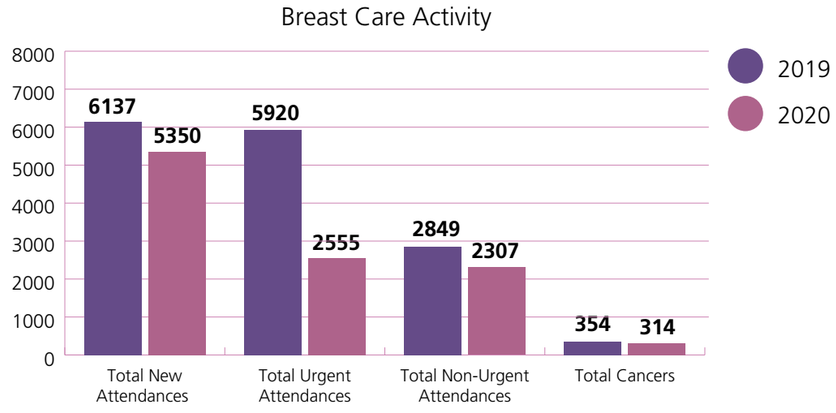
Clinical Care
During the COVID-19 pandemic The Breast Unit in SJH continued to function and provide care to cancer patients as well as seeing urgent referrals. The family risk service maintained ongoing follow up with virtual clinics and clinical review when restrictions allowed.

Referrals
In March 2020, TAC clinics were stopped for a two-week period, and then attendances were increased in increments ensuring the safety of both patients and staff. Initially only 10 patients were seen in a clinic this increased to pre-COVID-19 numbers of 35-40 patients by June 2020. From March to October 2020 only urgent referrals were seen in clinic.

Table 1: Breast Care Activity 2019 / 2020

Breast Care Activity	2019	2020
Total New Attendances	6137	5350
Total Urgent Attendances	5920	2555
Total Non-Urgent Attendances	2849	2307
Total New Cancer Diagnosis	354	314

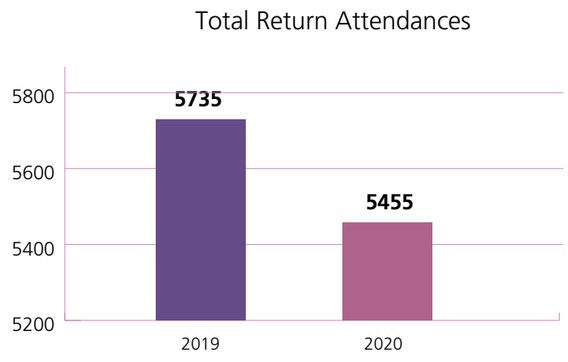
Figure 1: Breast Care Activity 2019 / 2020



Return Patients

Cancer diagnosis and treatment plan clinics continued, utilising virtual appointments when appropriate.
From March to August 2020 all review clinics were held virtually. From August, patients were seen in person in reduced clinics of 20 people; these clinics are now running at full capacity.

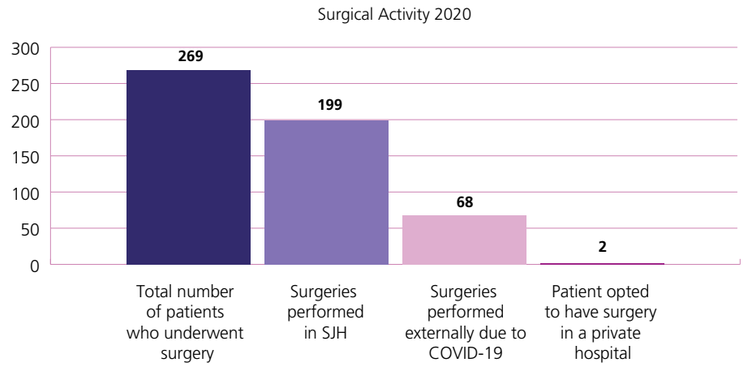
Figure 2: Breast Care Return Activity 2019 / 2020



Surgery

The breast team continued to perform surgeries for patients with cancer during the COVID-19 pandemic, initially operating in the private sector as per the HSE directive, surgeries recommenced in SJH towards the end of the year as allowed. The Breast CNS team linked in closely with the nursing team in the other hospitals to ensure standardised post-operative care.

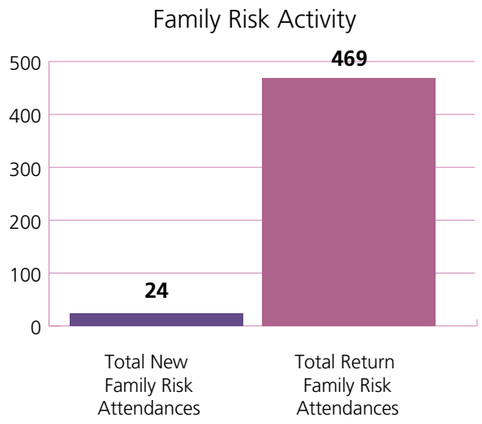
Figure 3: Breast Cancer Surgical Interventions 2020



Family Risk Service

Family Risk Service underwent a validation exercise to ensure all new patient referrals were relevant and still required assessment. It also involved the recommencement of new patient referrals by means of an innovative nurse-led telephone triage service. This is a new nurse-led function within the breast care department.
The Family risk service is now fully ANP supervised and nurse-led.

Figure 4 Family Risk Activity



Research

The Irish Cancer Society Research Nursing Grant was awarded in 2019 for the development of a "Risk Reduction Patient Decision Aid Toolkit for Women with a BRCA+ Gene Mutation" commenced in 2020. This study is currently ongoing and due for completion in 2022.

Training and Education

There is a drive within the breast care team for ongoing education

- Focus Group training by all breast nursing staff
- EnVIVO training by ANP Breast care and Family Risk CNS
- Trinity Research study workshop on systematic review by ANP Breast care and Family Risk CNS
- The successful application of one CNS into the Post Graduate Diploma in Adult Cancer Nursing in UCD
- The continued up-skilling of CNM/CNS in nipple micro-pigmentation
- The up-skilling of HCA to assist in post-operative bra and external prosthesis fittings

Key Achievements in 2020

- The commencement of ICS Research study
- The stratifying and validation of the family risk service
- The commencement of nurse-led family risk service
- The employment of a breast physician
- ANP Breast care presented at ICS "Cancer Week Living Well and Beyond Cancer" 2020
- The family Risk CNS presented at the Marie Keating BRCA symposium 2020

Spotlights of new initiatives and developments

The employment of a breast physician:
It is envisioned that this dedicated breast physician will run separate clinics in partnership with the symptomatic service to assist with non-urgent referrals; as the vast majority of patients seen within Breast Care do not require surgery.

The family risk service is in the process of developing nurse-led group sessions for newly diagnosed BRCA carriers. It is envisioned that this will provide a more efficient use of time, reduce clinical work load; whilst providing access to peer support for patients.

Key Priorities for 2021 and onwards

- The maintenance of high quality, patient centered breast cancer services.
- To commence dedicated breast physician clinics
- To continue the nurse-led family risk clinics
- Commencement of nurse-led group information sessions for new BRCA carriers
- Continued input into the NCCP family risk and symptomatic service meetings
- Involvement in IMS Cancer electronic pathway for breast cancer patients
- Continued interested in further education and research within the nursing team

New People who joined your service in 2020

- A 0.5 WTE Breast Physician Dr Orla De Faoite joined the service.
- Ms Roisin Clarke, the first Cancer Genetics Research Nurse was appointed.

Cancer Audit Programme

Cancer Audit Programme

Introduction

The Cancer Audit Programme (CAP) is managed by a cancer audit programme manager, Lisa McDowell, and clinically led by the cancer audit clinical director, Prof John Reynolds.

The CAP has dedicated cancer data managers for most cancer sites:

- Therese Brown - Gynaecological cancer
- Anita Cafolla - Skin cancer
- Karina Delaney - Breast cancer
- Mary Devlin - Head and neck cancer
- Chris Gleeson - Colorectal cancer
- Sinead King - Upper Gastrointestinal cancer
- Fiona Mulvany - Lung cancer
- Mary O'Brien - Urology cancer (until the end of 2020)

Summary overview of service

The audit programme provides detailed information to the administration and board of the hospital, Trinity St James's Cancer Institute (TSJCI), and relevant external bodies:

- National Cancer Control Programme (NCCP)
- Department of Health (DOH)
- Health Service Executive (HSE)
- Health Information Quality Authority (HIQA)
- Organisation of European Cancer Institutes (OECI)

Reporting and monitoring of in-house and national key performance indicators (KPIs) supports continuous improvement, and helps to measure the cost of cancer care.

Providing high-quality cancer data remains an operational and strategic priority at the hospital and TSJCI.

Cancer audit is a core foundation of the Institute, supporting

- research
- education
- quality improvement
- bio-resourcing
- basic and translational scientific research
- clinical care

All requests for data are submitted through the Research and Innovation Office. A data protection impact assessment (DPIA) must be completed and where applicable, the request must be approved by the Ethics Committee.

Key Priorities for 2021 and onwards

Improving data collection

- Collaboration with SLRON, to ensure that all details of a patient's radiotherapy treatment are recorded accurately and in a timely manner.
- Harnessing eHealth strategies both local and national e.g., EPR/Projects Oak & Elm, NCIS.
- Using local process to improve data collection e.g. MDT, HIPE, collaboration with teams so data being collected supports research and service evaluation.

Developing and increasing reporting

Continuous evaluation of what data is collected to ensure it supports reporting national KPIs, informs service planning, assesses the quality of the service, reporting of patient outcomes, and assists in research.

- COVID-19 impact report, for example, monitoring the number of patients presenting with more advanced disease.
- 2021 – Three-year report for 2018 – 2020 data – number of new cancer patients, age and gender, what stage cancer was diagnosed (early, locally advanced, metastatic), what treatments were given and the outcomes, for example, day 30 post-operative outcomes and survival analysis.
- 2023 – Two-year report for 2021 and 2022 data
- 2024 – Introduction of annual reporting, starting with 2023 data
- Support OECI re-accreditation in 2024 by expanding the data collected, such as unexpected re-admissions to surgery within 90 days.
- NCCP KPIs in Gynaecological cancer
- Supporting research and researchers and feedback to registry
- Genetics data and Biomarker data
- Development of KPIs in head and neck to measure patient pathway, and identify areas needing improvement

Key Achievements in 2020

- Successful pilot reporting of Cutaneous Melanoma key performance indicators (KPIs) in conjunction with National Cancer Control Programme
- CAP access to General Registry Office online to support outcomes analysis and benchmarking of care
- Development of a colorectal treatment summary template letter
- Data sharing agreement signed with National Cancer Institute of Ireland (NCRI) to help with external validation of data collected by the CAP team

Spotlights of new initiatives and developments

- Standard Operating Procedures (SOP) to map data collection process. SOP ensure that the process is standardised and identify any issues in the processes that need to be addressed, for example, difficulties getting access to data.
- Data dictionaries to define dataset agreed with multidisciplinary teams
- Import transfer function testing to enable faster and more accurate data capture.
- Head and neck inter hospital referral form pilot project. The form will be piloted initially with referrals from the Royal Victoria Eye and Ear Hospital with a view to rolling out to other hospitals in the group.
- Business cases are submitted for the data manager roles in gynaecology, head and neck, and urology to be increased from 0.5 whole time equivalent (WTE) to 1.0 WTE.

New People who joined our service in 2020

The team bid a fond farewell to Mary O'Brien who finished up with us in 2020 as the Urology cancer data manager. Many thanks for your dedicated service over the years and best wishes with your new role.

Cancer Genetics

Cancer Genetics

Introduction to the MDT team

The Cancer Genetics Service is led by Prof David Gallagher, Consultant Oncologist and Geneticist, and Prof Karen Cadoo, Consultant Oncologist and Cancer Geneticist, in conjunction with the HOPe Operations Manager Ms Sarah Almasry, ADON Ms Norma O'Riordan and HOPe Clinical Director, Dr John Cooney. The clinical leads, Prof Gallagher and Prof Cadoo, oversee a team of Genetic Counsellors (WTE 3.6) and Clinical Genetic Nurse Specialist (WTE 0.5) who provide genetic counselling consultations, a Research Nurse (WTE 1) and CNS Family History Nurse Coordinator (WTE 1). The service is supported by administrators (WTE 2) and a service manager (WTE 0.5). The Cancer Genetics service is part of the HOPe Directorate, and is the only cancer genetics service in an adult hospital in Ireland. Prof Gallagher is also the national clinical lead in cancer genetics at the National Cancer Control Programme (NCCP).

Summary overview of service

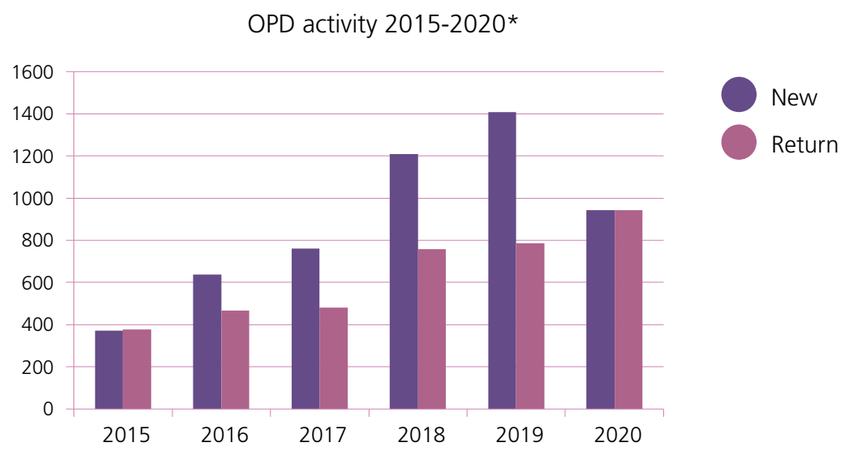
The Cancer Genetics service at St James's Hospital provides support for individuals and their families whilst undergoing investigations for hereditary cancer syndromes. The aim of the service is to identify individuals with a genetic predisposition to cancer through risk assessment and genetic testing, and to promote early detection of cancer and/or prevention strategies, and inform medical management. Referrals are received from all over the country. The service works closely with other departments in the hospital, genetic testing laboratories and the NCCP to provide quality patient care and advance service development.

Outpatient clinics are held twice weekly. We also facilitate virtual genetic counselling consultations where appropriate. In response to the COVID-19 pandemic, the majority of genetic counselling consultations have been virtual appointments in line with government restrictions without compromising patient care. As of 2020, remote testing is also available where appropriate.

Key Data on Services

The emerging availability of therapeutics on the basis of genetic testing has led to rapidly increasing demand for cancer genetics services. The service is facing significant challenges to meet the increased demand for genetic testing and assessment in a timely manner.

OPD activity 2015-2020*



*Due to COVID-19, clinics were significantly reduced from approximately March to July. Graph activity is based on BI/PAS clinic registrations. Data validation for 2020 is ongoing.
Given the exponential growth in service demand, waiting list and resourcing challenges, in conjunction with COVID-19, we are developing a model of care to facilitate our service provision incorporating telemedicine and remote testing with guaranteed capacity and acceptable turn-around-times.

Education:

Annual student placements from the MSc Genetic and Genomic Counselling at Cardiff University were cancelled in 2020 due to COVID-19 and travel restrictions. Student placements will resume in 2021, government guidelines permitting.

Key Achievements in 2020

- As expected, service demand continues to rise. Q1 2020 was the highest quarterly activity since the service was established.
- Due to COVID-19, as per government recommendations, OPD routine appointments were halted from approximately March to July and gradually resumed in line with government/hospital guidelines. During this time, the service continued to provide urgent appointments via telemedicine. Three Genetic Nurses were redeployed to support Occupational Health with contact tracing. The rapidly growing waiting list was a significant challenge for the service given resourcing constraints.
- A trial with an alternative vendor commenced in November 2020 which enabled the service to achieve a remote service model by delivering test kits directly to patient's homes and significantly reduced the turn-around-time for results. The Telemedicine initiative was accelerated to overcome COVID-19 restrictions, minimise risk, help reduce hospital footfall and improve patient reach
- Establishing this remote service with an appropriate supplier was prioritised in order to futureproof an adequate COVID-19 contingency plan looking towards uncertain times in 2021
- Working in collaboration with IMS, the quality improvement project for 'Progeny' software commenced. As a consequence of COVID-19, the go-live date was postponed to 2021.
- The Li-Fraumeni syndrome surveillance programme continued with the support from the Bobby Bastow Genetic Foundation and CAMI (Centre for Advanced Medical Imaging). From 2018 to 2020, 16 patients have attended this surveillance programme
- The service worked with IMS and LabMed on quality improvement projects within the service reduce paper processes and improve quality and efficiency e.g. EPR blood/saliva orders, EPR return appointment request pools.

Spotlights of new initiatives and developments

The adoption of remote, saliva based testing where appropriate, in conjunction with a telemedicine approach enabled the cancer genetics service to overcome COVID-19 restrictions without compromising patient care. This approach has enhanced patient and provider comfort with telemedicine and increased its acceptance. Particularly in these uncertain times of COVID-19 restrictions, there are many benefits to using a commercial saliva kit with telephone or video conferencing to facilitate remote testing, such as;

- Overcome OPD clinic capacity restrictions and reduce patient footfall
- Minimise risk of in person contact; patient-to-clinician, patient-to-patient waiting room, patient-to-public during travel to the hospital
- Provide home delivery to patients; patient's home location in proximity to Dublin, patient fitness to travel, COVID-19 travel restrictions, patient time off work/child care rescheduling appointments, vulnerable cocooning patient cohort can stay at home
- Patient quality and safety: consistent standard of panel testing and results turn around times, paperless efficiency using a secure website for electronic results, electronic database for results tracking

A key priority for service quality improvement is to implement Progeny software. Progeny is a risk modeling and pedigree software that will improve the quality of family based records, optimize workflow efficiencies and data collection. Working in collaboration with IMS, the Progeny project commenced, however, as a consequence of COVID-19, project completion was postponed to 2021.

Key Priorities for 2021 and onwards

Key priorities include;

- Implementation of Progeny software in 2021 will improve the quality of patient care and optimise resources.
- The growing waiting list is a momentous challenge for the service. Given resourcing constraints and demand, it is crucial to significantly increase clinic capacity. A key priority for 2021 is to expand the Cancer Genetics team.
- The service aims to further enhance the patient journey by facilitating care for patients close to or in their own home where appropriate.

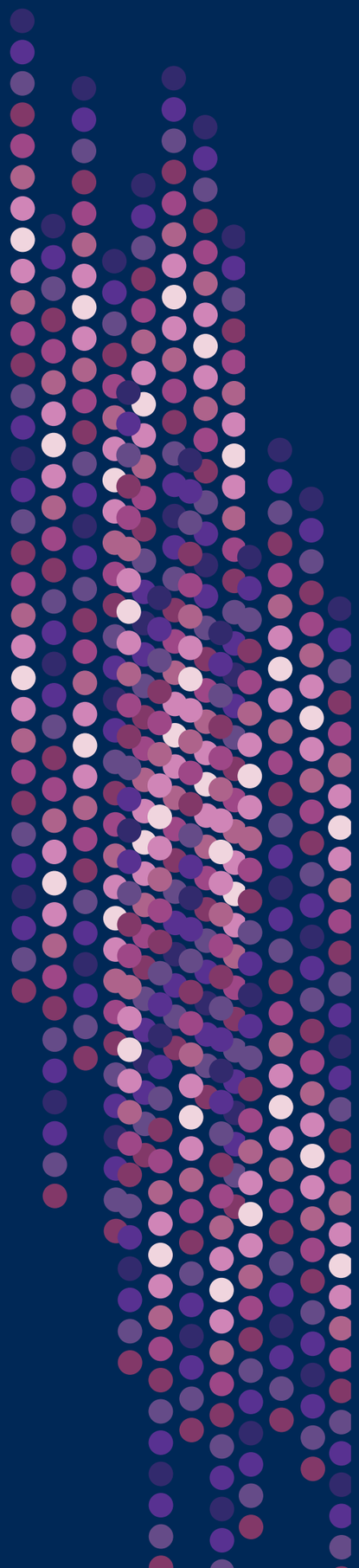
- Further development of the Li-Fraumeni syndrome surveillance programme which provides annual full body surveillance for adult patients identified with LFS in Ireland.
- Commence tender for genetic testing vendors and improve turn-around-time for results
- Continue to develop internal and external research collaborations
- Review the external referral pathway and drive electronic processes

New People who joined in 2020

The successful recruitment of Prof Karen Cadoo from Memorial Sloan Kettering Cancer Centre, New York, in June 2020 was a positive start for the progression of the Cancer Genetics service at St James's Hospital. Prof Cadoo recently returned to Ireland from Memorial Sloan Kettering Cancer Center (MSK) in New York where she had a joint appointment in the Clinical Genetics and Gynecologic Medical Oncology Services and was the lead of the Inherited Gynecologic Cancer Genetics Program. She was awarded the Irish Society of Medical Oncology Visiting Scholar Fellowship to MSK and during her fellowship she received an ASCO Young Investigator Award for research in HSP90 inhibitors in breast cancer. Her research is centered on drug development, inherited genetics, the interplay with somatic genetics, and the potential to target these therapeutically. She has served as principal investigator for multiple therapeutic trials in ovarian cancer and is a member of the NRG Oncology Ovarian Cancer Committee. She was awarded a place on an Advanced Sequencing Technologies & Applications Program in Cold Spring Harbor Laboratory and as a member of the Niehaus Center for Inherited Cancer Genetics at MSK, she has explored the role of inherited mutations in gynecologic cancers and across multiple cancer types.

The first Cancer Genetics Research Nurse was appointed, Ms Roisin Clarke.

Structural Symmetries sculpture by artist Chris Wilson installed in the hospital concourse. This artwork celebrates the work of staff at St James's Hospital and Trinity College Dublin, notably Prof Peter A. Daly, Nurse Wilma J. Ormiston and Dr O. Ross McManus, who contributed to the discovery of the BRCA2 gene in 1994. It also pays tribute to the generosity of families, particularly the extended Woods family, who participated in cancer genetics research leading to improved care for many worldwide.



Colorectal Cancers

Colorectal Cancers

Introductions to the MDT team

The colorectal surgical service comprises of six colorectal surgeons: Prof McCormick, Prof Mehigan, Mr Larkin, Mr Kavanagh, Mr O Riordan and Mr Kelly, two CNSs in colorectal cancer Ms Flannery and Ms O'Connor and four CNS' Ms McGovern, Ms Duffy, Ms Stuart and Ms Dowling in stoma care. Medical oncology is provided by Prof Gallagher and Radiation Oncology by Prof Gilham. Gastro intestinal pathology services are provided by Dr Muldoon and Dr Ryan, while radiology is provided by Dr Brennan, Dr Knox and Dr Sheehy.

The colorectal MDT meet as part of the Gastrointestinal MDT meeting on a Thursday morning at 7:30 hrs.

Summary overview of service

The colorectal service strives to provide care for patients who suffer from colon, rectal or anal cancer. These conditions are all increasing in prevalence. The unit is focused on treatment of these conditions but also increasingly on prevention through screening programs and vaccination treatments.

Treatment of these conditions is evolving in a number of different spheres:

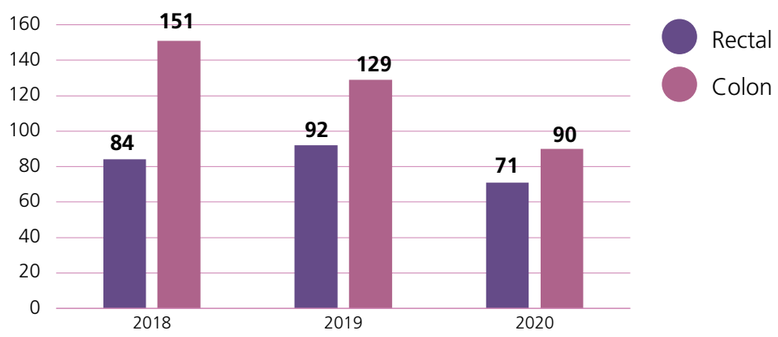
- Increased use of neo-adjuvant treatment in colon cancer.
- Use of total neo-adjuvant treatment (whereby previously adjuvant chemotherapy is now given pre-operatively).
- The adoption of 'watch and wait' protocols where appropriate.
- Surgical evolutions include increased use of endoscopic and minimally invasive techniques including EMR, TAMIS and TEMS, as well as ongoing enhancement of our laparoscopic service and introduction of robotic rectal surgery in the near future.

Preventative measures are heavily focused on screening. The National BowelScreen program focuses on identifying and removing pre malignant lesions but has also shown a significant improvement in the stage of cancer at which patients are diagnosed. Screening is also being adopted in symptomatic patients via Faecal Immunochemistory testing and Calprotection.

Key Data on Services

4.1 Colon Cancers

Figure 1. Colorectal cancer in St James 2018-2020



4.2 Rectal Cancers

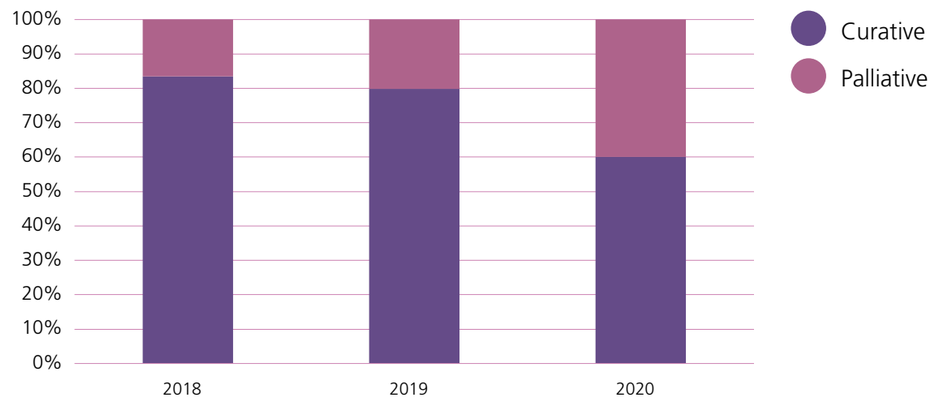
Table 1. Treatment for rectal cancer

	2018	2019	2020
Neo adjuvant Radiotherapy	30	40	41
Neo adjuvant Chemotherapy	30	38	43
Tumour resection surgeries for rectal cancer	56	50	43

Table 2 . Watch and wait approach for rectal cancer:

2018	2019	2020
5	9	7

Figure 2. Colon cancer curative intent at presentation:



This graph likely reflects the effect of COVID-19 on patient presentations and access to investigations and treatment.

Education:

The colorectal service hosts between three and five medical students at any given time. These are a combination of third and final year medical students. All of the consultants also provide focused final year tutorials. The colorectal service is also involved in postgraduate training in the Royal College of Surgeons both for basic and senior trainees. There are four registrars in the service, one of whom is a specialist registrar in the final year of their training and three registrars who are generally also in their final year and have completed their final exit examination and one senior house officer.

There is one MD student in full time research.

Key Achievements in 2020

The focus of 2020 was the continued functioning of our service in the context of the COVID-19 pandemic. This involved a change in our interactions with patients and a very significant change in our ability to treat patients. In relation to patient interaction we moved to telephone based clinics for the vast majority of patients, only seeing them on a face to face basis when absolutely required, i.e. Pre-operatively. While this approach was reasonable in patients awaiting results e.g. histology it was a huge problem regarding new patients as it was difficult to asses them.

From a therapeutic perspective the lack of face to face patient interaction was a challenge. Endoscopy and in particular the BowelScreen Programme was put on hold, except for extremely urgent cases, which given the diagnostic nature of these procedures was a huge challenge. Given these difficulties we expect to see a significant number of delayed diagnosis with advanced disease over the next few years.

The limitation of access also meant that a number of our cancer resections have been carried out in external hospitals during 2020 which again was a significant challenge.

The positives that have come from this challenging period have been the increased use of tele-medicine which definitely has also had benefits.

Spotlights of new initiatives and developments

Developments in our service focus are spread throughout our patients' journey:

- Enhanced use of screening techniques to identify patients at risk of colorectal cancer. This has been through the age bracket expansion of BowelScreen and expansion of the number of BowelScreen procedures performed in St James's Hospital.
- Increased use of non-invasive investigations to identify at risk individuals, primarily in the form of faecal immunohistochemical testing to identify hemoglobin in stool, combined with faecal calprotection (a marker of colonic inflammation) thus allowing for more appropriate referral of patients for endoscopy.
- Through the ongoing expansion of the cancer genetics service we are identifying at risk families for focused screening.
- Neoadjuvant and surgical innovations as described above are changing some of our treatment patterns, in many cases avoiding surgery and in most surgical treatments focusing further on minimally invasive techniques.

Key Priorities for 2021 and onwards

Our main challenges are related to the volume of work required to identify and subsequently treat our patients. Initiatives which will help include:

- Further enhancement of BowelScreen.
- Pre-colonoscopy counselling clinics.
- Enhancement of pre-assessment, pre-habilitation and day of surgery admissions, all of which will allow us to reduce our in-hospital length of stay.
- Dedicated colorectal beds on consistent wards allowing for focused specialist care which will facilitate Enhanced Recovery Programs.
- Expansion of theatre access, not just for patients with cancer but also for those whose cancer has been treated but require ongoing care, e.g. reversal of ileostomies. This care could be provided in off-site elective facilities.
- Enhanced services for general surgery and emergency conditions. These services must be improved along with those for cancer patients as firstly many malignant conditions are identified through this route and secondly the patient populations belief and trust in the institution will be based on how we manage all patients, not just our cancer population.

Diagnostic Imaging

Diagnostic Imaging

Introductions to the MDT team

The DiagIm Directorate (Department of Diagnostic Imaging) provides a diagnostic imaging service to the patients and clinicians of St James's Hospital. Imaging services provided include CT, MRI, ultrasound, breast imaging, nuclear medicine, PET/CT, interventional radiology and general X-ray.

Diagnostic Imaging Department staffing includes 15 consultant radiologists, 76 radiographers, 13 nurses and 12 specialist registrars. Prof Ciaran Johnston is the Clinical Director of the DiagIm Directorate.

Summary overview of service

The Department of Diagnostic Imaging provides all imaging modalities and has expanded considerably in recent years. The department performs approximately 180,000 examinations per annum and a significant amount of the complex departmental activity relates to oncology.

Over the last decade, the department has expanded with the opening of a digital PET/CT service, expansion of clinical MRI from one to three units, CT from two to three units and mammography from two to three units. Other developments have included the opening of a research facility with a high strength MRI and installation of two SPECT/CT units.

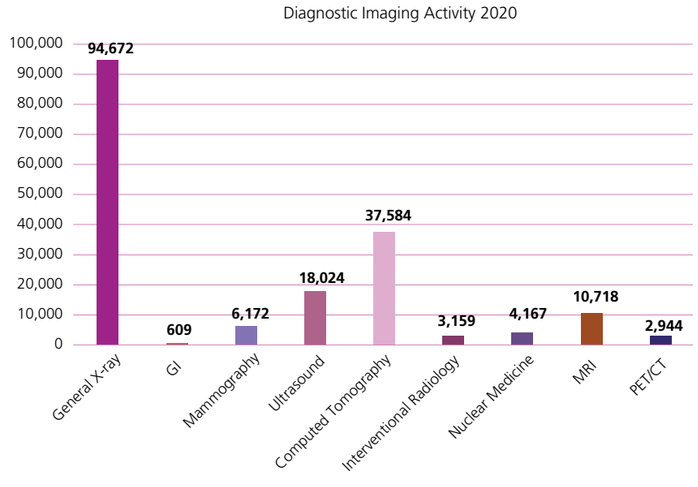
The department provides both an urgent and routine oncology imaging service and aims for turnaround times within HSE and NCCP guidelines. The department provides full support to all cancer MDT, which now represent a substantial workload. The centralisation by the National Cancer Control Programme (NCCP) of oncology care has led to a significant increase in workload for the radiology department. The department provides a supra-regional PET CT service and the national PET CT PSMA service.

The department has well-developed academic structures with established links to TCD and the Faculty of Radiology. A training programme for specialist radiology registrars is delivered in addition to on-going clinical training of undergraduate and postgraduate radiography students.

Key Data on Services

The demand for diagnostic imaging services, in particular CT, MRI, ultrasound, mammography and PET/CT, continued to increase in 2020. The Directorate aims to provide timely patient access to all diagnostic imaging services provided. There was a continued focus on improving our wait times for all procedures in 2020. The COVID-19 pandemic unfortunately resulted in necessary outpatient reductions at times of peak COVID-19 activity. However, urgent outpatients' appointments and oncology referrals were maintained during the year. In particular, the PET/CT service was not reduced as a result of COVID-19.

Figure 1: Diagnostic Imaging Activity 2020



In 2020, 178,049 diagnostic imaging examinations were performed. The breakdown of activity across imaging modalities is shown in Figure 1.

Key Achievements in 2020

PET/CT Service:
In 2020, the PET/CT scanner was replaced. The recently installed scanner is the first digital PET/CT scanner in Republic of Ireland (ROI) and provides improved image quality at lower radioactivity doses and faster acquisition times. During the replacement of the scanner, PET/CT referrals were outsourced to ensure that the St James's Hospital PET/CT service was maintained.

Graduate Entry MSc in Diagnostic Radiography programme:
In 2019, the new graduate entry MSc in Diagnostic Radiography programme commenced at Trinity College Dublin. The programme was established by radiography staff in the Directorate. St James's Hospital is the largest clinical placement site for radiography students on this programme. During 2020, the programme successfully achieved CORU programme approval. Graduates of this radiography programme will play a crucial role in the delivery of diagnostic imaging services for oncology patients.

Spotlights of new initiatives and developments

PET/CT Service:
The PET/CT service continued to offer Gallium PET/CT, namely PSMA and Dotanoc imaging. As the only national centre for PET/CT PSMA imaging, demand is considerably greater than available capacity. Prior to commencing this service, patients requiring this scan had to travel overseas. It is hoped that in 2021, the PET/CT PSMA service can be further expanded with an investment in staffing resources.

Key Priorities for 2021 and onwards

Expansion of PET/CT services:
During 2021, it is planned to increase PET/CT activity by recruiting additional staff to support extension of the current working day. Opportunities exist to develop the service further by increasing PET/CT PSMA capacity and introducing new radiopharmaceuticals.

Reconfiguration of Ultrasound:
In 2021, the ultrasound department will be reconfigured to provide additional ultrasound procedure rooms including a dedicated recovery area. These works when supported by staffing resources will provide increased capacity for oncology imaging and day procedures. Also, reconfiguration of the layout and design of the General Ultrasound department will improve patient privacy and comfort with separate waiting, changing and reception areas.

MRI initiatives to increase capacity:
The demand for MR services at St James's Hospital has increased at an average rate of approximately 10% per annum since 2011. In 2021, it is planned to extend the weekday service of the main MR Department by recruiting additional staff. Extension of the working day will provide increased capacity to meet increased MR demand.

Increased prostate imaging and biopsy
The demand for prostate imaging and intervention has increased based on updated NCCP guidelines placing radiology at the forefront. A new radiology colleague will increase this capacity in 2021.

New People who joined your service in 2020

New appointments: none

Retirements:

In 2020, Dr Graham Wilson, Consultant Radiologist retired. Graham is sorely missed from the department. He was one of the last truly general radiologists who could apply his expertise to anything from mammography to complex biopsies

General Intensive Care Unit

General Intensive Care Unit

Introduction to the MDT team

The GICU medical and nursing team incorporates 9 Critical Care Consultants, 1 ADON, 3 Candidate ANPs, 1 CNM3, 13 CNM2s, 6 Clinical Facilitators, 141 staff nurses and 8 Critical Care Assistants. There is a full complement of >30 non-consultant hospital doctors (including 3 senior Critical Care Fellows). The multidisciplinary team also includes 3.3WTE physiotherapists (with additional rotating physiotherapists), 1 senior critical care pharmacist and 0.75FTE speech/language therapist, 1 medical social worker, 1 occupational therapist and a full time nutrition service.

Summary Overview of Service

The unit manages the post-operative care of patients following head/neck, upper GI, lower GI and major gynaecological cancer surgery. We also manage the needs of medical haematology/oncology patients, including the administration and complications of chemotherapy and stem cell transplantation.

Due to COVID-19, the GICU doubled its capacity to meet the critical care requirement during the pandemic. The increased number of ICU COVID-19 patients in the ICU (>200 in total) had a huge impact on the ability to deliver non-COVID-19 care. Despite these challenges, the GICU nursing/medical leads joined a strategic hospital cancer group, and as a consequence, major cancer surgery continued to be accommodated in GICU throughout 2020.

The GICU has seen improvements in service delivery and in medical, nursing and MDT staff numbers in 2020. This has supported the expanding service (GICU beds increased from 18 to 22 in 2020). These developments have improved the cancer care in several areas;

- Reduced wait times for acutely unwell patients to access a GICU bed (medical/nursing)
- Reduced incidence of cancer surgery deferral due to GICU bed issues (medical/nursing)
- ERAS (Enhance recovery after surgery) pathways (physiotherapy)
- Pain management in the post-op period (pharmacy)
- Tracheostomy care after head and neck surgery (SALT – Speech and Language Therapy)

Key Data on GICU Services

Clinical Care in 2020:

- 304 (of 926 total [32.8% of total annual ICU admissions]) patients admitted to GICU for cancer care and of these 304 patients (190 were surgical admissions and114 were medical haematology-oncology admissions
- 163 patients (53.6% of cancer admissions) required invasive ventilation, 28 (9.2%) required non-invasive ventilation, 213(70.1%) received vasopressor/inotrope infusions and 29 (9.5%) received ICU dialysis
- The GICU low-risk standardised mortality rate for Q1/Q2 was 1.03
- A total of 3957 physiotherapy episodes of care were performed on GICU inpatients and a review of all GICU inpatients was documented as given within 24 hours of admission
- 2.5% increase in SALT workload with 1/3 of all SALT GICU reviews in cancer patients

Numerous Quality initiatives:

- Monthly GICU multidisciplinary Quality/Audit meetings
- "GICU inpatient diaries" project: successful pilot project completed
- "GICU Discharge subgroup" improved ICU discharge KPIs and enhanced patients' experience
- "Misuse of Drugs Act (MDA) medications" group to review and optimise processes around MDA use
- "Do not resuscitate" review group to appraise clinical practices relating to end of life care
- "Pressure ulcer device related" prevention group
- Formation of a "staff wellness" committee: implemented local initiatives to focus on staff wellbeing
- Change from hospital pagers to mobile phones to improve GICU inter-professional communication
- Pharmacy QI projects to enhance PCA (patient-controlled analgesia) and insulin therapy in discharged cancer patients
- SALT project to ensure all tracheostomized patients are reviewed in ICU
- Physiotherapy project to ensure coordinated ERAS service for all patient's post-op cancer surgery

Research:

- Member of Irish Critical Critical Care Trials Group (Dr T Ryan)
- Research Funding (010120-311220 Prof Ignacio Martin-Loeches)
  SFI COVID-19 immune response in critically ill patients-PI
  SFI-Vascular and coagulation abnormalities in COVID-19 patients. Co-applicant
  SFI TTMI COVID-19 consortium Co-PI
  HRB All Ireland COVID-19 biobank
  Provost Award in cancer immunosuppression in sepsis
  Prolastin in COVID-19 patients Co-PI
- Peer-review publications
  Prof Ignacio-Martin Loeches – 78
  Dr JD Coakley – 1
  Dr Enda O'Connor – 3
  Dr DT Finnerty – 5
  Physiotherapy – 2
- Number of clinical research studies opened - 4
- Number of patients in clinical research studies - 450

Education:

The educational pathway for ICU nurses extends from the Foundation course to the Masters programme. Nursing students are as follows:

- Number of foundation course nurses: 5
- Number of nurses undertaking the Postgraduate Higher Diploma: 7
- Number of nurses undertaking their MSc in Nursing: 3

New educational initiatives:

- Departmental simulation teaching
- Social Media Learning

Key Achievements in 2020

- GICU was awarded 'Best Clinical Learning Environment' by the graduate nurses of 2020.
- Continuity of GICU medical and cancer care despite managing the largest number of Irish ICU COVID-19 inpatients.
- The GICU featured in the RTÉ documentary (Inside Ireland's COVID-19 Battle) which won the News and Current Affairs award at the RTS Ireland Television Awards 2021.
- Expansion of the GICU by 4 beds to reduce waiting time to ICU admission, increase cancer surgery throughput and improve isolation room facilities for vulnerable cancer patients.
- Recruitment of additional audit nurse to improve data management for GICU national audit activities (National Office of Clinical Audit).
- Training of medical staff in managing critically ill CAR-T therapy patients.
- Pilot site for national ICU Bed Information system to facilitate nationwide delivery of critical care services.
- Successful recruitment of medical staff, nurses, and allied health personnel to staff the expanding GICU.
- Continuing refinement of the ICU electronic patient record system to manage complex cancer patients.
- Provost Award in cancer immunosuppression in sepsis (Prof Ignacio Martin-Loeches).

Spotlights of new initiatives and developments

- Introduction of patient diaries in the ICU. This innovation provides a daily record of the patient's care while in ICU, with entries in the diary made by ICU staff and patient's relatives. After ICU discharge, the diary is then given to the patient and/or their relatives
- A further increase in GICU bed capacity by 4 beds to cater for increased cancer care activity.
- Educating, training for all staff and the provision of clinical support to redeployed non ICU nurses during the pandemic when staffing levels increased by 1/3.

Key Priorities for 2021 and onwards

- Continued increase in GICU bed capacity.
- Improvements in infrastructure with the design and build of a new critical care facility.
- Provision to accommodate CAR-T service within GICU.
- Introduction and preparation of a veno-venous ECMO (extracorporeal membrane oxygenation) service.
- Introduction of GICU nurse-led plasmapheresis/plasma exchange service.
- Creation of a "healing garden" accessible to ICU patients and their families.
- Ongoing investment in staff wellbeing, education, clinical audit & research.
- Further senior and junior medical recruitment to support GICU expansion.
- Pharmacy recruitment to enhance quality and audit practices around prescribing and drug preparation.
- SALT service expansion (swallow assessment for all patients post-extubation / increase in FEES (fibreoptic endoscopic evaluation of swallowing) assessments for complex patients / development of above-cuff vocalization in GICU).
- Physiotherapy priorities (support of post-ICU clinic / Cancer Survivorship and Patient Safety MSc courses).

New People who joined in 2020

- Three critical care candidate advanced nurse practitioners (ANPs) have joined our service in 2020. This role is unique to St James's Hospital, as it is exclusively based on the service need of critically ill patients within and beyond the GICU.
- Additional GICU staff nurse compliment including two CNMs and one educator.
- Multi-disciplinary team has expanded to include an additional physiotherapist, speech & language therapist, an occupational therapist and social worker.
- 2 critical care Fellows (medical).
- 2 new medical interns.
- 1 new tutor registrar post (for undergraduate medical education).
- 3 PhD students, 2 MSc research students and 1 research assistant
- 1 consultant intensivist with clinical and research experience in critical care oncology.

Gynaecological Cancers

Gynaecological Cancers

The Gynaecological oncology department in St James's Hospital is the country's largest unit caring for over 300 newly diagnosed cancers annually. We provide care for approximately 30% of the national caseload. The SJH centre is an NCCP accredited tertiary referral centre for complex radical and exenterative gynaecological surgeries and delivers full multidisciplinary cancer care for all gynaecological cancer sites.

Introductions to the MDT team

The mission of the Gynaecology MDT is to provide patient centred responsive care. The MDT comprises of excellent expertise in treatment, research and support.

Table 1 Composition of MDT

Composition of MDT	
Consultant surgical oncologists	Mr W Kamran Prof N Gleeson Mr FA Saadeh Prof T D'Arcy Mr JP Beirne
Clinical Nurse Specialists	Debra McKnight Ciara Donohue Elaine Gray Laura McGovern
Surgical Oncology Fellows	Dr PJ Maguire Dr C Ovaere
Researchers	Dr S O'Toole Dr L Norris
Data manager	Therese Brown
Specialist physiotherapist, Gynaecology and Lymphoedema	Claire Murtagh
Clinical Nurse Managers, St John's Ward	Joanne Coogan and Lyndsey Reid
Clinical Oncology	Dr C Gillham Dr N Lavin
Medical Oncology	Dr D O'Donnell Prof K Cadoo
Histopathology	Dr C O Riain Prof J O'Leary Dr R Flavin
Radiology	Prof M Keogan Dr S Harte Dr M Knox Dr S O'Keefe
Clinical Genetics	Prof D Gallagher Prof K Cadoo

Summary overview of service

The gynaecological oncology service underwent significant adaptations over the course of 2020 during the COVID-19 pandemic. Adjustments were made to ensure continuity of service as follows:

- The MDT meeting format became virtual early in the pandemic which allowed continuation of urgent oncology treatment.
- Surgical services were reconfigured to allow procedures to take place in private hospitals by the TSJCI surgical teams during the first wave of the pandemic, maintaining our surgical oncology caseload.

The service has engaged with the rollout of enhanced recovery after surgery (ERAS) protocols. This has been complemented by the St James's Hospital Prehabilitation Physiotherapy initiative, which we have supported, and the lymphoedema prevention service delivered by Claire Murtagh, our newly appointed Specialist Physiotherapist. Our Clinical Nurse Specialists have continued to develop their role and the telephone review services which they provide have taken on an added dimension during the pandemic.

Research continues to be an integral part of the department with numerous studies undertaken by clinical staff in the department as well the work led by Dr Sharon O'Toole and Dr Lucy Norris.

Key Data on Services

Clinical care

Number of procedures:

- Total of 299 cases with 306 tumour sites (including synchronous tumours).
- Of these 189 required surgical management.

Table 2 Gynaecological Cancers 2020

Gynaecology Cancers 2020 (299 patients)	
Tumour sites: 306	
Tumour Sites	**Number**
Ovarian	97
Endometrial/ Corpus Uteri	114
Fallopian Tube	14
Vulva	18
Peritoneal	3
Cervix	47
Other/ Unknown site	13
Total	**306**

Number of procedures performed off-site: 85

Table 3 Out-Patient Activity in 2020

Out-Patient Activity in 2020		
	New	**Return**
OPD	587	2027
Telephone	132	1666
Total	**719**	**3693**

Quality initiatives:

- Submission of evidence to gain Accreditation as an Ovarian Cancer Centre with the European Society of Gynaecological Oncology
- Patient feedback on the use of telephone review at the outset of the pandemic
- Ongoing development of Key Performance Indicators for Gynaecological Oncology which will be used to inform the development of national KPIs by the NCCP
- Re-development of the Morbidity and Mortality meeting format to include more opportunities for discussion of complex cases and learning points.
- Development of a tailored Enhanced recovery after surgery (ERAS) protocol for Gynaecological Oncology patients

Education

Ongoing undergraduate medical TCD teaching throughout the year- both onsite and virtual. This teaching is conducted by the gynaecology team as well as Trinity College Dublin academic gynaecology staff.

Table 4 Medical Teaching 2020

Medical Teaching 2020
One summer elective TCD medical student
Residents- SpR x 1, registrar x 1, clinical lecturer (TCD) x 1, SHO x 2
Fellows- RCOG-registered sub-specialist trainee x 1,
ESGO-registered sub-specialist trainee x 1,
RCPI-registered complex gynaecological surgery trainee x 1
all attached to Gynaecological Oncology service

Table 5 Post Graduate Students

Post Graduate Students
Postgraduate medical (gynaecology) trainee undertaking lab-based fellowship x 1
PhD student (Dr N O'Donoghue, supervisor Dr N Gleeson)
MD student (Dr C O'Gorman, supervisor Dr N Gleeson)
MD student (Dr Zibi Marchoki, supervisor Dr N Gleeson)

Key Achievements in 2020

- Implementation of lymphoedema prevention pathway
- Engagement with Prehabilitation Physiotherapy service
- Continuation of telephone review for low-risk oncology follow up
- Safely working offsite during the first wave COVID-19 pandemic with service adaptation and education of staff in associated hospitals to ensure the surgical oncology service was maintained

Spotlights of new initiatives and developments

- Initiative around introduction of Hyperthermic intra-peritoneal chemotherapy (HIPEC) for ovarian cancer patients
- Development and implementation of the ERAS pathway for gynaecology-oncology patients
- Telephone review for low-risk oncology follow up
- Implementation of gynaecology KPI initiative with the EPR/TSJCI team and NCCP
- Sharon O'Toole from the Gynaecology Cancer group co-leads a public patient involvement group (PPI) in the Irish Society of Gynaecological Oncology Public and Patient Involvement Group (ISGOPPI) which works closely with the gynaecology cancer charity groups as well as national charity groups involved in gynaecology cancer. A number of highlights from 2020 included;
  - Research input into gynaecology studies across the island of Ireland and input into grant Applications: Many of the Irish Society of Gynaecological Oncology Public and Patient Involvement Group (ISGOPPI) members took part in a survey run

by Engage to assess the impact of COVID-19 on gynaecological cancer patients across European countries. The results were recently published and acknowledged by ISGOPPI. Perspectives, fears and expectations of patients with gynaecological cancers during the COVID-19 pandemic: A Pan-European study of the European Network of Gynaecological Cancer Advocacy Groups (ENGAGe). Cancer Med. 2021 Jan;10(1):208-219. doi: 10.1002/cam4.3605. Epub 2020 Nov 18. PMID: 33205595; PMCID: PMC7753798.

- Presentation of the Laura Brennan award for patient advocacy and PPI to Jacqueline Daly from the East Galway and Midlands Cancer Support Group
- Successful awareness campaign for world ovarian cancer day on May 8th with online webinars and Light Up In Teal Campaign 2021
- World Gynaecology Oncology Day on Sept 20th 2020 was a very successful awareness campaign with buildings lighting up in purple, gynaecology online seminars and lots of media outputs.
- Creation of a webpage for biobanking on the Trinity St James's Cancer Institute.
  The website now houses many resources for patients in terms of biobanking leaflets, informational videos which are played throughout the hospital screens, infographics. This is an output from the Cancer Research Engagement Award.
  https://www.stjames.ie/cancer/research/biobanknetwork/
- Biobanking infographic was used for online promotions which took place on Clinical Trials Day on May 20th 2020 and during Cancer Week on 28th Sept 2020. The infographic was designed by a patient and was shared widely on social media and a video highlighting what biobanks are and what is involved.

Key Priorities for 2021 and onwards

- Urgent need for appointment of new Consultant Gynaecological Oncologist to maintain clinical caseload following the impending retirement of Dr Gleeson in 2021.
- Appointment of Advanced Nurse Practitioner
- A new system for more effective dictation of clinical letters is needed
- Rollout of the new informatics system for recording MDT outcomes

New People who joined in 2020

- Claire Murtagh, Specialist Physiotherapist with an interest in lymphoedema
- Celine Ovaere, Gynaecology Oncology Sub-Speciality Fellow

Haematology

Haematology

8.1 Blood Cancers and Haematological Disorders

Introduction to the MDT team

The Haematology Department at St James's Hospital is the largest in Ireland and incorporates the National Adult Stem Cell Transplant Centre. There are seven consultant haematologists who provide care for patients with general and malignant haematological disorders, including leukaemia, lymphoma and myeloma.

Each of the haematology consultants has had training in all areas of stem cell transplantation and in addition to stem cell transplantation have areas of special interest as follows:

- Dr L. Bacon: Acute Lymphoblastic Leukaemia, Lymphoma, Adolescent/Young Adult (AYA) haematology. CAR T Cell therapy
- Prof P. Browne: Myeloma, Acute Leukaemia.
- Dr E. Conneally: Acute Leukaemia, Myelodysplastic syndromes, Myeloproliferative Neoplasms.
- Dr C. Flynn: Acute Leukaemia, Myelodysplastic syndromes, Bone Marrow Failure Syndromes.
- Dr P. Hayden: Myeloma, Cryobiology/Apheresis.
- Dr Nina Orfali: Acute Leukaemia, Myelodysplastic Syndromes.
- Prof E. Vandenberghe: Lymphomas, Lymphoproliferative Disorders, Molecular Diagnostics.

In addition, the haematology consultants provide specialist laboratory input and have clinical responsibility for the extensive haematology laboratory services.

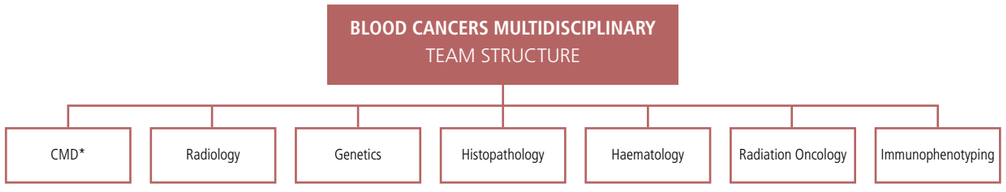
Summary Overview of Service

The clinical Haemato-Oncology Service includes

- The Acute Leukaemia/Stem Cell Transplant Service based on the Denis Burkitt unit;
- Patients requiring less intensive therapy are admitted to a dedicated haemato-oncology ward: the Donal Hollywood Ward
- Patients with blood cancer are increasingly managed in the haematology day-care setting and treatment is delivered by a day centre team.

Multidisciplinary working is integral to the haematology service and includes several weekly multidisciplinary team meetings (MDT). These include a bone marrow transplant planning meeting, a haematopathology MDT and a Lymphoma MDT.

Table 1: Blood Cancers Multidisciplinary Team Structure



* Cancer Molecular Diagnostics

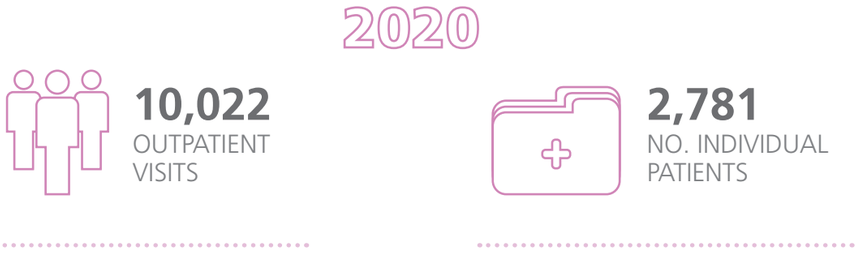


Table 2: Out Patient Activity Haematology 2015-2020

Outpatient Activity Haematology 2015-2020						
	2015	2016	2017	2018	2019	2020
New	744	1046	1104	702	794	807
Return	9439	9168	9387	9869	10231	9215
Total	10183	10214	10491	10571	11025	10022

Figure 1: Blood Cancers and Haematological Malignancies Reviewed in Outpatients in 2020

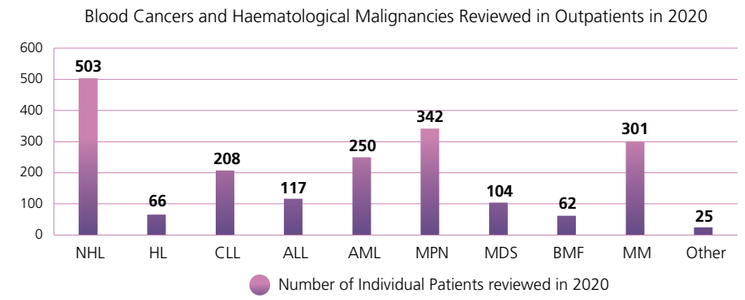


Figure 1: Blood Cancers and Haematological Malignancies individual patients reviewed in Outpatients 2020
NHL=Non Hogkins Lymphoma, HL= Hodgkins Lymphoma, CLL= Chronic Lymphocytic Leukaemia, ALL= Acute Lymphoblastic Leukaemia, AML= Acute Myrloid Leukaemia, MPN= Myeloproliferative Neoplasms, MDS= Myelodysplastic Syndrome, BMF= Bone Marrow Failure Syndrome, MM= Multiple Myeloma and plasma cell disorders.

Figure 1 shows a breakdown of individual patients who attended 2020 outpatients by cancer/malignancy type. Many patients will have more than a single visit to outpatients. There are patients with non malignant haematological disorders and other miscellaneous groups (e.g. stem cell donors) that attend out patients.

The day unit is staffed by clinical nurse managers who ensure delivery of chemotherapy, blood products and assessment of patients undergoing treatment in a dedicated facility with access to isolation features.

Table 3: Daycase and In Patient Activity Haematology 2015-2020

Daycase and Inpatient Numbers 2015-2020						
	2015	**2016**	**2017**	**2018**	**2019**	**2020**
Daycase Discharges	5191	5826	6122	5167	6141	6327
Inpatients Stays	943	936	952	905	895	864

Even with the COVID-19 pandemic affecting some sectors of activity across the hospital Day Case activity continued to increase from 2019.

Figure 2: 2020 Inpatient Blood Cancers and Haematological Malignancies

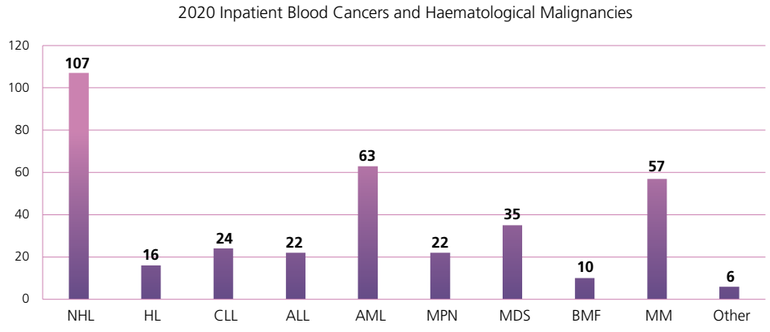


Figure 2: Blood Cancers and Haematological Malignancies individual in patients 2020 (Non Malignant Haem Disorders not included in this graph).

Figure 2 shows a breakdown of subsets of individual in patients who were admitted with blood cancers and haematological malignancies. There were 895 inpatient stays in 2020 accounting for 443 individual patients. Refer to figure 1 for explanation of disease abbreviations.

Figure 3: 2020 Daycase Blood Cancers and Haematological Malignancies

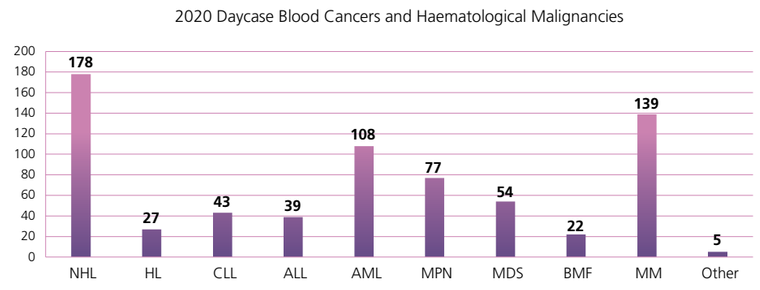
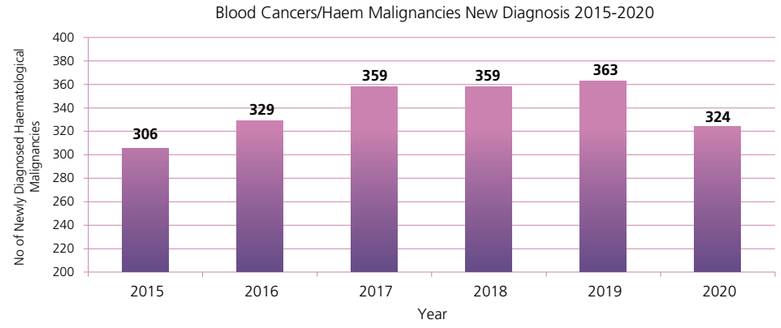


Figure 3: Blood Cancers and Haematological Malignancies individual Day Case patients 2020 (Non Malignant Haem Disorders not included in this graph).

Figure 3 shows a breakdown of subsets of individual day case patients with blood cancers and haematological malignancies. There were 6327 daycase discharges in 2020 accounting for 905 individual patients. Refer to figure 1 for explanation of disease abbreviations

There were 324 individual patients with newly diagnosed haematological malignancies attending St James's Hospital in 2020 either as inpatients or managed through the day care centre. (Note 2020 Data is subject to change as validations are still ongoing)

Figure 4: Blood Cancers/Haematological Malignancies New Diagnosis 2015-2020



Haematology Clinical Trials

There were 5 New haematology studies opened in 2020 (3 Clinical and 2 non interventional). See details in clinical trials section.

Spotlights of new initiatives and developments

Quality Objectives for 2021

- To implement standardized electronic patient referral forms for haematological cancers.
- To establish a patient forum group for the development of patient centred improvements in service delivery.
- Implementation of the national clinical information system (NCIS) for electronic prescribing.
- Set up next generation sequencing diagnostic service for haematological disorders.

Key Priorities for 2021 and onwards

- Formalise the myeloid MDT service to include all new myeloid diagnoses and marrow failure syndromes to assist in the streamlining of treatment planning and to improve the triage and prioritization of national transplant referrals.
- To include chronic lymphoid malignancies in the Lymphoma MDT.
- Launch of myeloid next generation sequencing service to assist in assessment and counseling of patients with myeloid disorders for transplantation.
- To formalise and provide greater structure for patients with bone marrow failure disorders to include a more comprehensive diagnostic work up, improved fertility preservation options and improve the nursing support for these patients.
- Development of a service (AYA) directed towards young adults with haematological malignancies.

New People who joined in 2020

- Dr Nina Orfali, Consultant Haematologist joined in Nov 2020
- Michelle O Connell was appointed as Myeloma CNS
- Grace Faulkner was appointed as Lymphoma CNS
- Maria Boyle, Acute Assessment Clinical Nurse Specialist appointed to the Acute Haematology Oncology Day Unit

8.2 Bone Marrow Transplant Unit

HSC Transplant Service

Introduction to the MDT team

The Stem Cell Transplantation (SCT) Service in St James's Hospital was founded in 1984 and has since performed more than 2500 stem cell and bone marrow transplants. The service oversees approximately 160 transplants each year. The SCT Unit includes the National Adult Allogeneic Transplant Programme, and an Autologous Stem Cell Transplant Programme. The service is one of the largest SCT units in Ireland and the United Kingdom. It is affiliated to the European Blood and Marrow Transplantation (EBMT) Registry, and it reports all outcomes to the registry and takes part in EBMT research projects. JACIE accreditation was awarded in February 2020.

Summary overview of service

The SCT Service is overseen by seven transplant trained haematology consultants (WTE 3.5), each have specific sub-specialist interests and sit on the relevant working parties of the EBMT. This is a national service and the team receives referrals from all over Ireland, including Northern Ireland.

All referrals are discussed weekly at the bone marrow transplant planning meeting in addition to specialist MDT which include review of all radiological and diagnostic investigations.

The service infrastructure is composed of an apheresis unit, a 21 bedded HEPA filtered inpatient unit (Denis Burkitt ward) and the haematology day care centre.

Key Data on Services

The service is supported by bone marrow transplant coordinators, a specialist cryobiology laboratory, clinical nurse specialists, clinical nurse managers and a team of experienced nurses and a clinical quality manager. In addition, specialist support is provided by the pharmacy team, dieticians, physiotherapy and occupational health allied services. A consult service is supplied by the radiology and pathology department and other specialist clinical teams as required. A business manager and team provide administrative services to the unit. In addition, there is a dedicated EBMT data manager. Post transplant all patients are followed life-long in a consultant provided survivorship clinic with support from endocrine, dermatology and respiratory specialists.

The new national Chimeric Antigen Receptor T-Cell (CAR-T) service will become part of this service when HSE funding has been secured for this service. Planning is in progress to start in 2021.

The cancer clinical trial unit is recruiting SCT patients for clinical trials. In 2020, three new clinical trials and 2 non interventional studies opened (for details see clinical trials section).

The COVID-19 pandemic brought new challenges to the BMT unit. During the first wave most of the autologous stem cell transplant programme was deferred, however allogeneic transplant activity continued with enhanced precautions. No patient COVID-19 infections occurred during this time which is a remarkable achievement. By end 2020, all deferred autologous transplants had been rescheduled.

Figure 1: Transplant Activity Trends 1984-2020

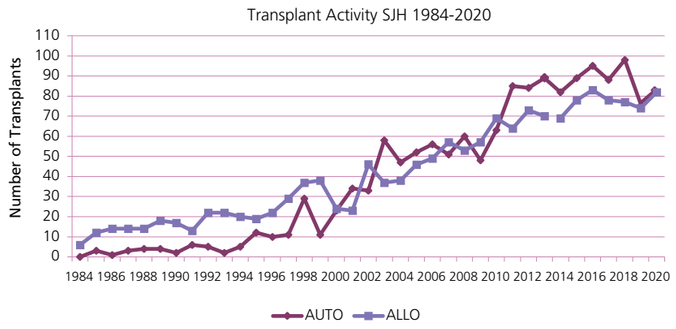
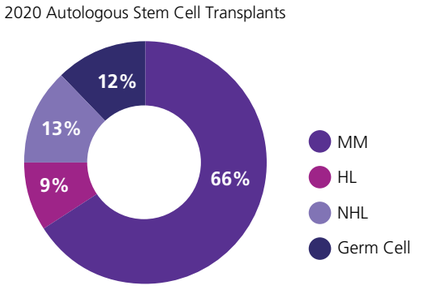


Figure 2: Autologous Stem Cell Transplants 2020



Transplant activity is increasing over time. Since 2003 transplant activity has increased by around 75% up to 2020. In recent years, activity is still increasing but at a slower rate due to the limitations of capacity for the service.

Autologous Transplants 2020

There were 82 autologous transplants, (A procedure in which a patient's healthy stem cells (blood-forming cells) are collected from the blood or bone marrow before treatment, stored, and then given back to the patient after treatment) performed in the BMT unit in 2020. Of these transplantation for Multiple Myeloma (MM) accounted for 66%. Other main transplant groups were Non Hodgkin Lymphoma (NHL), Hodgkin Lymphoma (HL) and Germ Cell tumours.

Allogeneic Transplants 2020

There were 82 allogeneic stem cell transplants (A procedure in which a patient receives healthy blood-forming cells (stem cells) from a donor to replace their own stem cells that have been destroyed by treatment with radiation or high doses of chemotherapy) performed in 2020. There were 26 myeloablative and 56 reduced intensity transplants completed. Fifty (50) transplants performed for myeloid indications, with Acute myeloid leukaemia being the most frequent indication. 29 transplants were performed for lymphoid indications with non-Hodgkin lymphoma being the most common indication. There were 3 transplants performed for bone marrow failure indications.

Figure 3: Allogeneic Stem Cell Transplants 2020

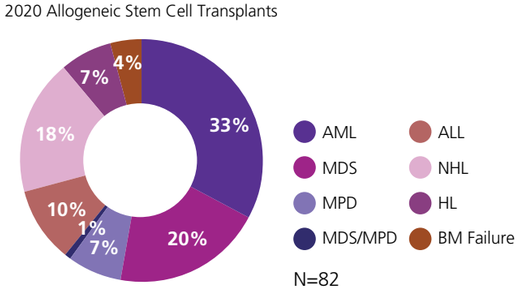
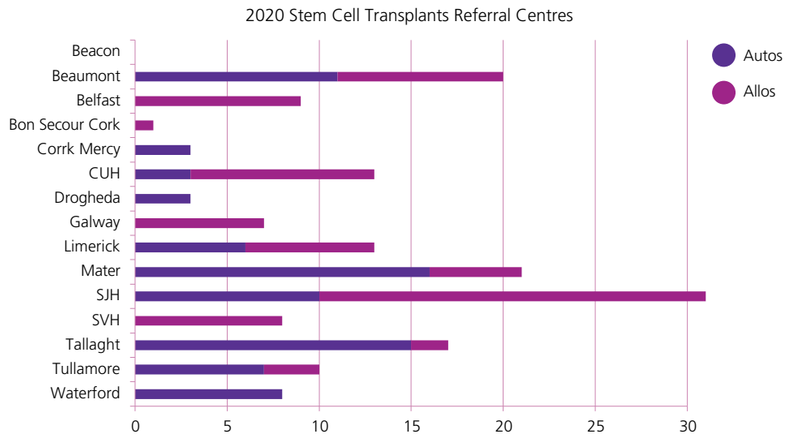


Figure 4: Referral Centres by Transplant Type in 2020



Allogeneic Transplants 2020

26
Full Intensity Myeloablative (MA) Transplants

56
Reduced Intensity Conditioning (RIC) Transplants

34
Related Donor Transplants

48
Matched Unrelated Donor Transplants

Transplant Survivorship

Autologuos Transplant Patient from 1985 transplanted for Lymphoma still alive, **survival 35 years**

Autologuos Transplant Patient from 1986 transplanted for ALL still alive, **survival 34 years**

431
unique patients treated post transplant in late effects service in 2020

19
Allo patients transplanted between 1984 and 1990 are known to be still alive having a **survival rate of 28-34 Years**

Late effects and bone marrow transplant survivorship clinics are held every week and with increasing numbers of survivors these clinics continue to grow. In 2020, 431 individual patients attended the late effects service

Key Achievements in 2020

The Joint Accreditation Committee ISCT-Europe and EBMT JACIE accreditation was awarded in 2020.

Spotlights of new initiatives and developments

Chimeric Antigen T Cell Receptor Therapy (CAR-T): This is a novel advanced immunotherapy for the treatment of patients with Lymphoma (DLBCL, PMBL) and Acute Lymphoblastic leukaemia (up to age 25 yr.). Education and training of all staff involved, (clinical, laboratory pharmacy) has been ongoing throughout 2020.

HSCT Transplant Clinical Trials

St James's transplant service has been granted affiliated status with IMPACT, a UK based BMT clinical trial unit with plans to commence BMT clinical trials in 2021

Key Priorities for 2021 and onwards

- Opening of BMT clinical trials.
- Obtain JACIE accreditation for Autologous stem cell transplants.
- Distribution of a shared care memorandum of understanding to referring centres.
- To improve communications and data collection between SJH and referring centres through fully implementing and on line referral service.
- To consolidate the bone marrow failure service with specialist nursing and diagnostic services.
- To be fully prepared for the introduction of CAR-T therapy by quarter three 2021 having completed staff training and developed associated standard operational procedures.
- To review all SCT policies and procedures in preparation for JACIE interim audit in 2022.
- To increase the number of clinical audits undertaken in 2021.
- To improve the models of care for management of the expanding population of adult allogeneic transplant survivors. This will involve closer and more structured liaison with referring national haematological and oncological services.

New People who joined in 2020

- Dr Nina Orfali, Consultant Haematologist
- Michelle Pollard, CAR-T cell administrator
- Liz Higgins, CAR-T Cell Coordinator

Head and Neck Cancers

Head and Neck Cancers

Overview of Service

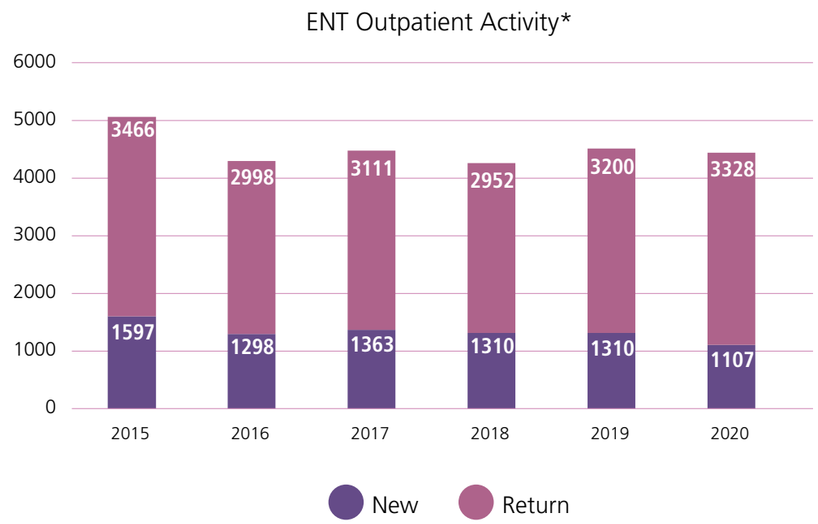
Head and Neck cancers are a diverse group of cancers that in the main are made up of mucosal malignancies of the upper aerodigestive tract, including the oral cavity, larynx and pharynx. They also include salivary gland malignancies, thyroid malignancies and many cutaneous malignancies of the head and neck are treated by our service.

In SJH, patients are managed by both the Department of Otolaryngology-Head & Neck Surgery (Prof Conrad Timon, Mr John Kinsella and Mr Paul Lennon) and the Department of Maxillofacial Surgery (Mr John Edward O Connell, Mr Conor Bowe and Mr Padraig O Ceallaigh).

Radiotherapy (Dr Sinead Brennan and Dr Fran Duane) is a mainstay of treatment for our patients, often along with chemotherapy provided by Dr Cliona Grant. The MDT also comprises specialist Endocrinology (Prof Marie Louise Healy), Pathology (Prof Mary Toner and Dr Esther O'Regan) and Radiology input. Restorative dental (prosthodontics) services are provided by Dr Aisling O'Mahony. SJH acts as the hub, with patients often diagnosed and/or treated in spokes such as Royal Victoria Eye and Ear Hospital (RVEEH), Dublin Dental Hospital, Tallaght University Hospital, Tullamore Hospital and St Luke's Hospital in Rathgar. St James's MDT acts as a tertiary referral centre for Head and Neck Cancers, with patients being referred from throughout Ireland. All complex major cancer surgery is carried out at SJH. Our patients often require extensive rehabilitation, provided by specialist Speech and Language therapists and Dietitians, and dedicated nursing staff on St. John's, Anne Young and Private 3 wards.

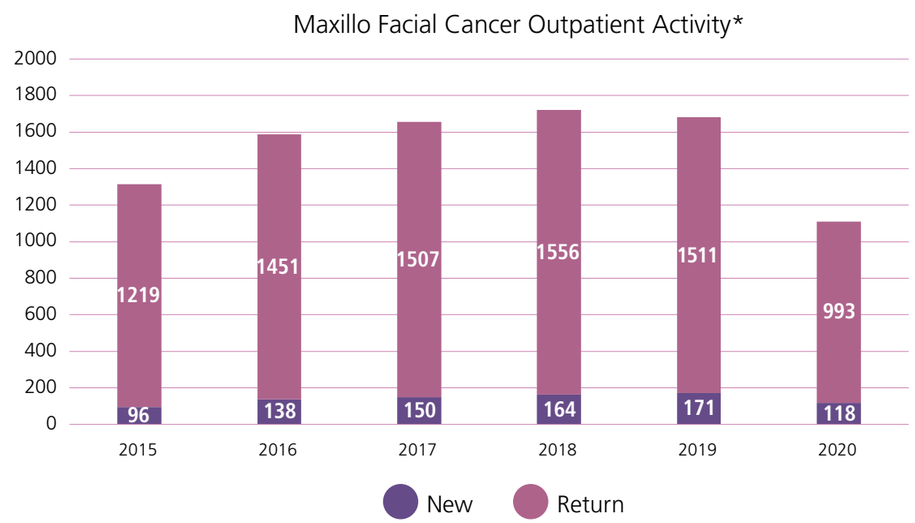
Ear, nose and throat (ENT) outpatient activity in 2020 compared with previous years

Figure 1 ENT Outpatient* Activity



*Activity reflects overall activity including non-cancer activity

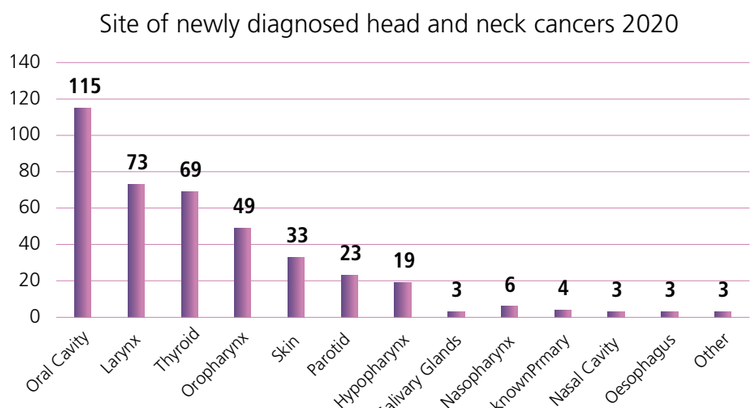
Figure 2 Maxillo Facial Cancer Outpatient Activity



*The activity shown in the graph above may not include all cancer attendances.

Number of new patients diagnosed with Head & Neck cancer in 2020* is 425
(* This is preliminary data and includes newly diagnosed patients and also patients for further first line treatment and patients who have recurrent Head & Neck cancer but their primary treatment was elsewhere. Excludes patients who have had MDT or follow up discussion only)

Figure 3 Site of newly diagnosed Head and Neck Cancers 2020



*Lymphomas removed

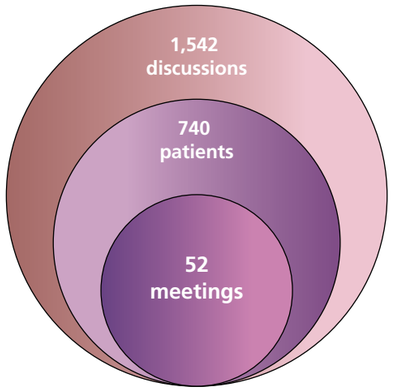
Weekly Multidisciplinary Team (MDT) meeting

At the weekly MDT in 2020, there were 1,542 patients discussed over 52 MDT meetings.

Key Achievements in 2020

- COVID-19 pandemic created many challenges for this very vulnerable and high risk cohort of patients, the service adapted rapidly to continue to provide highly specialised care. Virtual clinics were undertaken from March until June 2020 and then face to face clinics resumed for the patients who required in person examination.
- A tracheostomy nurse was appointed to increase the number from 1 to 2 WTE.
- All documentation was reviewed and updated and a new SOP for management of the patient with a tracheostomy during COVID-19 was developed.
- The head and neck cancer referral form for GPs was utilised to improve patient flow through St James's Hospital

Figure 4 Weekly Multidisciplinary Team (MDT) meeting



Key Priorities for 2021

- A dedicated head and neck ward, with specialist nurses and a High Dependency Unit (HDU). This would concentrate similar patients in the same ward leading to greater nursing expertise, earlier recognition of complications and overall a safer environment for our patients. This configuration will benefit patients with complex care needs, such as tracheostomies and free flaps. A specialised ward would allow more complex cases to return to the ward when appropriate, instead of the current system where an ICU bed is often needed, even for, for example, primary laryngectomies. A specialised ward would attract highly trained and motivated nurses. It would also lead to efficiencies as similar patients would be on the same ward. This would be beneficial for speech and language therapists, nutritionist, tracheostomy nurse specialist and clinical nurse specialists and ultimately improve patient safety.
- Increase data management resource from 0.5 WTE to minimum 1.0 WTE to ensure robust data capture for the growing number of complex head and neck patients managed by the MDT. This resource will support data collection to enable clinical audit, activity and service evaluation which is currently insufficient for the number and complexity of patients.
- Develop ANP roles within the multi-disciplinary team (MDT) in particular to support patient and the team in survivorship clinics
- Develop dedicated research team to improve academic output and assist in clinical trial co-ordination in keeping with our goal of becoming an accredited comprehensive cancer institute.
- Improve Speech and Language Therapy(SLT)/dietician numbers to meet the demands of the service and complexity of care required for our patients
- Access to a robot for Tran Oral Robotic Surgery (TORS) to support care pathway for patients

Histopathology and Biobank

Histopathology and Biobank

10.1 Histopathology

Introduction to the MDT team

The department has a current complement of 10.5FTE Consultant Histopathologists offering a subspecialized service in all cancer-related activities with active MDT participation. The suite of pathologists is listed below:

- Gastrointestinal & Hepatopathology Pathology: Dr Cian Muldoon, Dr Ciara Ryan, Prof Stephen Finn
- Breast Pathology: Dr Barbara Dunne, Dr Aoife Maguire, Dr Ciaran O'Riain
- Gynaecological Pathology: Dr Ciaran O'Riain, Dr Richard Flavin, Dr Aoife Maguire, Prof John O'Leary
- Genitourinary Pathology: Dr Barbara Dunne, Dr Niamh Leonard, Prof Stephen Finn
- Haematolymphoid Pathology: Dr Richard Flavin, Dr Barbara Dunne, Dr Michael Jeffers
- Dermatopathology: Dr Mairin Mc Menamin, Dr Niamh Leonard
- Head and Neck and Oral Pathology: Dr Mary Toner, Dr Esther O'Regan, Dr Bijal Shah
- Cytopathology: Dr Siobhan Nicholson, Dr Bijal Shah, Dr Aoife Maguire
- Thoracic Pathology: Dr Siobhan Nicholson, Dr Ciara Ryan

Summary Overview of Service

- The Histopathology Laboratory is part of the LabMed Directorate at St James's Hospital and is one of the largest histology laboratories in the Republic of Ireland, providing a comprehensive cancer service to the hospital itself as well as to many outside institutions, general practitioners and other hospitals nationwide.
- The department offers several excellent diagnostic facilities including automated immunohistochemistry, FISH, flow cytometry and molecular diagnostics.
- The Department offers sub-specialised cancer diagnostic reporting and is active in many undergraduate and postgraduate clinical and translational research projects in: Gynaecological, breast, lung, gastrointestinal, head and neck, dental, skin, soft tissue, haemato-lymphoid pathology and cytopathology.
- Cancer cases are discussed weekly at multi-disciplinary team meetings.
- The department is currently accredited by INAB ISO15189. The department is actively participating in the Faculty of Pathology NQAIS Programme. The Histology workload is consistently higher than the other 7 cancer centers throughout the year.

Total Histopathology Workload Figures for 2020:

In 2020, 23,378 patients had specimens processed through the Histopathology Department and 5,211 patients had specimens processed through the Cytology Department. 153,818 routine stains and a further 29,297 specialized ancillary stains were performed to assist with diagnosis, prognosis and therapeutic decisions.

The total workload (Table 1) included 1747 cancer resections reported across all sub-specialties (a decrease of 11% from 2019). 76% of cancer resections in 2020 were reported within a 10-day TAT.

Table 1: The total workload

Histopathology	Requests:	23,378
	Specimens:	50,820
	Number of blocks:	98,920
	Sections	153,818
	Referred cases	2,430
Cytopathology	Requests	5,211
	Specimens	6,824
	Procedures	15,566
	Referred cases	19
Cytology Procedures	Cell block	1,789
	Requested Cell Block	652
	Flow cytometry	105
	MGG	3,282
	PAP	6,709
	Specials and immunos TP	91
	Specials and Immunos CB	2611
Immunohistochemistry	IHC	25,840
	HER2 IHC	625
	Kappa / Lambda ISH	388
Specials Stains		4280
Mohs surgery cases		346
FISH/ISH	HER2 FISH Breast/Gastric	278
	ALK FISH	16
	ALK IHC	464
	EBV ISH	371
	HPV ISH	51
	Lymphoma FISH	1,253
	ROS1	11

Research:

Research Funding:
SFI CRT in genomics PhD studentship and Welcome HRB ICAT fellow (Prof Finn)
Publications: 35

Education:

- Number of residents: 7
- Number of fellows: 0
- Number of research trainees –
  MSc research: 2
  PhD/MD: 3/2

Key Achievements in 2020

- 2020 was a difficult year for the department with the onset of the COVID-19 pandemic. In a short amount of time, staff and management worked closely together to maintain histo/cytopathology services, while ensuring the safety of our staff and continuation of service provision to the highest quality.
- The department was heavily involved in research throughout the year with the publication of 35 research papers and poster presentations and two Medical Scientists successfully completed their Masters degrees.
- The department also retained their INAB accreditation status by working within a quality management system under the ISO 15189 standards.

Key Priorities for 2021

- Implementation and integration of the new National MedLIS IT system
- Procurement and implementation of a Digital Pathology Workflow system
- Acquire additional space and laboratory reconfiguration
- Enhanced laboratory automation

New People who joined in 2020

Dr Bijal Shah took up a Consultant post in the second half of 2020 and is involved in reporting Cytopathology and Head and Neck Pathology

10.2 Histopathology Biobank

Summary overview of service:
A Biobank is a large collection of human biological samples (tissue) and healthcare data, donated by people, for health research. Our aim is to provide samples and data to researchers both within St James's Hospital and to external entities in the hope that we learn about cancer; growth, prevention, early detection, diagnosis, tests, treatments, and drugs.

The principle objective of the St James's Hospital Histopathology Biobank is to facilitate research while simultaneously safeguarding the integrity of the diagnostic archive. To date the Biobank has collected over 11,000 samples donated by patients who have been diagnosed with breast or colon cancer. The Biobank also acts as a centralised storage facility for the storage of samples collected during the course of certain clinical trials which are co-ordinated by Cancer Trials Ireland.

Key Activities 2020:

- The Biobank Information Management System (BIMS) went "live" in November 2020. The BIMS is a dedicated biobank IT system that provides a means to securely store patient information, consent management, pathology diagnosis and sample related data in one location.
- Biobank is involved with St James's Hospital, Trinity College Dublin / TTMI and Biobank Ireland Trust in the development of an on-campus centralised Freezer Farm. Planning permission granted for this facility in November 2020.
- Key hospital collaborator in Irish Cancer Society funded Breast Predict Project.
- Key storage site for samples for Cancer Trials Ireland sponsored prostate cancer project(s).

Key Achievements in 2020:

- Irish Healthcare Awards:

Laura Tier 1st Commendation in the Category of Hospital Manager of the Year.
SJHHB shortlisted for Hospital Project of the Year.

Key Priorities for 2021 and onwards:

- Further integration of BIMS into SJHHB activities.

35
research papers and poster presentations

2
Medical Scientists successfully completed their Masters degrees

Lung Cancer

Lung Cancer

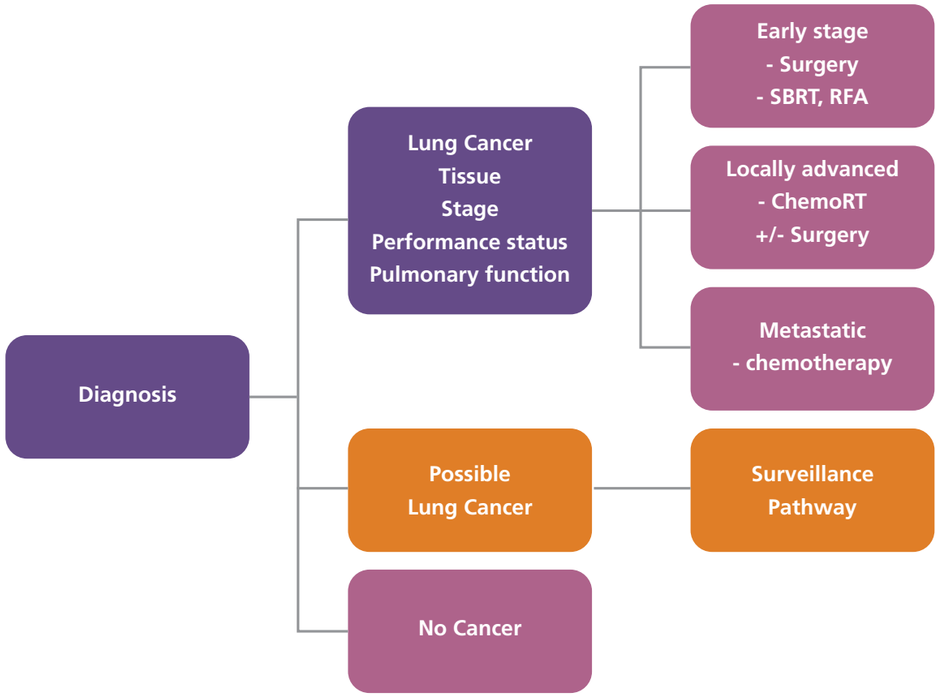
Introduction to the MDT team

The mission of the lung MDT is to provide best care for all lung cancer patients – safe, responsive, person-centered, with excellent outcomes. The MDT brings together the specialties required to achieve this, from respiratory medicine, diagnostic imaging and cytohistopathology, to thoracic surgery, medical oncology, radiation oncology and palliative medicine. Our oncology nurse coordinators ensure continuity of care for patients, with seamless transition between specialties, supported by clinical nurse specialists and advanced nurse practitioners. The MDT is underpinned by our data manager, MDT coordinators and research team.

Composition of MDT

Respiratory Physicians
Radiologists
Cytohistopathologists
Cardiothoracic Surgeons
Medical Oncology
Radiation Oncology
Palliative Care
Oncology Nurse Coordinators
Clinical Nurse Specialists
Data Manager
MDT Coordinator
Research Team

Figure 1: Lung Cancer Pathway



Summary overview of service

In 2020, 589 patients were diagnosed and/or treated for lung cancer at SJH. Despite the impact of COVID-19 on the Irish Health system, this was broadly similar to 2019 (651 patients).

1,394 patients attended the Rapid Access Lung Cancer clinic, and compliance with the 10-day access metric for new patients was 97%.

There were 46 MDT meetings, mostly over Zoom, at which 1,583 individual patient discussions were conducted (average 34 patients per MDT) regarding 989 patients (average 1.6 MDT discussions per patient). Our partner centres, who continued to Tele-link with the SJH MDT, include Limerick, Waterford, Mullingar, Tullamore and Letterkenny. MDT discussion is focused on tissue diagnosis, stage of disease, performance status and pulmonary function, in order to determine best management. Data is entered live at MDT to the electronic patient record by our data manager. Meetings are conducted in an atmosphere of collegiality, support, and respect for patients and each other.

Our thoracic surgical team continued to attend lung MDT meetings at Beaumont and Tallaght, thereby taking referrals from 3 of the 4 Irish Rapid Access cancer services which do not have thoracic surgery on site (Beaumont, Limerick, and Waterford) as well as satellite services at Tallaght and Letterkenny. 212 patients underwent surgical resection as their primary treatment for early stage disease, compared to 283 in 2019. During peak COVID-19 periods, our surgical teams carried out much of this work off-site. In total, 148 surgeries were carried out at SJH and 64 off-site. A small number of patients with early stage disease, who were deemed unfit for surgical resection, underwent stereotactic radiotherapy as primary treatment, and those with locally advanced inoperable, and metastatic disease, underwent combined chemo-radiotherapy, or systemic therapy respectively. Over 95% of patients entered active therapy with small numbers going direct to palliative care.

Key Data on Services

Figure 2: Hospital of Diagnosis 2020

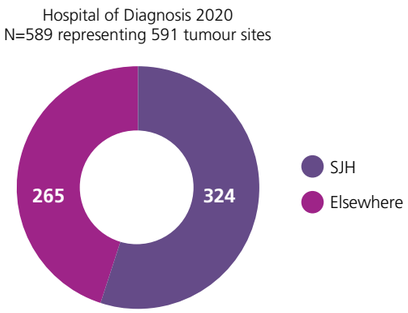


Figure 3: Proportion of SJH patients diagnosis via Rapid Access Lung Service 2020

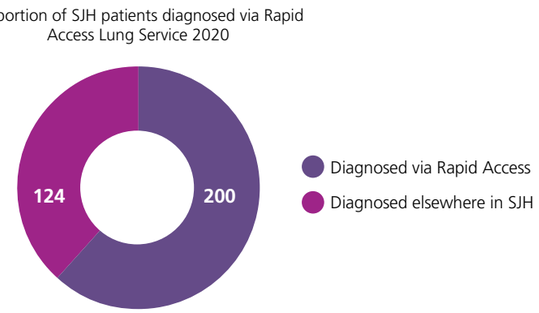


Figure 4: Rapid Access Lung Clinic Attendances 2020

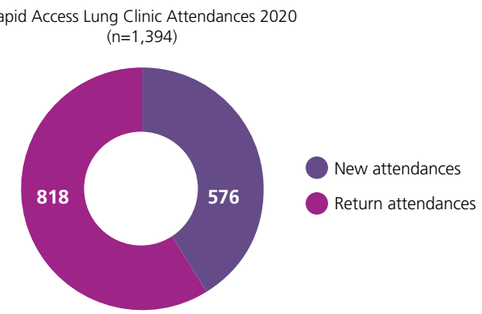


Figure 5: Rapid Lung Cancer Clinic Attendance 2016-2020

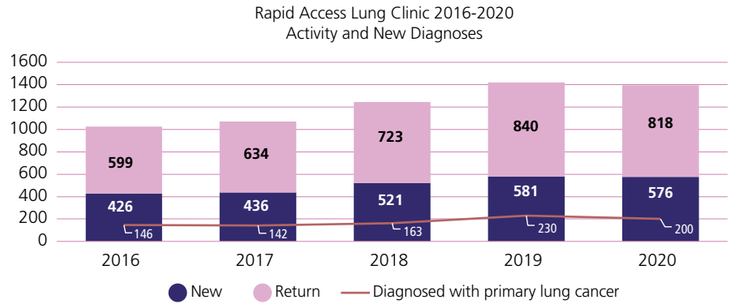


Figure 6: Lung Cancer MDM 2020

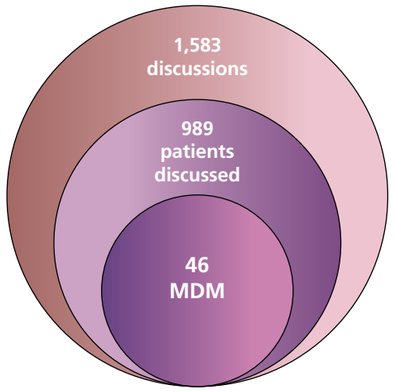
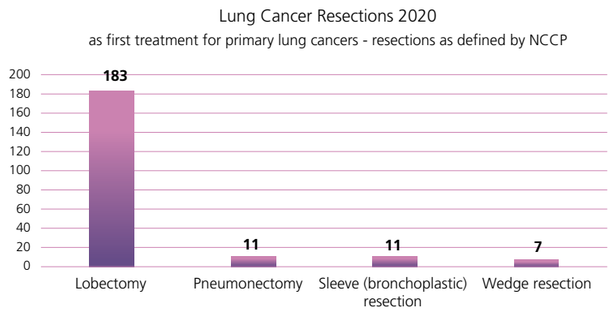


Figure 7: Surgical Resections as Primary treatment for Lung Cancer 2020



Other services

- 750 patients attending the nurse-led post-surgical surveillance clinic
- 20 peer-reviewed publications

Key Achievements in 2020

- Maintenance of high-volume diagnostic and treatment pathways for lung cancer during the COVID-19 pandemic.
- 97% compliance with access metric (10 working days) for Rapid Access clinic.
- Seamless transition of patients for surgical resection to private hospitals during COVID-19, coordinated by the thoracic nursing team.
- Robotic surgical resection off-site (9 patients)
- Maintenance of low pneumonectomy rate with lung preserving surgery.
- VATS – now 59% of all anatomical lung resections (European Society for Thoracic Surgery (ESTS) audit figures 2020)
- Teaching and mentoring of BSc, MSc & PhD students undertaking degree programmes at TCD.
- Internal & external examiners for PhD theses at TCD and from other national, European & international academic institutions.
- 4 Cardiothoracic nurses commenced the Higher Diploma in Cardiothoracic Nursing at TCD.
- Patient Information evening on Cancer Survivorship, February 2020, coordinated by the Lung Cancer Surveillance and Survivorship nursing team.
- Adjudication at the Global Undergraduate Awards.
- Review of abstracts for the 2020 Congress of the European Respiratory Society (ERS) and the 2020 World Conference on Lung Cancer.
- Senior Research Fellow elected President of Lung Cancer Europe (LuCE), a non-profit umbrella organization working at the European level to be the voice of people impacted by lung cancer.
- Clinical Scientists within the Thoracic Oncology Research Group were appointed to the Editorial Board of the following journals:
  - » Translational Oncology
  - » Cancer Treatment & Research Communications
  - » Clinical & Experimental Medicine
  - » Biology
  - » Cancers
  - » BMC Pulmonary Medicine

Spotlights of new initiatives and developments

Following a successful trial in Autumn 2019, all surgical cases are now entered live into the European Society for Thoracic Surgery (ESTS) Database. Robotic surgical resection commenced off-site, while we await development of the robotic surgical theatre at St James's. VATS lobectomy rate increased significantly, with 59% of all anatomical lung resections now carried out by VATS (ESTS Audit figures 2020).

A consultancy project commenced with US non-profit LUNGevity Foundation on "Project PEER", a longitudinal study to trace patients' journeys through lung cancer treatment (surgery, immunotherapy, clinical trials).

The 5th Donegal Shines a Light on Lung Cancer fundraising event was held and Target Lung Cancer continues to actively fundraise through the St James's Foundation. We are immensely grateful for the continued support of our patrons and sponsors, and for those who have given generously to this cause.

A multi-disciplinary working group was established to introduce the Enhanced Recovery After Thoracic Surgery (ERATS) Guidelines. This holistic multi-pronged approach, focused on pre-op assessment, fasting times, smoking cessation support, patient education and post-op pain management contributes to reduce post-op hospital stay. It is planned to introduce a 6-month Thoracic Foundation Nursing course for new nursing staff, who will gain certification in proficiency in the management of thoracic surgery patients.

Key Priorities for 2021 and onwards

- Alignment with the missions, aims and objectives of the Trinity St James's Cancer Institute, and the strategic vision for the development of a unique and comprehensive Heatlthcare campus at SJH.

Surgery:

- ERATS – additional ANP to develop thoracic surgical PAC, update ERATS program with a focus on fasting protocol / anesthetic management / analgesic protocol, update post-operative care protocols delineating VATS lobectomy pathway;
- Preparation for introduction of robotic surgical resection on site.

Surveillance pathway:

- Nurse coordinator/ANP for pathway for patients with lung nodules and other focal CT/imaging abnormalities which require surveillance

Multidisciplinary Team Meeting Coordination

Multidisciplinary Team Meeting Coordination

Introductions to the Multidisciplinary Team Meeting Co-ordination Team

The Multi-Disciplinary Meeting Coordination team (MDT) coordination team consists of one WTE Grade V manager and three WTE Grade IV clinical coordinators, with support from the HOPe Directorate Services Manager. Each MDT coordinator works with their clinical team and external hospitals to ensure all information required is available for diagnosis, staging and treatment discussion at the meeting. In 2020 the MDT adapted their way of working to virtual meetings. There are no in person meetings. Each MDM is hosted through Zoom, charts are no longer retrieved for each MDM, relevant reports are scanned to EPR and reviewed.

Table 1 Participating External Hospitals

MDT	Participating External Hospitals
Head and Neck	Tullamore, Royal Victoria Eye and Ear, Tallaght
Gynaecology	External referrals to St James's Hospital. No external MDT attendance
Lung	Mullingar, Letterkenny, Limerick, Waterford, Tullamore
Breast	External patient referrals to St James's Hospital. No external MDT attendance
Upper Gastrointestinal & Colorectal	Tullamore
Lymphoma	Tullamore, Waterford, Tallaght, Limerick
Skin	Tallaght
Urology	External patient referrals to St James's Hospital. No external MDT attendance

Summary overview of service

Multidisciplinary Meetings (MDM) are a key component in the management of patients with cancer. The cancer MDM provides a forum through which the relevant multidisciplinary specialists discuss each patient's clinical presentation, radiological, histopathological and other relevant findings in order to generate an appropriate individualised treatment plan based on current best practice.

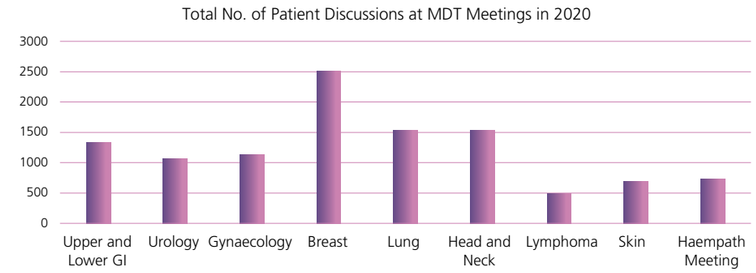
Currently there are eight cancer MDM held weekly to establish consensus diagnosis and treatment plans for all cancer patients. Each month on average 900 patients are discussed. In 2019, 10,622 patients were discussed and in 2020, 10,286 patients were discussed at MDM. In addition to the eight MDM there is a weekly Haempath meeting, 725 patients with blood cancers and hematological conditions were discussed at the Haempath MDM in 2020.

Key Data on Services

Table 2 Total number of patient discussions at MDT meetings in 2020

Total Number of Patient Discussions at MDT Meetings 2020	
Upper and Lower GI	1333
Urology	1065
Gynaecology	1128
Breast	2511
Lung	1540
Head and Neck	1538
Lymphoma	485
Skin	686
Haempath Meeting	725

Figure 1 Total No. of Patient Discussions at MDT Meetings in 2020



Quality improvement projects

The development of the digital MDT pathways across all cancer specialities is a key priority.

Quality improvement projects are ongoing within MDT the aim of which is to manage all MDM through an electronic platform and captured on the electronic patient record (EPR). This will improve how the MDM is coordinated, the resources required to prepare for the meeting and on the capture of data.

Quality improvement plans for 2021 and onwards includes:

- Development of KPIs for each MDT
- Establish SOP for MDM governance, oversight and review
- Implementation of electronic MDM order forms
- Implementation of electronic MDM outcome forms

Key Achievements in 2020

The COVID-19 pandemic changed how MDT were conducted and they very quickly responded to move to being conducted electronically.

- All in-person MDM ceased and all meetings transferred to Zoom. This process has continued.
- Historically charts were required for most of MDM. In response to COVID-19 charts are no longer required for MDM.
- For patient quality care and safety, the aim is for all MDM outcomes to be recorded directly to EPR by an attending clinical professional in real-time at the meeting. MDM outcomes can be saved, and consultants can 'sign off' and close the order at the end of the meeting. EPR outcome proforma's also enable data capture for coding, more accurate activity and data analysis and act as a way to help identify cancer diagnosis patients with cancer in the hospital. This initiative is making good progress and will continue into 2021.

Spotlights of new initiatives and developments

- In response to the COVID-19 pandemic charts are no longer required for MDT
- In response to the COVID-19 pandemic all meetings are held virtually

Key Priorities for 2021 and onwards

- Continuation of 2020 EPR outcomes proforma initiative to enhance patient quality care and safety.
- Continuation of real time capture of MDM outcomes, with consultant 'sign off' at the end of the meeting
- Engagement with IMS to improve EPR multi patient task list functionality for MDM
- Formation of the MDT working group to drive quality improvement
- Standardise Electronic external referral process for MDM
- Develop KPIs in conjunction with OECI standards
- Continued collaboration with HOPe, Trinity St James's Cancer Institute (TSJCI) Programme Office and IMS to standardise and future proof MDM processes
- Clear communication and collaboration with all involved in MDT pathways for adherence to best practice and continued quality improvement
- Establishment of Haematology MDM, Myeloma, and CAR-T

Medical Oncology

Medical Oncology

Introduction to the MDT team

The Medical Oncology team at St James's Hospital comprises of 8 Consultant Medical Oncologists in conjunction with the HOPe Operations Manager Ms Sarah Almasry, ADON Ms Norma O'Riordan and HOPe Clinical Director, Dr John Cooney

Consultant Medical Oncologist team and areas of special interest;
Prof John Kennedy - Breast Cancer
Dr Cliona Grant - Head and neck, Sarcoma, Lymphoma
Dr Dearbhaile O'Donnell – Urology, Gynaecology
Dr Sinead Cuffe - Lung, Gastric, Oesophageal, Melanoma
Prof David Gallagher –Colorectal, Cancer genetics,
Prof Karen Cadoo – Gynaecology, Cancer genetics
Prof Maeve Lowery – Gastric, Oesophageal, Pancreatic
Dr Fergal Kelleher - Melanoma, Sarcoma
Dr Sue Sukor – Assoc. Specialist Medical Oncology

Summary overview of service

The Medical Oncology Service provides a comprehensive service for patients with a suspected or confirmed diagnosis of cancer. All patients suspected of having cancer are discussed at a multidisciplinary team meeting, where individual treatment plans are agreed. The service strives to improve quality of life for patients and reduce cancer-related deaths by providing advancing cancer therapies. The service is closely integrated and aligned with surgical and radiation oncology, cancer clinical trials, radiology, histopathology and molecular diagnostics.

The oncology service provides treatment on an inpatients and outpatient basis. The service is consultant led and includes an associate specialist medical oncologist, a team of specialist nurses, pharmacists allied health care professionals who provide care to patients with cancers, with support from a team of administration staff.

The Donal Hollywood Ward is the specialist oncology ward for inpatients.

The majority of patients receive care on an outpatient basis within the Haematology and Oncology Day Centre [HODC] and the Outpatient Department.

Patients attend HODC for medical and nursing reviews, procedures and treatment, such as systemic anticancer treatments [SACT], blood transfusions, haematopoietic stem cell transplant [HSCT] support and stem cell harvesting.

HODC includes two treatment bays with 18 couches for patients receiving intravenous chemotherapy. It also includes 5 isolation rooms and a 2 chair apheresis unit.

Key Data on Services

Medical Oncology
Oncology outpatient and day case activity remains high with 27,707 combined attendances in 2020.

2020

1,120 NEW OUT PATIENTS

16,707 RETURN OUTPATIENTS

- Inpatient Discharges total 1260. Average of 105 inpatient discharges per month.
- Average length of stay was 10.9 days in 2019.
- Day care Discharges total 9880. Average of 824 day case discharges per month – reduced from 2019 due to COVID-19 pandemic.

2020

9,880 DAYCASE DISCHARGES

1,260 INPATIENTS DISCHARGES

Table 1 New and Return Outpatients in Oncology

	2014	2015	2016	2017	2018	2019*	2020**
Oncology OPD	11994	10985	11756	12361	12713	16138	17827
Oncology Daycase	6638	8986	9823	10609	10246	11095	9880

** Note: Patients attending for consultation on the same day as treatment are now registered separately as of July 2019. This change in practice accounts for some of the increase in OPD figures for 2019. Day case numbers are not affected by this change.*
*** Day case numbers reduced by approx. 25% in Mar to June 2020 due to COVID-19 pandemic – this accounts for drop in overall annual numbers when compared with 2019*

Spotlights of Quality Initiatives and Service Developments during 2020

- **HODC Expansion** – gained 3 consultation rooms, 2 isolation rooms, addressing capacity, demand and NCCP COVID-19 social distancing guidelines
- **Acute Haematology Oncology Service** – This nurse led service in HODc functions from Monday - Friday (8.00- 16.30 Mon-Thurs and 8.00 – 15.30 Friday). The service provides timely recognition of symptoms, access to specialised assessment and appropriate management of symptoms. Referrals are made via telephone triage line and are appointment based attendance.
  Benefits;
  - » reduction in Haematology/Oncology ED attendance
  - » admission avoidance
  - » reduction in re-attendance for unscheduled care and provides streamlined access to care for patients
  - » provides timely recognition of symptoms, access to specialised assessment and appropriate management of symptoms
  - » enhanced outcomes for patients with cancer
- **HODC Phlebotomy Support** – the expansion of phlebotomy support using Swift Queue technology has reduced the patient journey significantly. Swift queue is an online system used by St James's Hospital and the HSE which enables patient appointment booking for Phlebotomy. The Patient Representative Group [PRG] patient survey feedback confirmed the average patient waiting time experience for phlebotomy service via Swiftqueue has been reduced from an average of 40-60 minutes to 7-10 minutes. We plan to continue and expand this service into 2021.
- **Telemedicine adoption** - remote delivery of healthcare services where appropriate within Haematology, Oncology and Cancer Genetics Services enabled the service to overcome COVID-19 restrictions without compromising patient care and establishing the following benefits.
  - » Enhanced patient and provider comfort with telemedicine and increased its acceptance. Particularly in these uncertain times of COVID-19 restrictions, there are many benefits to using telephone or video conferencing to support.
  - » Minimise risk of in person contact; patient-to-clinician, patient-to-patient waiting room, patient-to-public during travel to the hospital, including reduction in COVID-19 related patient anxiety.
  - » OPD clinic capacity restrictions and reduce patient footfall.

Research:

A number of research publications were successfully published in peer reviewed journals. All listed in publications section.

Dr D. O'Donnell continues to be part of Trial Management Groups of the multinational cancer clinical trials ICOn-8 and TIGER.

Education:

Dr O'Donnell was part of the multidisciplinary international ESGO/ESTRO/ESP group which developed and published guidelines for the management of patients with endometrial cancer.

Key Achievements in 2020

- Active and continuous involvement in improving standards leading to achieving OECI Cancer Centre accreditation
- Significant contribution by the medical oncology team into research activity and healthcare policy development at local, national and international levels
- Project team preparation for implementation of the National Cancer Information system (NCIS), Clinical Lead for project is Dr Dearbhaile O'Donnell Consultant Medical Oncologist
- HODC Expansion
- Introduction of the Acute Haematology Oncology Clinical Nurse Specialist Service

Key Priorities for 2021

- Continue to expand collaborative participation in translational clinical research.
- Expand the use of Community Intervention Teams (CIT) and services.
- Expansion and implementation of locally developed and NCCP key performance indicators.
- Engage with key stakeholders to increase the number of cancer clinical trials available to patients and patients enrolled onto a cancer clinical trial in 2021.
- Ongoing quality assurance to maintain this OECI accreditation and designation status.
- Introduction of a National Cancer Information System [NCIS] in collaboration with NCCP.
- Expand the use of Swiftqueue Phlebotomy Service in collaboration with Laboratory Medicine Directorate.
- Introduction of a new digital dictation system to improve the capture and sharing of clinical patient information.
- Introduction of an Appointment Scheduling system in collaboration with Swift Queue.

New People who joined in 2020

- Prof Karen Cadoo was appointed as Consultant Medical Oncologist and Cancer Geneticist
- Andrea Ferguson appointed CNM III to HOPe Directorate incorporating Cancer Clinical Trials
- Emma Rowan appointed Clinical Nurse Manager (CNM III) to HODc
- Claire Kelly was appointed Clinical Nurse Specialist (CNS) in Palliative Care
- Katie O'Neill was appointed CNS in Oncology
- Maria Gillespie was appointed Hope Quality Manager
- Maria Boyle appointed CNS in Acute Haematology Oncology
- Bernadette McGee appointed CNM I HODc
- Brigid Brennan was appointed as Directorate Services Manager

Nursing

Nursing

Introductions to the MDT team

The Cancer Nursing Team engage with patients through many disciplines which include; diagnoses, surgery, radiation, chemotherapy, survivorship and specialist palliative care (when required). The ethos of our care delivery is that delivery is an evidence-based approach, where we place the patient at the centre of all activities. The Nursing Team is competent and progressive, and advocates on behalf of the patient within the Multidisciplinary team. Their skillset and dedication ensure that high-quality and safe patient care provision is afforded to every patient across all Clinical Directorates (including; Medical, Surgical, Oncology and Haematology and the Care of the Elderly and include both inpatient and ambulatory care services).

Summary Overview of Service

The World Health Organization designated 2020 as 'The Year of the Nurse', which paid tribute to the contribution of Florence Nightingale towards global health and humanity. The cancer nursing profession was required to exhibit endless resilience, professionalism and adaptability in multiple and wide-ranging capacities to address the unforeseen responsibilities and workload required throughout the ongoing COVID-19 pandemic.

Numerous cancer nursing clinics reverted to a 'Telehealth' service delivery during the pandemic, including; surgical cancer nursing, palliative care, and cancer survivorship. Daffodil Centre Nurses (representing the Irish Cancer Society) collaborated with SJH nursing staff to provide patient education in-advance of them receiving SACT (Systemic Anti-Cancer Treatments) through phone-based sessions. Patients attending SACT appointments were required to be inducted through a patient check-point to monitor patient temperatures and complete a comprehensive COVID-19 assessment prior to accessing the Haematology Oncology Day-ward. Cancer patients requiring a review were treated and followed a "COVID-19 Pathway" to protect other cancer patients within the hospital environment.

The redeployment of some cancer nurses was undertaken to augment the Palliative Care, Intensive Care and Occupational Health units' subject to skill-set requirements and availability.

Cancer nurses received stellar support from colleagues from the Psychological Oncology and End of Life teams in various supportive sessions, and there is immense gratitude for their time and consideration. Despite the challenges of this ongoing COVID-19 era, cancer patient care and quality improvement initiatives continue apace.

Key Data on Services

The recruitment of cancer patients for clinical trials during 2020 proved challenging. Due to the pandemic; recruitment was paused for a four-month period (March –June inclusive), during which no new trials commenced. However once recruitment was permitted,12 clinical drug trials and one interventional research study were launched during the latter half of 2020.

The Bowel Screening nursing team adopted a 'paperless' policy and recommenced their service provision towards the support and reassurance of bowel screen patients. The Colorectal CNS team evaluated a 'Patient Passport', which was developed by the NCCP. It is a personal document enabling patients to record both progression and events during their cancer trajectory, and its' evaluation (in collaboration with patients) will continue throughout 2021.

The Dermatology Surgical CNS team convene a weekly nurse-led clinic to provide immediate post-operative wound care for primary and secondary intention wounds, including skin cancer patients.

The clinic involves:

- The care of skin grafts, flap repairs (including but not limited to paramedian forehead flaps, large advancement flaps)
- General sun protection advice and particular advice in relation to sun and scars
- Skin check advice on any early indications (signs) of future skin changes and potential skin cancer evidence.

Quality:

- A validation exercise on the Breast Care Family Risk service was led by Yvonne P Hanhauser (ANP). All new patient referrals were assessed, and appointments provided through an innovative nurse-led telephone triage service.
- The Family Risk service is presently developing nurse-led group sessions for newly diagnosed BRCA carriers. It is envisioned that this will be more time- efficient, and will reduce clinical work load; whilst providing access to peer support for patients. The Breast ANP & CNS Teams successfully completed a Focus Group training course to facilitate the delivery of the nurse-led group.
- Cancer Clinical Trial nurses collaborated with the Cancer Nursing Group on their ongoing research and development towards the publication of a patient information leaflet.
- A review clinic was piloted in the Clinical Research Facility for Cancer Clinical Trial patients towards the end of 2020, which effectively reduced the patient pathway. Resultantly, a new cancer clinical trial review and treatment clinic are scheduled to commence during 2021.

Research:

The Irish Cancer Society Research Nursing award was awarded to the Breast Care Nursing in collaboration with Trinity College academia in 2019 for their development of a "Risk Reduction Patient Decision Aid Toolkit for Women with a BRCA+ Gene Mutation" (which commenced during 2020). Their study is currently ongoing and scheduled for completion in 2022. To-date, their study is finalising a scoping review of BRCA risk reduction methods, surveillance and decision aids available, and has concluded focus groups with key stakeholders. The next steps are to commence E-delphi study focus groups and create an online decision aid (Q3 2021).

Other ongoing cancer Nursing Research activities during 2020 included;

- Yvonne P Hanhauser (ANP) continued to contribute towards 'The Cochrane Review of Risk Prediction Models for Familial Breast Cancer'.
- Maria Boyle, Acute assessment clinical nurse specialist and Norma O'Riordain Assistant Director of Nursing HOPe Directorate 'Acute Haematology Oncology Day Care in a Cancer Institute: A Service Evaluation'
- Peig Carroll, Quality Manager HOPe, Noreen Waldron Cancer Clinical Trials CNM II, 'Patient Feedback from Patients attending the Haematology Oncology Day Centre (HODC)'.
- Deirdre Byrne CSN, DBW, Fidelma Dowdall CNM II DBW: 'Implementing a program of self-care to Haematology patients during COVID-19 pandemic'
- Norma O'Riordan, Maria Boyle, Emma Rowan: 'Adaptations in Practice in a Single Irish Haematology Oncology Ambulatory Care Centre during the first 4 months of the COVID-19 Pandemic in Ireland'
- Accepted for publication by BMJ: Yvonne P Hanhauser, Sarah A McGarrigle, Carol Spillane, Niamh Byrne, Geraldine Prizeman, Amanda Drury, Elizabeth M. Connolly, Anne-Marie Brady. 'Risk management options and decision-making supports for female BRCA mutation carriers: a scoping review protocol'
- Poster presentation accepted for ABS May 2021: Yvonne P Hanhauser, Sarah A McGarrigle, Carol Spillane, Niamh Byrne, Geraldine Prizeman, Amanda Drury, Elizabeth M. Connolly, Anne-Marie Brady. 'Risk management options for BRCA mutation carrier; a decision-making needs assessment'
- Dr Maria Walsh, Stephen McDermott & Dr Norma O'Leary
  'A Retrospective Cohort Study of Hospitalised Patients with COVID-19 receiving Specialist Palliative Care Support'

Education:

Post-graduate learning has been undertaken as-follows;

	Position	Qualification attained during 2020
1	Dermatology Nurse	MSc. in Clinical Dermatology
1	Staff Nurse – Gynaecology & Head/Neck Surgical Ward	Post-graduate Diploma in Adult Cancer Nursing (UCD)
6	Cancer Staff Nurses – HOPe Directorate	Post-graduate Diploma in Cancer Care & Haematology
2	Cancer Clinical Trial Nurses	MSc. in Clinical Trials & Clinical Practice (UCD)
3	Oncology CNS	MSc. in Advanced Nursing Practice (UCD)
	Position	**Course commencement during 2020**
1	CNM 1 – HOPe Directorate	Post-graduate Diploma in Cancer Care & Haematology (TCD)
1	Oncology CNS	MSc. in Clinical Trials (UCD)
2	Cancer Staff Nurses – HOPe Directorate	Post-graduate Diploma in Cancer Care & Haematology (TCD)
1	Breast CNS	Post-graduate Diploma in Adult Cancer Nursing (UCD)

Key Achievements in 2020

New Service: Acute Oncology Haematology Service During July 2020, an Acute Haematology Oncology CNS Service commenced within Haematology Oncology Day Care. Its function is to implement a direct route to specialised assessment for Oncology Haematology patients who are experiencing disease or treatment-related complications. The CNS provides specialised assessment and care via teleconsultations and in-person attendances at the Unit, which has positively-contributed to emergency department avoidance during the COVID-19 pandemic. There was a total of 132 attendances by unwell patients to the service from July-December which represented an average of 22 patients per month. Admission to SJH was streamlined for 45% (n= 59) of patients who attended and 55% (n= 73) of patients avoided a hospital admission. It is anticipated that the service will continue to expand in-line with future service engagement.

The Dermatology Nursing Team continued to operate for those who required either an urgent OPD review or surgery due to high-risk tumours.

Niamh Kiely (cardiothoracic ANP) managing Lung Surveillance & Survivorship service and Catherine O'Brien (ANP Cancer Survivorship) coordinated a successful cancer survivorship information evening for patients and their families in February 2020. The evening was attended by seventy patients and their family members from SJH and nationally.

Our Cancer Clinical Trials had the highest patient recruitment within the UK & Ireland for the MK3475-859 trial ("Phase 3, randomized, double-blind clinical study of pembrolizumab (MK-3475) plus chemotherapy versus placebo plus chemotherapy as first-line treatment in participants with previously untreated, HER2 negative, advanced gastric or gastroesophageal junction adenocarcinoma"). This is a significant Phase III clinical trial which is sponsored by MSD with Prof Maeve Lowery as the Principal Investigator at SJH and patient care delivery via the Clinical Trial Nursing team.

Spotlights of new initiatives and developments

- The continued delivery of Nursing education (which has transitioned to virtual teaching and learning via Zoom), were accessible by SJH staff and staff from other Hospitals nationwide, which included; the first roll out of the Fundamentals in Oncology course, The Foundation Course in Cancer Care & Haematology, and a Specialist Palliative Care course.
- Planning has commenced towards the launch of a Chimeric Antigen Receptor (CAR) T-cell therapy programme with a Nursing focus.
- The continued collaboration between the Trinity College Dublin School of Nursing and Midwifery, and St James's Hospital emboldens our drive towards an increasing contribution to cancer nursing and research in Ireland.
- Expansion of Nurse-Led clinics (including Telehealth).
- The Dermatology Nursing Team continue virtual wound reviews and are committed to weekly nurse-led surgery lists to ensure time-sensitive diagnostic biopsies and excision of suspicious lesions.
- Newly appointed Andrea Ferguson CNM 3 in Cancer Clinical Trials (since December 2020) will lead and manage the nursing team in conducting dedicated cancer trial clinics in the Clinical Research facility.
- The Colorectal Cancer CNSs and Bowel screen CNSs intend to research and explore clients' experience of cancer diagnosis following detection through the bowel screen service.

Key Priorities for 2021 and onwards

- Our key focus is our accreditation as an OECI comprehensive cancer centre through continuous improvement and provision of patient centered care including co-production and co-design. An additional accreditation target is 'Magnet 4 Europe Hospital' status.
- The planned integration of a Medical Ward into the HOPe Directorate will require education and supports for incoming nursing staff through education programmes and specialised Clinical Skills Labs.
- Commencement of the Car T-Cell programme.
- Development of an Adult Young Adolescents (AYA) service for cancer patients
- The Breast Care Nursing Team will deliver Nurse-Led group sessions for newly-diagnosed BRCA carriers.
- Cancer Clinical Trials Nursing team will care-for enrolled patients in the Clinical Research Facility.
- The Surgical Cancer Nursing team plan to develop an accredited education programme tailored towards SJH nursing needs.

New People who joined in 2020

Throughout 2020 we welcomed many new Staff Nurses across both the Medical Oncology/Haematology & Surgical Cancer Ward settings, which included the following promotional grade posts;

- Emma Rowan - Clinical Nurse Manager (CNM III) to HODc
- Andrea Ferguson - CNM III to HOPe Directorate incorporating Cancer Clinical Trials
- Bernadette McGee - CNM I HODc
- Claire Kelly - Clinical Nurse Specialist (CNS) in Palliative Care
- Katie O'Neill - CNS in Oncology
- Maria Gillespie - HOPe Quality Manager
- Elizabeth Higgins - Chimeric Antigen Receptor (CAR) T-Cell Co-Ordinator
- Grace Faulkner - CNS in Haematology
- Maria Boyle - CNS in Acute Haematology Oncology
- Siobhan Ni Chinneide - CNS in Breast Care
- Grainne Kelly - CNS in Urology
- Leonie Mahon - CNS in Malignant Melanoma
- Maeve Stenson - Registered ANP in Breast Care Radiology

Oesophageal and Gastric Cancers

Oesophageal and Gastric Cancers

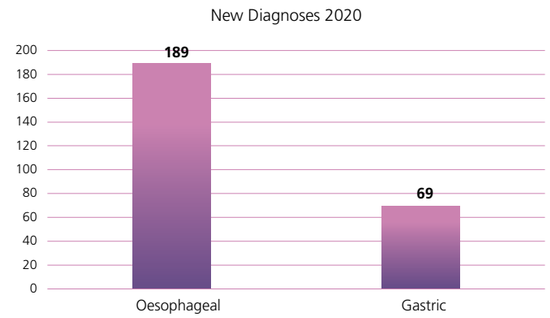
Overview of Service

St James's Hospital is the National Centre for Oesophageal and Gastric cancer, and also the National Centre for early mucosal neoplasia. It has well defined MDT structures and pathways. The Multidisciplinary team includes Prof John Reynolds (National Lead), Prof Narayamasamy Ravi, and Ms Claire Donohoe (surgeons); Prof Dermot O'Toole and Dr Finbar Mc Carthy (specialist gastroenterology); Dr Moya Cunningham (radiation oncology); Prof Maeve Lowery, Dr Lore Komanyane (medical oncology), Ms Jennifer Moore and Ms Catherine O'Farrell, (CNS) and Ms Sinead King, (data manager). The Team is complemented by senior staff from dietetics, physiotherapy and speech and language therapy. It also includes the staff on Bennett's Ward, P3, ICU and HDU.

Key Data on Services

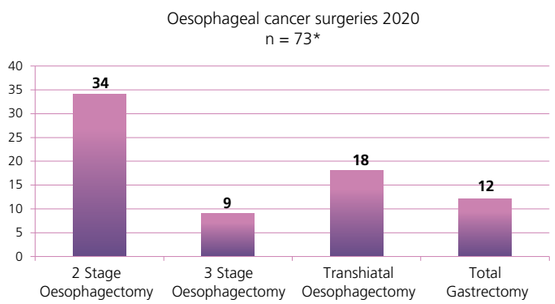
- Upper GI OPD attendances
  - » New outpatients: 712
    includes cancer and non cancer
  - » Return: 2,206
- 1,333 MDM
- 258 new upper gastrointestinal cancers diagnosed
- 93 surgeries completed; 73 oesophageal and 20 gastric surgeries
- 59% of patients with oesophageal cancer were treated with curative intent
- 45% of patients with gastric cancer were treated with curative intent

Figure 1: New Diagnoses 2020



15.1 Oesophageal Cancer

Figure 2: Oesophageal cancer surgeries 2020

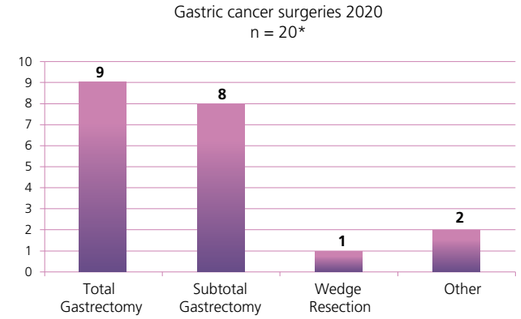


*includes patients diagnosed in 2019 & 2020

- En bloc radical 2 stage oesophagectomy was the most common type of surgery, involving laparotomy and thoracotomy

15.2 Gastric Cancer

Figure 3: Gastric cancer surgeries 2020



* includes patients diagnosed in 2019 and 2022

Key Achievements in 2020

The most significant achievement was the completion of the Neo-AEGIS trial which had Prof Reynolds as Principal Investigator, and was administered by Cancer Trials Ireland, and enrolled 378 patients from Ireland, the UK, Denmark, France and Sweden. This randomized trial compared best available preoperative chemoradiotherapy (CROSS regimen) with best perioperative chemotherapy (MAGIC/CROSS).

There was also a major increase in the endotherapy programme for early mucosal oesophageal cancer at the TSJCI, under the leadership and clinical care of Prof D. O'Toole and N. Ravi.

In clinical research, patients are linked in to the RESTORE trial of multimodal rehabilitation following major cancer surgery, and all patients are pre-habilitated in collaboration with the Department of Physiotherapy and Ms Sarah Moore, in particular.

The Nutrition Survivorship Clinic, led by a senior dietician, Ms Michelle Fanning, provides follow up on all patients who have had oesophageal cancer surgery, as well as detailed management of patients who are diagnosed with malnutrition or malabsorption

Numerous publications submitted or for submission including (a) An audit of operative outcomes from the National Centre at St James's Hospital compared with best international benchmarks; (b) A study of visceral obesity and metabolic syndrome and impact on operative and oncological outcomes in oesophageal cancer; (c) A study of liver function before and after oesophageal cancer surgery; (d) Prospective analysis of pneumonia and surgical site infection in oesophageal cancer; (e) A 10 year audit of operative and oncologic outcomes after oesophageal cancer surgery; (f) Biology vs Anatomy across the spectrum of oesophago-gastric junction adenocarcinoma, and (g) early experience with FLOT regimen chemotherapy and en bloc oesophageal cancer surgery.

National Clinical Guidelines for oesophageal cancer were developed with the NCCP, Prof Reynolds chaired this group which had significant input from Prof Dermot O'Toole (gastroenterology), Prof Ravi and Ms Donohoe (surgery), Prof Ciaran Johnson (radiology), and Dr Cian Muldoon (pathology).

Key Priorities for 2021

- Creating a new post, with a particular focus on robotic assisted cancer surgery.
- Scientific research, including publications on (a) a microRNA signature predicting response or resistance to chemoradiation; (b) the prognostic significance of the immunoscore in oesophageal cancer; and (c) visceral obesity and the tumour microenvironment.
- Creating a national network, already approved, for reporting of all oesophageal cancer cases within an international database (Esodata.org)
- Increase participation in new clinical and translational trials, particularly in metastatic disease, under the Lead of Prof Maeve Lowery
- Collaborating in international database trials, including TIGER, TENTACLE, CARDIA, and NEEDS
- Develop new posts as ANP in specialist nursing, in dietetics, and speech and language therapy
- Increase molecular testing within pathology for both oesophageal and gastric tumours to support personalised treatment and enable clinical research
- Standardisation of MDT process and data capture on the electronic patient record (EPR)
- Standardisation of the patient pathway

Pharmacy

Pharmacy

Introduction to the MDT team

There is a large pharmacy department in St James's Hospital. There are over 80 staff members within the department. The Pharmacy Department is led by the Director of Pharmacy; Gail Melanophy. The Haematology/ Oncology Clinical Pharmacy Team is managed by Chief II Pharmacist; Sinéad Smith. The Aseptic Compounding Unit Team is managed by Chief II Pharmacist; Martin Flattery.

There is a team of senior pharmacists, rotational basic grade pharmacists and pharmacy technicians dedicated to providing specialist, high quality care to cancer patients who attend the St James's Cancer Institute for treatment.

Summary Overview of Service

In 2020, COVID-19 brought one of the biggest challenges in the history of our Health System. The additional service requirements in response to COVID-19 and maintenance of essential cancer services were a priority. The first wave of COVID-19 resulted in a reduction in the number of patients receiving anti-cancer treatment temporarily. Pharmacists worked closely with medical teams to adjust treatment plans in line with COVID-19 guidance.

Ensuring safe, effective and economical use of medicines and to support education, training and research is at the heart of everything we do. The pharmacy service covers the inpatient wards, daycare treatment ward, clinical trials and the aseptic compounding unit.

Inpatient
Pharmacists clinically verify systemic anti-cancer therapy (SACT) prescriptions for planned and emergency admissions. The pharmacy provides a medicines reconciliation service for patients admitted, this is an important process to ensure appropriate medication prescribing. The pharmacy provide an ongoing clinical review of both SACT and non-SACT medications over the course of the patient's admission.

Dayward (HODC)
Pharmacists clinically verify SACT prescriptions. We provide a medicines information service to nursing and medical colleagues, supporting them in the care of patients.

Aseptic Compounding Unit
The Aseptic Compounding unit manufactures SACT tailored to each individual patient. This clean room unit contains modern technology ensuring high quality and efficient medication production.

Key Data on Services

Haematology Oncology Day ward
- Cancer Pharmacists clinically verified 3,806 prescriptions for day case SACT.
- Cancer Pharmacists made clinical interventions in 19% of prescriptions for SACT.
- Cancer Pharmacists answered 2,399 medication queries.

Inpatient Service
Bone Marrow Transplant Unit- Denis Burkitt Ward
- Cancer Pharmacists clinically verified 331 prescriptions for SACT.
- Cancer Pharmacists carried out 1,080 reviews of ongoing SACT treatments.
- Cancer Pharmacists undertook 223 medicines reconciliations for new admissions.
- Cancer Pharmacists carried out ongoing medication reviews 2,397 times.
- Cancer Pharmacists answered 1,152 medication queries.
- Cancer Pharmacists provided post-transplant discharge counselling and medication record cards to 208 patients.
- Cancer Pharmacists made 376 clinical interventions on discharge prescriptions for patients.

Donal Hollywood Ward
- Cancer Pharmacists clinically verified 474 prescriptions for SACT
- Cancer Pharmacists carried out 358 reviews of ongoing SACT treatments
- Cancer Pharmacists undertook 669 medicines reconciliations for new admissions
- Cancer Pharmacists carried out ongoing medication reviews 2,539 times.
- Cancer Pharmacists dealt with continuity of supply queries for discharges 114 times.

Clinical trials
In conjunction with the cancer clinical trials office, cancer pharmacists assist with feasibility assessment, opening, closing and day to day management of clinical trials. COVID-19 resulted in the temporary pause on opening clinical trials for the first half of 2020. Opening of new Clinical Trials resumed in the second half of 2020.

13 new Clinical Trials opened
- 10 in Oncology specialty
- 3 in Haematology specialty

36 new patients enrolled onto clinical trial treatments.

Compassionate Access Medications
Pharmacists have a significant role in the review, assessment, opening, maintenance and closing of compassionate access medication programs. These programs allow patients access to medications which otherwise would not be readily available.

Aseptic Compounding Unit
Despite a temporary interruption of cancer services due to COVID-19, we processed over 24,000 items for our chemotherapy day ward, inpatient and clinical trial patients. We manufacture approximately 90% of items in house, outsourcing just 10% of all treatments provided to our patients.

Education and training
- Pharmacists actively participate in education. Pharmacists have facilitated virtual education sessions to nursing colleagues, medical colleagues and pharmacy colleagues throughout 2020.
- Senior Pharmacist, Breda Bourke was a guest lecturer for the Trinity College Dublin Aseptics and Good Manufacturing Practice (GMP) Module as part of the MSc in Hospital Pharmacy.
- Senior Pharmacist attended the British Oncology Pharmacy Association (BOPA) 2020 Virtual Symposium.
- Haematology/Oncology Pharmacy team facilitated prescription verification training for a senior clinical pharmacist in an external hospital.

Key Achievements in 2020

Our Greatest Achievement for 2020 as a department was maintaining an efficient cancer service in the midst of a global pandemic.

Pharmacist Noor Sako completed a Masters in Hospital Pharmacy with Trinity College Dublin.

Pharmacist Noor Sako had an abstract submission accepted and received an invitation to present at the 2020 European Association of Hospital Pharmacists (EAHP) Congress. Her abstract was published in the European Journal of Hospital Pharmacy March 2020 - Volume 27 – Supplement 1

National Cancer Information System (NCIS)
NCIS is a computerised system that records information about a patient's cancer case, diagnosis and treatment. The goal of this system is to support the care of Oncology and Haematology patients across Ireland. With the development of this National system, patients will have one electronic cancer care record.

This new system will be used by various health care professionals for functions including
- Prescribing
- Pharmacist prescription verification
- Electronic medication administration records
- Support for aseptic compounding
- Documentation and reporting.

Spotlights of new initiatives and developments

Current prescribing for SACT in SJH is on a paper based system. In 2020, two members of the pharmacy team joined the NCIS implementation project. A large amount of work has been completed in preparation for this roll out.

Development of a Clinical Metrics System
In 2020, a new metrics system was developed and trialed for recording the day to day activities of the team.

Developments in service
During the COVID-19 Pandemic, our cancer patients were a particularly vulnerable group. Reduction in the number of patient visits to the hospital and reduction in the time required for treatment administration was a priority.

Pharmacy were highly involved in the business case submissions which enabled our patients to receive treatment with Rapid Iron Infusions and also allowed the switch from intravenous to subcutaneous administration of Rituximab.

Key Priorities for 2021 and onwards

NCIS
2021 brings the launch of the electronic prescribing system for SACT. Pharmacist involvement will be instrumental in the set up and roll out of this system. Ongoing pharmacist involvement will be required in the future for the upkeep and regular maintenance of the system.

Chimeric Antigen Receptor T (CAR-T) Cell Therapy
CAR-T Cell Therapy has been licensed for use in Ireland in 2020. SJH has been chosen to be the National Adult CAR-T Centre. Set up and establishment of this service is a priority for 2021.

Use of Robotics in Aseptic Compounding

New People who joined in 2020

We have maintained a consistent team in pharmacy throughout 2020.

Plastics and Reconstruction

Plastics and Reconstruction

Introduction

Plastic surgery in St James's is a key provider of complex melanoma and non-melanoma skin cancer care. Plastic surgery is an essential part of the MDT of complex head and neck malignancies, breast cancer and contributes to the MDT in all oncologic ablative surgery specialties including Colorectal, Gynecology and Cardiothoracics. SJH is the national burns referral centre, the Dublin Midlands Hospital Group DMHG upper limb and complex trauma referral centre and DMHG referral centre for all plastic surgery.

Summary Overview of Service

The scope and demand of plastic surgery in St James's has increased significantly and predictably with the designation of St James's as a Cancer Centre, the centralisation of complex head and neck, colorectal and the de facto centre for familial and high risk breast cancer. Combined with an exponential rise in new diagnosis of melanoma and non-melanomatous skin cancers, the role of plastic surgery in St James's is critical in the delivery of high level quality and safe clinical care.

The department has subspecialized within consultant staffing to work co-operatively at an interdepartmental level to provide reconstructive surgery for Breast Cancer and Head and Neck cancer amongst others, whilst maintaining our role as key provider of complex skin cancer.

Our priority is to increase the ability to meet the demands of the department and other specialties equitably, whilst maintaining the highest standard of care. It follows that at intradepartmental level we are committed to expanding subspecialist care, whilst continuing the specialist care of burns, trauma and benign plastic surgery at national and group level.

Key Data on Service

Clinical Care:

- Number of procedures: 3709
- Inpatient Procedures 717
- Acute daycase 2033
- Acute dayward 892
- Combined complex Reconstructive Procedures 67
- Number of clinical visits: 6574
- Number of therapy visits: 1573

The number of procedures performed in SJH during this period was curtailed significantly by the COVID-19 pandemic. Considerable effort was made to outsource the time sensitive procedures to the private hospitals. These procedures were part completed by the SJH consultant staff. The day case procedures reflect the increase utilization of the theatre facilities within the outpatient department.

Quality:

Due to the impact of the COVID-19 pandemic severely reducing access to theatre the Plastic surgery outpatient department restructured to deliver a see and treat skin cancer service by maximizing the utilization of the theatre facilities available in the outpatient department. In 2020 873 patients had a surgical intervention under local anaesthetic in the department outpatients, representing a 400% increase in surgical activity. This ensured that the delivery of a large volume of skin cancer care continued in St James's. In addition to these procedures, those requiring monitored or general anesthesia were pooled amongst the consultant staff and had their procedures performed in a number of private facilities by our team in a safe, timely manner.

Research:

- Research Funding (awarded Jan 1- Dec 31 2020)
- Peer review publications (published 2020) 16
- Number of clinical research studies opened
- Number of patients in clinical research studies
- Number of patients entering clinical trials -NA
- Number of patients treated in clinical trials -NA

Education:

Number of new students – Undergrad/Postgrad, MSc or PhD

- Number of residents =0
- Number of fellows = 1 (Funded Bahrain Medical School)
- Number of research trainees – MSc research/PhD/MD=1

3,709
NUMBER OF PROCEDURES

717
INPATIENT PROCEDURES

Key Achievements in 2020

The National Treatment Purchase Fund (NTPF) insourcing funded post 2020 triaged the 1800 patients to assess suitability for clinic review and treatment on an outpatient local anaesthetic basis. Approximately 40% of the referrals were suitable, and during three months in post-COVID-19 over 150 patients have been seen and removed from the waiting list and almost 70 have had consultant delivered "minor ops" procedures. The majority of the remaining patients did not need or declined surgery after a consultation, while a small number were booked for inpatient or day case main theatre surgery.

As a trial of a "paperless" surgical service, the NTPF clinics were run without charts - letters were scanned to EPR, and clinical notes and operative notes were typed. Following meetings with the CICO, placeholders were created on EPR to allow the scanning and uploading of consent forms and operative drawings. Once the theatre module is added to EPR in later stages of Project Oak, this ground work will allow a surgical service to run without physical charts.

Spotlights of new initiatives and developments

The plastic surgery department are seeking approval for 2 Advanced nurse practitioners to support the skin cancer service, breast reconstruction service and burns service. Whilst there are excellent nurses working within the department, the addition of 2 ANPs would improve patient education, perioperative and post-operative care, community delivery of service and ensure continuity of care.

The plastic surgery department plan to add to new consultant posts to meet the demand for subspecialist breast reconstruction and head and neck reconstruction.

The facilities available in Hospital 2 outpatient department are being developed to expand the role of ambulatory care to the considerable volume of upper limb trauma, reducing the need for inpatient stay and theatre access.

Key Priorities for 2021 and onwards

Our greatest challenge is to meet the increased and expanding demand for plastic surgery in complex non-specialty cancer care, specifically Head and Neck cancer and Breast Cancer Care.

Funding has been sought and approved for a new consultant post with a specialist interest in Head and Neck cancer reconstruction. This new post will integrate with the ENT and Maxillofacial oncology service.

A robust business case is under review to increase, to an appropriate level, the resources for a dedicated breast reconstruction service, including consultant and nursing staff and theatre allocation.

New People who joined our service in 2020

During 2020, funding was obtained for an "insourcing" consultant post from the National Treatment Purchase Fund (NTPF) where the additional resource was provided within St James's Hospital. This role was to address the long-waiting patients on the waiting list for routine outpatient review with benign lesions via a funded consultant plastic surgeon with nursing and administrative support.

Jackie Morrin, was appointed as acting CNM2 and Julie Kirkham acting CNM3 to fill maternity leave vacancy. Both were pivotal in ensuring that our cancer services continued throughout the COVID-19 pandemic and ensured the delivery of surgery within the outpatients department was safe to patients and staff and of the highest standard.

Psychological Medicine

Psychological Medicine

Introduction to the team

The Psychological Medicine team at St James's Hospital consist of

3 WTE Consultants supported by 2 WTE Registrars, 1 WTE Intern, 3 WTE Clinical Psychologists and 4 WTE Clinical Nurse Specialists

Consultant team and areas of special interest;
Dr John Cooney
Dr Anne Marie O'Dwyer
Dr Tara Kingston

Summary overview of service

The Psycho Oncology Service is a component of the wider Psycholgical Medicine service at St James Hospital which provides Psychiatric and Psychological care to all services in the hospital. The Psycho oncology service provides care for all cancers – haematology, oncology, medical and surgical cancer patients.

The service was launched by the Minister for Health as a regional service in 2004 and provides psycho-oncology care to St James's Hospital, one of the eight designated Regional Cancer Centres. The Psycholgical Medicine service includes 3 whole-time consultant liaison psychiatrists and has developed specialist nursing and clinical psychology expertise with administrative support. It is situated within the HOPE Directorate.

Key Achievements in 2020

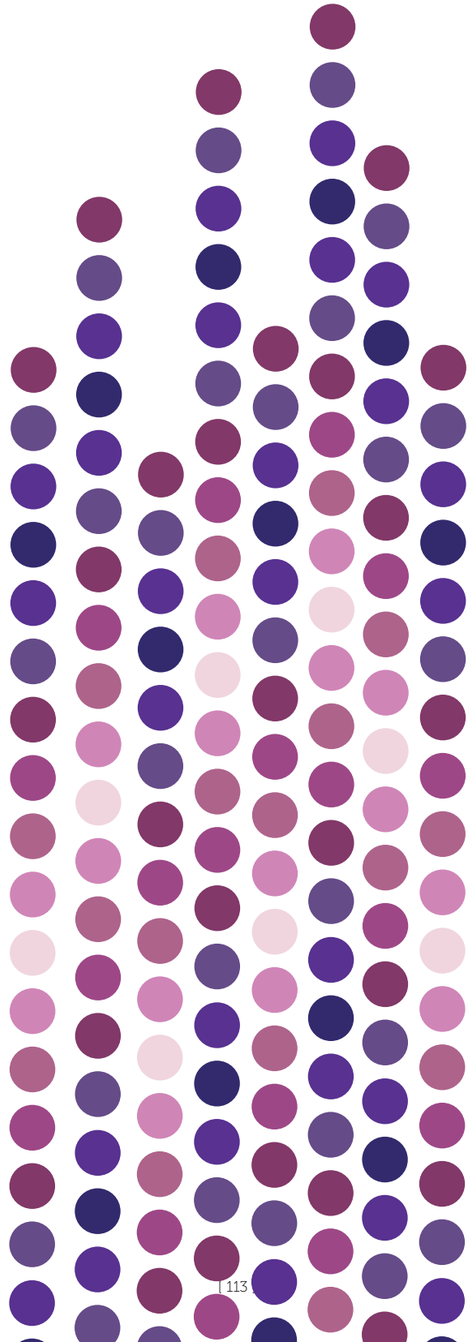
The Psychological Medicine Service continued to deliver psychiatric and psychological care to cancer patients in St James's. The COVID-19 pandemic led to a 25% reduction in attendance at the HOPe Directorate during March, April and May of 2020. This meant a reduction in referrals during this period. This allowed the service to pivot and develop resources for the well-being and psychological support of frontline staff. As a development of the need to provide care in a different way, the service moved to using technology to provide care for patients remotely. With the return of patients to services after the first wave – patients were seen both in person (face to face) and remotely – depending on preference and clinical need. This flexibility has been maintained. Group activities have not been possible in light of the pandemic but patient and staff education have continued. The offices have been upgraded to comply with infection control requirements.

Key Priorities for 2021

The development of Advanced Nurse Practitioner (ANP) posts is a key priority for 2021 using the existing expertise of the Clinical Nurse Specialists (CNS).

Replacement of key personnel due to retirement.

The development of methods to capture service activity. One of the strengths of the service 'on the ground' has been its flexibility in responding to patient need, for example seeing patients on the HODC while they attend their haematology-oncology appointment rather than requiring them to attend a separate Psycho- Oncology OPD. This approach, while promoting a flexible clinical approach, has meant that much of the service activity is not measured. With the activation of the EPR, there is now the possibility of capturing activity in a more practical manner and this will be a focus over the next year.



Radiation Therapy

Radiation Therapy

Introduction to the Radiation Therapy MDT team

St Luke's Radiotherapy centre in St James's Hospital, established in 2011, is part of the St. Luke's Radiation Oncology Network (SLRON). SLRON operates as a network across three Dublin locations - St Luke's Hospital in Rathgar, St Luke's Radiation Oncology Centre at St James's Hospital and St Luke's Radiation Oncology Centre at Beaumont Hospital.

Seven Consultant Radiation Oncologists - Dr Charles Gillham (Clinical Lead), Dr Sinéad Brennan, Dr Moya Cunningham, Dr Patricia Daly, Dr Fran Duane, Dr Naomi Lavan and Dr Pierre Thirion - provide a comprehensive radiotherapy service at St Luke's Radiation Oncology Centre with in-patient and out-patient department consultations.

Summary Overview of Service

St Luke's Radiation Oncology Centre has four linear accelerators for delivery of radiotherapy, two radiotherapy planning CT scanners and one MRI unit also used for radiotherapy treatment planning. There are 12 designated radiation oncology in-patient beds in SJH. The centre provides state of the art and complex radiotherapy treatment for patients referred from St James's Hospital and other hospitals nationally as part of the St Luke's Radiation Oncology Network and has a clinical trials unit based in the centre.

The centre provides the only national total body irradiation (TBI) service for haematology oncology patients attending the National Stem Cell Transplantation Centre. The national stereotactic ablative radiotherapy (SABR) programme, established in March 2014 for patients with early stage (usually medically inoperable) lung cancer is now also treating patients with advanced oligo-metastatic disease. SLRON participated in 8 clinical trials in SJC in 2020.

Like all hospital services, 2020 was a particularly challenging year for radiotherapy with the COVID-19 pandemic. SLRON developed a COVID-19 clinical response plan and maintained treatment activity at 80% of pre-pandemic levels across the network throughout the year. This was achieved by adapting working arrangements during peak periods of the pandemic and increased utilisation of shorter fractionation schedules.

Key Data on Services

Clinical Care:
In 2020, St Luke's Radiation Oncology Centre had 1,337 treatment starts which included new and return patients and was a small decrease on the number of patients treated in 2019. In total, 19,098 radiotherapy fractions were delivered. This is a 12% decrease on the number of fractions delivered in 2019 and results from the slight decrease in overall patient numbers due to the COVID-19 pandemic but also from introduction of a new fractionation schedule for breast patients based on international best practice.

The complexity of the radiotherapy delivered has consistently increased over the last number of years and 80% of treatments are now delivered using volumetric modulated arc therapy (VMAT). The centre delivered 91 TBI treatment fractions and 546 SABR treatment fractions during 2020.

Quality:
Quality initiatives in 2020 were largely centred on the organisational response to COVID-19 and the measures put in place to maintain safety for both patients and staff while also ensuring continuity of service. SLRON participated in the development of national COVID-19 radiotherapy specific protocols with the National Cancer Control Programme as well as developing many internal policies and procedures based on evolving national health advice.

Research:
St Luke's Radiation Oncology Centre participated in 8 clinical trials in 2020.

Education:
St Luke's Radiation Oncology Centre participates in undergraduate student education programmes by providing clinical placement for radiation therapy and medicine in collaboration with Trinity College Dublin and with postgraduate training for both physics and nursing. St Luke's Radiation Oncology Centre is also involved in the national post graduate specialist training programme for Radiation Oncology.

Key Achievements in 2020

COVID-19 Response

- Maintained service activity at same level compared with 2019 without significant waiting lists. This was a huge achievement during the COVID-19 pandemic when other hospital services had to be halted or severely curtailed
- Implementation of new software platforms to provide virtual consultations for patients with the medical team, nursing and health and social care professional staff
- Leveraged use of remote access technology to ensure continuity of radiotherapy planning and treatment image review during the peak periods of the pandemic
- Participated in development of national COVID-19 radiotherapy specific protocols

RapidPlan

- Expansion of the use of the Rapidplan software to new treatment sites which significantly reduces planning times, improves consistency in planning and streamlines staff training.

Spotlights of new initiatives and developments

St Luke's Radiation Oncology Centre introduced a new fractionation schedule for breast patients in 2020 which is significantly shorter than traditional regimens. This shorter five fraction schedule is based on international research and best practice. The schedule has the benefit of fewer treatment attendances from the patient perspective with equal treatment efficacy. This was particularly positive during COVID-19 where limiting numbers of contacts was so important. This short regimen also had a positive impact for the service resulting in an increased number of available treatment slots. This was especially important when the service increased length of standard appointment slots to ensure social distancing and allow time for the increased level of cleaning required.

A SLRON capacity utilisation initiative made use of the second CT scanner in the centre. Patients for treatment in SLRON Beaumont and Rathgar regularly had planning scans in the St James's centre positively impacting on access to treatment across the network.

A quality improvement initiative saw the introduction of bladder scanners for pelvic sites to ensure consistent bladder volume prior to daily radiotherapy treatment.

Key Priorities for 2021 and onwards

During 2021, St Luke's Radiation Oncology Centre is focused on the following projects:

- Further development and expansion of our SABR service
- Implementation of Surface Guided Radiotherapy technology for use with motion management breast, thoracic and SABR patients
- Planning for replacement of our major radiotherapy equipment including linear accelerators and CT scanners
- Continued utilisation of hypo-fractionated (short) treatment regimens to improve patient experience and increase linac capacity
- Further developments under the SLRON capacity initiatives

New people who joined your service in 2020

Dr Siobhra O'Sullivan joined the service in St Luke's Radiation Oncology Centre as a locum Consultant Radiation Oncologist in 2020 in response to the COVID-19 pandemic.

19,098
RADIOTHERAPY FRACTIONS WERE DELIVERED

1,337
TREATMENT STARTS AT ST LUKE'S RADIATION ONCOLOGY CENTRE

Speech and Language, Medical Social Work,
Clinical Nutrition, Occupational Therapy
and Physiotherapy

Health and Social Care Professionals

Speech and Language, Medical Social Work, Clinical Nutrition, Occupational Therapy and Physiotherapy

Introductions to the SCOPE Directorate MDT team

SCOPe HSCPs have a critical role in supporting people affected by cancer. While each discipline has uniquely different roles, they also have common themes within their working practice with a patient-centred approach. HSCP interventions have a significant positive impact, improving patient outcomes in many areas including quality of life, physical fitness, wellbeing, mental health, fatigue, communication, mobility, function, nutritional status and pain.

Summary Overview of Service

Speech & Language Therapy (SLT):
The role of SLT in managing communication and swallowing difficulties in cancer patients has rapidly evolved. Increasing referrals from many cancer specialities demonstrate the need for targeted, skilled intervention and a well-resourced SLT service.

Medical Social Work (MSW)
MSW provide comprehensive assessment of patients' psychological and social needs, counselling for patients and families, practical advice and information. MSWs advocate for patients and liaise with community services to facilitate discharge planning and aftercare.

Clinical Nutrition (CN):
Clinical Nutrition play an integral role in cancer patient care, across specialities including head and neck and GI cancer surgery and medical oncology. Dietetic involvement encompasses the patient pathway from diagnosis to survivorship or palliation.

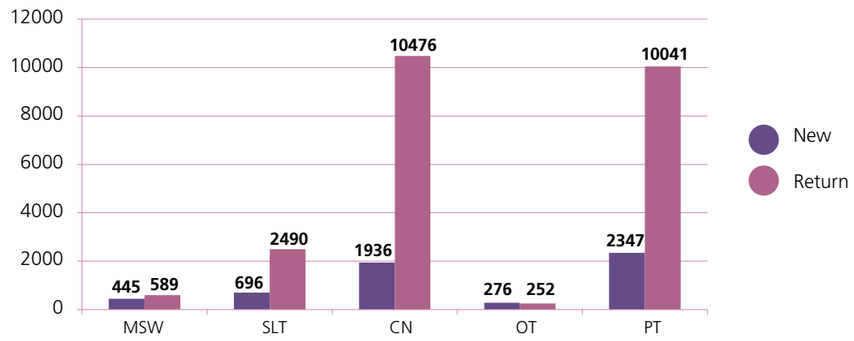
Occupational Therapy (OT):
Occupational Therapy is a key member of the multi-disciplinary team throughout all stages of a patient's cancer journey. The role of OT is to facilitate and enable individuals to achieve maximum functional performance, physically and psychologically, in everyday living skills.

Physiotherapy (PT):
Physiotherapy has a key role for patients throughout their cancer journey. The primary goal is to assist the person to achieve maximum physical functioning within the limits imposed by their disease/ treatment. Exercise reduces risk of cancer recurrence and mortality.

Key Data on Services

Clinical Care
SCOPe cancer activity statistics for 2020 are demonstrated below:

SCOPe cancer activity statistics for 2020



Quality Initiatives

Occupational Therapy
OptiMal is a 6-week, occupation-based, self-management intervention facilitated by occupational therapists with multidisciplinary team input and designed for people with multimorbidity. Three Occupational Therapy PhD studies in collaboration with TCD have demonstrated that that the OT led occupation-based programme - "OptiMal", delivers statistically significant improvements in activity participation, anxiety, self-efficacy, depression and quality of life, thus, assisting cancer survivors with mixed cancer diagnoses to transition from treatment to survivorship.

Clinical Nutrition
Clinical Nutrition commenced a new initiative to demonstrate early safe discharge and admission avoidance for upper GI cancer surgery patients requiring home enteral feeding. A dedicated Senior Dietitian post was approved for this pilot to facilitate an accelerated discharge path for patients admitted electively for placement of a feeding tube and manage tube-related complications in the outpatient setting. This will reduce length of stay, prevent ED presentations, free surgical beds and improve flow.

Physiotherapy
Prehab clinical specialist physiotherapist delivering OpFit programme to improve patients' fitness before cancer surgery.

Research:

Early experience with a nutrition and survivorship clinic in esophageal cancer. Murphy CF, Fanning M, Raftery N, Elliott JA, Docherty NG, Donohoe CL, Ravi N, le Roux CW, Reynolds JR. Diseases of the Esophagus, June 2020

Physiotherapy research underway: MSc – "An exploration of patient experiences and satisfaction with a virtual pre-operative rehabilitation programme prior to cancer surgery during the COVID-19 pandemic"

2 SLT staff involved in perusing PhD research in cancer

Education:

Student placements facilitated across SCOPe.

MSW - 2hr Zoom workshop on the role of the MSW in HOPe for 2nd year Trinity BSS students.

4 MSWs completed CLIMB facilitator training to facilitate children and loss groups

Key Achievements in 2020

- SCOPe HSCPs rapidly and effectively adapted to telehealth to deliver service to cancer patients during COVID-19. SCOPe received positive feedback from service user surveys.
- MSWs developed a greater role in liaising with families and patients who were significantly impacted by visiting restrictions with COVID-19.
- Occupational Therapy successfully delivered an OptiMal self-management programme prior to the emergence of COVID-19.
- SLT compiled a 5-year service plan for cancer.
- Clinical Nutrition managed 56 Medical Oncology patients (220% increase/ 3 years) requiring home enteral feeding. This supports outpatients during treatment, avoiding re-admission, and enables palliative patients to get home. Supported dietetic and MDT staff in private hospitals undertaking cancer surgery for SJH patients during COVID-19.
- MSW secured small grants funding to purchase children's books and 'memory making resources', to support patients reaching end of life. Developed patient information leaflet on financial concerns/ welfare issues for haematology patients.
- Continuation of temporary Senior Speech and Language Therapist and Senior Dietitian posts in head and neck cancer surgery, improving service to patients.
- A Prehabilitation Programme (OpFit) was developed to improve patients' fitness before cancer surgery. This was awarded best proffered presentation and poster at IACR 2020 Annual Conference. Highly commended in HSE Excellence Awards 2020

Spotlights of new initiatives and developments

Speech and Language Therapy
- Provision of a prioritised SLT telehealth OPD service for Cancer patients during COVID-19 to prevent hospital admissions.

Social work
- Adapting service to deal with impact of COVID-19.
- Facilitating virtual counselling services and care planning meetings.
- Coordinating and facilitating weekly virtual interdisciplinary psychosocial meetings.

Clinical Nutrition

- Pilot new initiative to demonstrate early safe discharge and admission avoidance for upper GI cancer surgery patients requiring home enteral feeding by a dedicated senior dietitian. This facilitates an accelerated discharge path for patients admitted electively for placement of a feeding tube and manages tube-related complications in the outpatient setting, reducing length of stay, freeing up ED and surgical beds and improves flow.

Occupational Therapy

- OT led occupation-based programme - "OptiMal", delivers statistically significant improvements in activity participation, anxiety, self-efficacy, depression and quality of life, thus, assisting cancer survivors with mixed cancer diagnoses to transition from treatment to survivorship. OptiMal is a 6-week, occupation-based, self-management intervention facilitated by occupational therapists with multidisciplinary team input and designed for people with multimorbidity.

Physiotherapy

- Introduction of early detection lymphoedema service supported by HSE.
- Service-user feedback form cancer patients regarding the use of telehealth and video based exercise classes during COVID-19 pandemic.

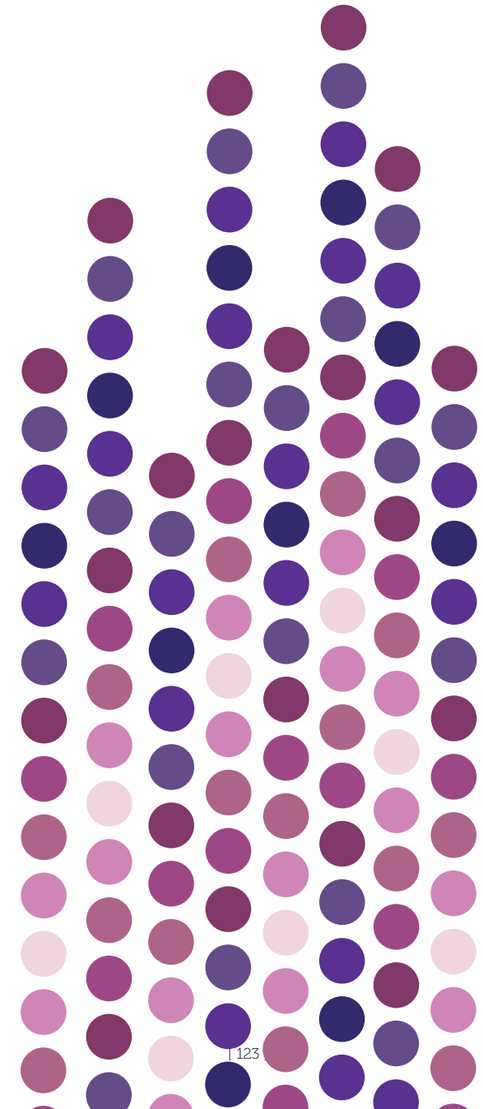
Key Priorities for 2021 and onwards

- Introduction of post-op cancer rehabilitation and survivorship Physiotherapy service
- MSW aim to reintroduce the CLIMB programme for children who have a parent or significant adult in their life with a cancer diagnosis.
- Occupational Therapy aim to deliver the "OptiMal" programme to cancer survivors, measuring clinical effectiveness and patient satisfaction.
- Secure Senior SLT and Senior Dietitian posts in Head and Neck Cancer Surgery.
- Establishment of a prehab/rehab SLT post for OPD Head/Neck oncology patients
- From OECI accreditation feedback, patients at nutrition risk should be identified on presentation to HODC and individualised nutrition care plans implemented. This remains a challenge.

New People who joined in 2020

Social Work

- The .75 Oncology Senior MSW post for outpatients was reinstated. This enabled us to provide a more-timely, comprehensive Social Work support service to patients attending the HODC.
- Prehab OpFit clinical specialist physiotherapist post is now permanently funded.



Skin Cancer

Skin Cancer

Introduction to the MDT team

Skin cancer care in St James's hospital is provided by a large range of specialties in a coordinated multidisciplinary team. The Dermatosurgery Department is the largest dermatology-led, dedicated skin cancer unit in the country. It provides weekly rapid access clinics for both pigmented lesions and for high-risk non-melanoma skin cancers (NMSC). The hospital has pioneered the role of the Multidisciplinary Team (MDT) in skin cancer and there is a weekly skin cancer MDT meeting, with all relevant departments being an integral part of this decision-making forum. Close liaison exists with other MDT (Lymphoma, Head and Neck, Lung) as a result of the diverse range of specialists available on site.

The core MDT team includes Plastic Surgery, Radiation Oncology, Dermatology, Medical Oncology, Histopathology, Data manager, Melanoma and Oncology Nurse specialists, with attendance form a wide range of specialities when needed, such as Head and Neck Surgery, Gynaecology, Maxillofacial surgery etc.

Key Data on Service

Table 1 Skin Cancer Activity for 2020

Skin Cancer Activity for 2020	
Patients diagnosed with Melanoma 2020	216
Tumour Sites	219
Non melanoma skin cancer 2020	
Squamous cell carcinoma	
Patients	376
Tumours	443
Basal Cell Carcinoma	
Patients	1045
Tumours	1172
Skin Carcinoma - other	
Patients	30
Tumours	34
Basosquamous Carcinoma	
Patients	54
Tumours	55

Table 2 Mohs Micrographics Surgery 2020

Mohs Micrographic surgery	
Patients	656

Summary Overview of Service

Skin cancer patients are referred via electronic and traditional referrals, triaged and directed into the Departments of Dermatology, Plastic surgery, Radiation Oncology, Medical Oncology, Maxillo- facial surgery and Head and Neck surgery depending on the individual requirements. Close links between Occuloplastic surgery and other departments nationally facilitate the delivery of complex skin cancer throughout the country.

- The Department of Histopathology has two dedicated Dermatopathologists who work as an integral part of the team and provide both secondary and tertiary services, including the provision of laboratory support for Mohs micrographic surgery
- St James's hospital set up and runs the national Mohs Micrographic Surgery (MMS) service in the Department of Dermatology with two dedicated Mohs surgeons, leading training in Dermatologic surgery, and playing pivotal roles in the development of national and international standards of care for people with skin cancer.
- St James's has the largest department of Plastic and reconstructive surgery in Ireland, with a wide range of subspecialties available to our patients, and sub-specialty areas of expertise including melanoma, sarcoma, and the full range of reconstructive surgery.
- Dr Sinead Brennan (Radiation Oncology), Dr Fergal Kelleher (medical oncology), manage complex Melanoma and non-melanoma skin cancers – an increasing workload given the reputation of St James Hospital as the Skin cancer centre in Ireland.
- The large cohort of cancer survivors from other cancer types, attending St James's Hospital are looked after by the skin cancer team, particularly those at high risk of secondary skin cancers as a result of the primary disease process such as chronic lymphocytic leukemia (CLL) or from their prior treatments such as bone marrow transplant (BMT).

Quality:

- Electronic melanoma patient diagnosis/treatment/ surveillance pathway monitoring system being developed
- Mohs micrographic histopathology quality audit – UK NEQUAS External Quality assessment

Key Achievements in 2020

The highest achievement in 2020 was maintaining the Skin cancer service in the time of a Pandemic. Services halted for less than 3 weeks – until the agility and flexibility of the Skin cancer teams were able to find solutions to continue care.

Hybrid care using digital technology for remote imaging, virtual consultations, See and Treat clinics, and active management of patient flow to minimize number/time of face to face exposure between staff and patients were all developed.

The huge advantage of having departments physically separate from the main hospital allowed much of the surgery that needed to be done, to be done, and patients that needed to be seen, to be seen.

The innovation, collegiality and teamwork that has always been present in the Skin cancer team came to the fore. It was an honour and a privilege to have worked with so many selfless Doctors, Surgeons, Nurses, HCAs and administrative staff in the times of uncertainty and in the times of rebound workload.

A particular mention of those who were transferred out of their normal area of practice to care for those most closely effected by the Pandemic, and for the administrative staff who spent hours on phones comforting worried patients and reorganizing the services as required.

Spotlights of new initiatives and developments

- Partnership with Remote Imaging technology (Dermview Ltd) for distant diagnostics and referral refinement.
- Multiple "Surgery at clinic/ See and Treat" episodes – reducing number of visits per patient, utilizing existing facilities.
- Expanding the role of the Clinical Nurse Specialists, providing specialist expertise within patient's treatment pathways, performing surgical procedures, managing patients in the pre-operative and post-operative periods and addressing psychological needs of patients.

Key Priorities for 2021 and onwards

- Development of plan to address waiting lists – application for NTPF funding
- Recruitment of Melanoma Specialist Nurse
- Further partnership with Distant Imaging Technology
- Appointment of Third Dermatology Surgeon and third Histopathologist with interest in Dermatopathology
- Commencement of transition to EPR based outpatient records
- Application for ANP in Dermatology Surgery
- Coordination of the care pathway of paediatric melanoma patients and rare tumours from Our Lady's Hospital for Sick Children occurs via the skin cancer MDM, developing the concept of " transition of care into practical working pathway, prior to paediatric and adolescent care is transferred on site to the St James's campus within the National Paediatric Hospital

Specialist Palliative Care Service

Specialist Palliative Care Service

Introduction to the MDT team

The Specialist Palliative Care Service (SPCS) in St James's Hospital (SJH) is a support service for all patients in SJH deemed to have specialist palliative care needs whether they have a malignant or non-malignant diagnosis. 67% of the team's workload comprises of new referrals for patients with a malignant diagnosis.

Summary Overview of Service

The team comprises of 3 medical consultants, Dr Karie Dennehy (1 Locum WTE), Dr Norma O'Leary and Dr Lucy Balding, (23.5-hour commitment), a Registered Advanced Nurse Practitioner (Mr. Rory Wilkinson), a fulltime medical registrar, 4 WTE clinical nurse specialists (Ms Martina Thuillier, Mr Stephen Mc Dermott, Ms Claire Kelly and Ms Sinead Mc Hale), a medical social worker (Ms Alison Brennan) and 0.5 WTE administration support (Ms Jennifer Ryan).

The direct administrative supervision and governance of the service is conducted through the HOPE directorate. The strategic policy direction of the service is in line with the HSE National Clinical Programme for Palliative Care. Two weekly multidisciplinary meetings are held (inpatient and outpatient) where all patients referred to the service are discussed and a plan of care agreed. Joint palliative medicine/oncology psychosocial meetings are held twice weekly.

Key Data on Service

1. Clinical care
   a. Total number of inpatient referrals 2010 – 2020

Table 1 Referrals to Service (2010-2020)

1. Referrals to Service (2010-2020)											
	2010	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
New	775	718	866	TBC	TBC	722	706	733	814	862	857
Return	209	208	211	TBC	TBC	305	380	387	452	432	478
Total	**984**	**926**	**1077**	**1049**	**1088**	**1027**	**1086**	**1120**	**1266**	**1294**	**1335**

There has been a 35% increase in the inpatient consultant service over the decade spanning 2010-2020
Inpatient referrals, cont'd…

Table 2 Referrals to Inpatient services 2020

Referrals to inpatient service 2020													
	Jan	**Feb**	**Mar**	**Apr**	**May**	**Jun**	**Jul**	**Aug**	**Sept**	**Oct**	**Nov**	**Dec**	**TOTAL**
New referrals	95	59	64	99	74	80	65	57	63	61	70	72	859
Re-referrals	61	50	37	30	42	47	41	36	33	29	48	32	486
Total No. of referrals	156	109	101	129	116	127	106	93	96	90	118	104	1345

In January 2020 the Specialist Palliative Care Service (SPCS) received a record number of referrals (new and return patients). In April 2020 the Specialist Palliative Care Service received a record number of new referrals, many of whom had COVID-19 and died. The team was central to the hospital's clinical response to the COVID-19 pandemic. During the first wave of the pandemic the Specialist Palliative Care Service was involved in 25% of all COVID-19 patients admitted to SJH. 90% of the patients referred to the team died.

Fig 3. Diagnosis (Of new Referrals to Service) 2020

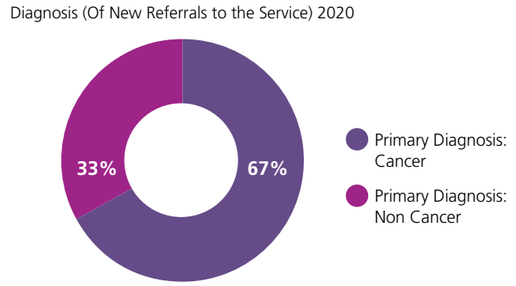


Figure 2 Patient Outcomes

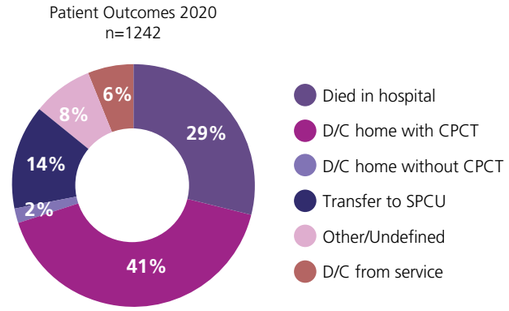
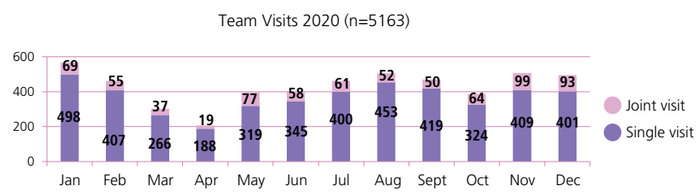
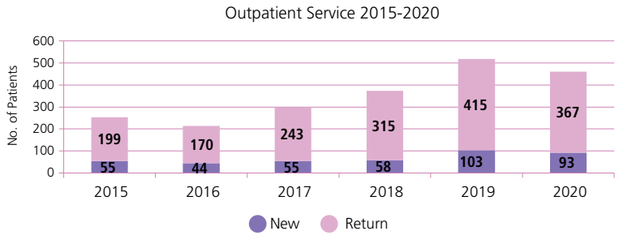


Figure 3 Team Visits 2020



COVID-19 impacted significantly on how the team delivered care. This was especially evident in April 2020 where there were very few joint visits carried out by team members.

Figure 4 Referrals to outpatient services 2020



COVID-19 disrupted outpatient activity across the hospital. There was a 10% reduction in overall activity. However great efforts were made to support patients virtually.

2. Quality:

a. The SPCS adopted different work practices during the first and second wave of the pandemic to ensure all COVID-19 patients received specialist palliative care in a timely and safe manner.
b. In line with national and local guidelines surrounding COVID-19 the outpatient SPCS realigned its outpatient pathway by adopting telehealth successfully and providing a blended approach (face to face or virtual) depending on patient need and circumstances.

3. Education:

- The "Introduction to Palliative Care Programme". This multidisciplinary foundation course, ran in October 2020. 22 people completed the course.
- Mr. Rory Wilkinson (RANP) presented a talk "A new Model of Palliative Care" at the SJH Inaugural Nursing Conference in October 2020.
- The team is actively engaged in education of undergraduate medical students (3rd and final medical students).
- The team provides post graduate medical teaching to the SHO teaching programme and HOPE SHOs and registrars.
- The team contributes to the MSc in Translational Oncology.

Key Achievement in 2020

1. The SPCS was an essential element of the hospital's response to COVID-19.
2. The introduction of Telehealth in the outpatient setting.

Key priorities for 2021 and onwards

1. Due to the COVID-19 Pandemic and in line with national and local healthcare policy the continued use of Telehealth as part of the outpatient service
2. To resume the remembrance service (face to face or virtual) to support bereaved relatives of patients supported by the SPCS
3. The service continues to have a deficit of 1 WTE medical consultant post which is considered a priority within SJH.

New people who joined the team in 2020

1. Dr Aoibheann Conneely, temporary consultant support
2. Dr Karie Dennehy, Locum Consultant in Palliative Medicine.
3. Ms Claire Kelly, Clinical Nurse Specialist in Palliative Care.
4. Ms Sinead Mc Hale, Clinical Nurse Specialist in Palliative Care.

Urology

Urology

Introductions to the MDT team

The Urology service accepts secondary and tertiary referrals and provides specialist services for patients with a range of urological conditions, both malignant and benign. There are currently four urology consultants, two WTEs and two 0.5 WTEs who work between St James's and Tallaght University Hospital. The Urology team is also comprised of six NCHDs, with two Specialist Registrars, two registrars, and two interns.

There are also four WTE Clinical Nurse Specialists as part of the Urology service, three for General Urology and one CNS for Prostate Cancer Survivorship. The Urology service works closely with MDT colleagues in Radiation Oncology, Medical Oncology, Radiology and Pathology.

Summary Overview of Service

The Urology service at St James's Hospital caters to a large population of patients with malignancies of the urinary tract. The care of these patients involves a high volume of procedural work, including day cases, endoscopic and inpatient cases. The outpatient service is comprised of general, surveillance and Rapid Access clinics – all of which cater to patients with genitourinary cancers.
The Urology Multi-Disciplinary Team meeting is held weekly, facilitating the collaboration of Urology, Radiology, Pathology, Medical Oncology, and Radiation Oncology, to discuss a large cohort of cancer cases. The Urology department has noted a steady rise in cancers diagnosed over the past decade, with the period 2010 to 2020 demonstrating an increase in bladder cancers and prostate cancers by 23% and 15% respectively. This reflects an increasingly busy service which is providing diagnosis, treatment and follow-up care for these patients.

Urological cancer care in St James's is supported by the Urology Clinical Nurse Specialist service. The CNS service coordinates the Haematuria Clinic, through which bladder and renal tumours may be detected, and the Rapid Access Prostate Clinic, as well as providing ongoing support and education to patients with cancer diagnoses. The Prostate Cancer Survivorship CNS also coordinates the nurse-led Erectile Dysfunction clinic, and the virtual Diagnosis Support clinic.

The Rapid Access Prostate Clinic is a specialist clinic set up in conjunction with the National Cancer Control Programme (NCCP), which aims to provide a fast, efficient service for men aged 40 – 70 with risk factors for prostate cancer. One Consultant Urologist currently sits the clinic. The RAP Clinic aims to offer an appointment to men within 20 working days of referral. Over 70% of patients seen were compliant with this KPI in the latter six months of the year, with compliance greatly affected in other months by downtime due to the COVID-19 pandemic and consultant leave. 401 patients were reviewed in the RAP Clinic in 2020.

The RAP Clinic was required to adapt rapidly in response to the COVID-19 pandemic. A virtual RAP Clinic was established in order to facilitate the assessment of patients in the context of new COVID-19 restrictions.

The pandemic also saw a reduction in available inpatient beds and theatre closures, impacting admission capacity for elective cancer surgeries. In response to this, off site services were established to allow operating in local private centres, with no major reduction seen in the number of cancer surgeries performed in 2020 as a result.

Key Data on Services

Clinical Care:
Number of procedure: Table 1

Table 1: Number of Procedures

Procedures	2020
Cystectomy	6
Diathermy - Rigid check cystoscopy and cauterisation of bladder lesion	1
Nephrectomy/nephroureterectomy	30
Orchidectomy	2
Robotic-Assisted Radical Prostatectomy	40
Scrotal exploration+Ex mass RT Cord	1
Stent insertion	1
TURBT	64
TURP	5
Total	**150**

Table 2: Rapid Access Prostate Clinic Attendance in 2020

Year 2020	New Patients	Return Patients	Total Patients
	375	26	401

Spotlights of new initiatives and developments

Development of a virtual Rapid Access Prostate Clinic in response to the COVID-19 pandemic. Patients were assessed and further tests booked through a telephone appointment, which avoided downtime of the Rapid Access pathway during restrictions.

A Sexual Wellbeing Programme for Patients with Prostate Cancer was launched in February 2020. The online self-management programme was workshopped with staff from urology, medical and radiation oncology, and was introduced as a routine aspect of care by the Prostate Cancer Survivorship CNS.

A virtual Nurse-led Erectile Dysfunction clinic was established when the clinic was suspended due to restrictions, allowing ongoing psychosexual support for men with sexual dysfunction after prostate cancer treatment.

Key Priorities for 2021 and onwards

- Addition of new Consultant Urologist Mr. Peter Lonergan
- Addition of robotic surgery to the urologic oncology programme within the hospital
- Maintenance of highest quality, patient-centred urological cancer service
- Maintenance of robust research programme
- Consolidation of the Prostate Cancer Survivorship nursing service
- Planned addition of Advanced Nurse Practitioner in Rapid Access Prostate Clinic, reducing downtime in Rapid Access Clinic

New People who joined the service in 2020

- Prostate Cancer Survivorship Clinical Nurse Specialist Ms Siobhán Ni Chinneide
- Urology Clinical Nurse Specialist Ms Gráinne Kelly

SECTION 2

Cancer Clinical Trials

2 Cancer Clinical Trials

Introductions to the MDT team

The Cancer Clinical Trials Unit (CCTU) consists of the following team:

- 7 Research Nurses
- 5 Data Managers
- 1 Clinical Trial Start-up Specialist
- 1 Clinical Trials Pharmacist
- 1 CNM3 Research Nurse Manager
- 1 Clinical Trials Manager

The CCTU works with 13 Principal Investigators (PIs); Consultant Haematologists and Oncologists. The CCTU management team is led by Prof Elisabeth Vandenberghe (Consultant Haematologist) as CCTU director with Ingrid Kiernan (Clinical Trials Manager), Andrea Ferguson (CNM3) and Claire O'Donohoe (Clinical Trial Start-up Specialist) managing the daily operations of the unit.

Summary Overview of Service

The CCTU manages all cancer drug trials in SJH with an aim to provide cancer patients access to clinical trials, novel anti-cancer therapies and improve patient outcome in a patient focused environment.

2020 was a challenging year with recruitment and trial initiation on hold for 4 months (March –June inclusive) due to the pandemic. No new trials were opened during this period. From June 2020 12 clinical drug trials and 1 interventional research study were opened in 6 months. The appointment of a Clinical Trial Start-up Specialist in April 2020 helped streamline the set-up of new trials, reduce the start-up time and identify and reduce blocks, in trial initiation and work with PIs to increase the access to good quality trials.

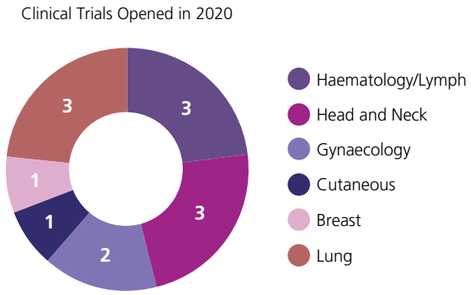
A CNM3 was appointed in December 2020 to manage the nursing team and transfer patient facing activity from the day unit to the Clinical Research Facility (CRF).

The organization and strategy of the CCTU was critically reviewed as part of the HRB grant submission with planned recruitment of dedicated medical research support, liaison with CCTU in Tallaght University Hospital and Midlands Hospital, Tullamore

Key Data on Services

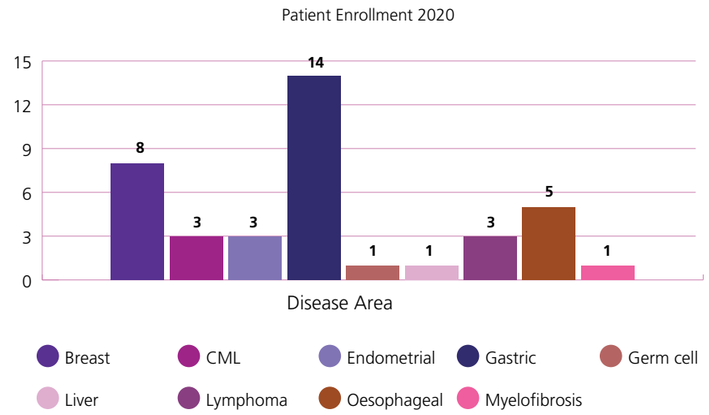
Number of Clinical Trials opened: The CCTU opened 12 clinical drug trials and 1 interventional research study in 2020. All 13 were industry sponsored and funded. Of the 12 clinical drug trials, 11 were phase III trials and the remainder was a phase II trial. The COVID-19 pandemic severely impacted the CCTU in Q1 and Q2 with no new trials being opened in March-June inclusive.

Figure 1: Breakdown of Clinical Trials opened in 2020



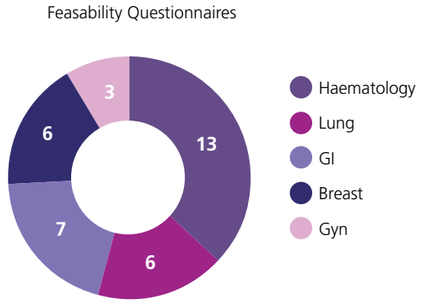
Number of patients enrolled onto clinical trials: The CCTU enrolled 36 patients onto clinical drug trials and 3 patients onto an interventional research study. The enrollment spanned 12 different trials and 7 Principal Investigators. Due to the COVID-19 pandemic no patients were enrolled from March-June inclusive.

Figure 2: Breakdown of Patient Enrollment to Clinical Trials in 2020



Number of feasibilities questionnaires completed: The CCTU completed 35 feasibilities in 2020. The breakdown per disease area is displayed in the pie chart.

Figure 3: Breakdown of Clinical Trial Feasibilities Questionnaires completed in 2020



Key Achievements in 2020

Patient Recruitment
We were the highest recruiting site in the UK and Ireland on the MK3475-859 trial. This is a large phase III clinical trial sponsored by MSD with the Principal Investigator at SJH being Prof Maeve Lowery.

"Phase 3, randomized, double-blind clinical study of pembrolizumab (MK-3475) plus chemotherapy versus placebo plus chemotherapy as first-line treatment in participants with previously untreated, HER2 negative, advanced gastric or gastroesophageal junction adenocarcinoma"

We recruited 17 patients by December 2020, including many external referrals, exceeding the original recruitment target by 240%

Capturing Metrics and Monitoring Performance
In 2020 we started capturing the clinical trial start-up metrics using CRF Manager, this is a software package used by all the CRFs in Ireland. We also developed an in-house database with the help of the SJH IT department to capture metrics data and to develop dashboards using Power BI.

Cancer Clinical Trial Clinics (CRF)
In December 2020 the first of the dedicated cancer trial clinics were held in the CRF.

HRB Grant
The HRB 2020 National CCTU 5-year Grant was submitted in a reconfigured format with linkage to our academic partner TCD. The Trinity Academic Cancer Cluster was developed with Tallaght University Hospital and the Midlands Regional Hospital Tullamore and the grant will be submitted in January 2021.

Spotlights of new initiatives and developments

Cancer Trial Clinics in the CRF
The major development in 2020 was the conduct of clinics in the CRF. Some clinical trial patients are reviewed in the CRF by the medical and nursing teams and receive their treatment in the cancer day unit. The aim for 2021 is that this service will be greatly expanded so all cancer clinical trials patients will be reviewed and treated in the CRF.

Improving Start-up Timelines
In 2020, we contacted all the trial sponsors to ask if they would agree to a Master Confidentiality Agreement with SJH. Most sponsors agreed with this proposal. This removes the requirement for a Confidentiality Agreement to be signed for every time, this removing one step in the set-up process.

Patient Engagement
In 2020, we started the process of re-developing the CCTU page on the SJH/TSJCI website. We are working with the TSJCI PRG to develop patient focused expertise involvement in both CCTU strategy and operation. We envisage both initiatives will increase our engagement more with the public and improve trial access for patients

Expanded PI base
Prof Karen Cadoo started as a Consultant in Medical Oncology and Cancer Genetics, following training at the Memorial Sloan Kettering Cancer Centre and has opened 1 phase III ovarian cancer trial in December 2020 and recruited 3 patients to the MK7902-001 phase III endometrial cancer trial. Dr Nina Orfali commenced has a consultant in myeloid leukaemias and transplantation in 2020 with planned CCTU activity in 2021.

MK7902-001 "A Phase 3 Randomized, Open-Label, Study of Pembrolizumab (MK-3475)
Plus Lenvatinib (E7080/MK-7902) Versus Chemotherapy for First-line Treatment of Advanced or Recurrent Endometrial Carcinoma

Key Priorities for 2021 and onwards

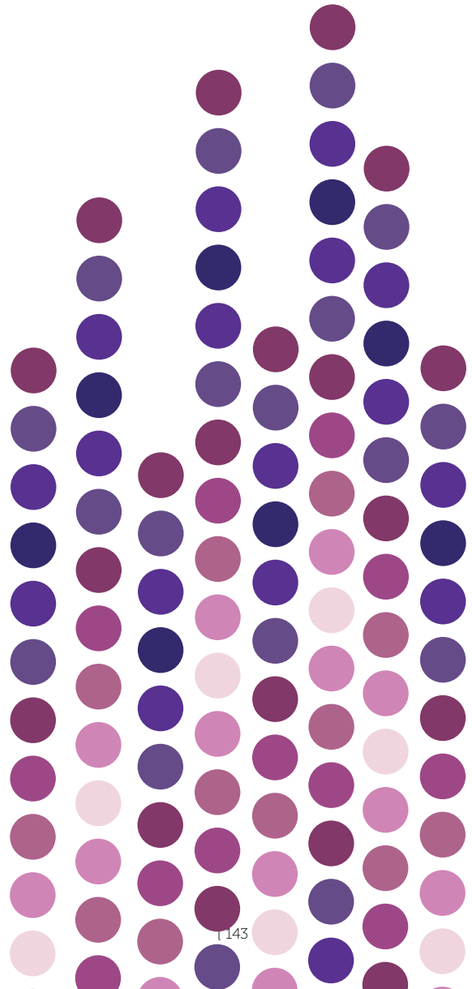
There are 5 key priorities for 2021:
1) Increase the number of clinical trials opened, with an emphasis on the academic trial portfolio.
2) Increase patient access to clinical trials and ensure all eligible patients are enrolled.
3) Improve the patient experience of inclusion in clinical trials by conducting clinical trials in the tailored setting of the in SJH CRF.
4) Work with our Trinity Academic Cancer Cluster (TACC) colleagues to increase patient recruitment across the cluster by engaging with patients through a patient representative group (PRG) and the CCTU website.
5) Enable trial groups and the pharmaceutical industry to work efficiently with us to open trials in a timely fashion

New People who joined in 2020

Two new CCTU roles were created in 2020:
1) Clinical Trial Start-up Specialist and 2) CNM3 Nurse Manager.

Ms Claire O'Donohoe started in the Clinical Trial Start-up Specialist role in April 2020 and Ms Andrea Ferguson started in the CNM3 Nurse Manager role in December 2020.

Ms O'Donohoe manages the start-up process for all new trials and Ms Ferguson will reconfigure the research nursing team to embed professional nursing development



SECTION 3 Education

3 Education

Introduction to the MDT team

The education pillar in the Cancer Institute contains 4 programmes.

Ph.D. training programme for scientists and health care professionals 2) Research Fellow training programme 3) Cancer education programme allowing flexible personalized education pathways and 4) Patient-public engagement and involvement programme delivering education outreach activities

Summary overview

The mission of the education pillar is to position the cancer institute as the hub for cancer education offering cancer education opportunities for all connected with delivering cancer care and those enrolled in cancer education training programmes. Patient-public outreach is also a priority in this education pillar. Below is a list of our key activity under education for 2020. In 2020, despite COVID-19 restrictions, education programmes and graduation of Ph.D. students were achieved. A lot of educational activity was conducted remotely.

Key Data/Achievements on Education

- 13 Ph.D. students graduated under the Cancer Theme, across a number of cancer types including Lung, Oesophageal, Colorectal etc. and postgraduate projects were linked with the 4 research pillars in TSJCI.
- 14 MSc in Translational Oncology graduated where 30 ECTs of their 90 ECT degree was assigned to translational cancer research experience. These students were placed across many cancer groups in TSJCI (all projects were remote projects in 2020).
- In 2020, the course committee for the MSc. in Translational Oncology began developing content for 4 new pathway topics; Cancer Immunology, Precision Oncology, Obesity and Physical Activity and Drug development and discovery (needs approval). This will contribute to the pool of cancer modules on offer to all trainees.
- The new MSc. in Cancer Survivorship enrolled their first set of students in 2020.
- Nursing postgraduate Haematology/Cancer Crae programme in association with TCD School of Nursing.
- Oncology & Palliative care foundation programme for Nurses.
- The Cancer TEP elective directed by Dr Maher attracted students from many different disciplines outside of Health Science. This educated non-biology focused students on cancer prevention, diagnosis, treatment and survivorship.
- Online courses on Radiation Oncology, available on FutureLearn platform.
- Many educational outreach activities ran in 2020 involving trainees at different stages of their career development pathways.
  - » TTMI Transition Year Programme in March 2020
  - » Monthly TTMI seminar series under 4 pillars: Infection/Immunity, Cancer, Genomics and Key enabling Technologies.
  - » Monthly Haematology seminar series
  - » Immunometabolism monthly forum meetings
  - » European Citizens information webinar on radiation oncology in November 2020
  - » Patient evening, led by Dr Sheill on the FIXCAS study
  - » Dr Margaret Dunne released an animated video on cancer research awareness co-created with Transition Year students at New Cross College, Finglas West. Video was used to promote public awareness of research, as part of Clinical Trials Day and Cancer Week.

Key Achievements in 2020

As outlined above, key achievements have been made across the 4 pillars of the Education programme.

Spotlights of new initiatives and developments

Due to COVID-19 and disruptions to cancer educational programmes in 2020, the development of online delivery platforms have been very successful. Feedback from students have also been positive. This has led us to embark on developing new certificate and diploma cancer programmes with a hybrid mode of teaching, which may attract an increasing number of trainees.

Key Priorities for 2021 and onwards

Obtain funding to roll out the below activities, these have been mapped out in our education pillar business plan.

- Hire an education coordinator to work with Prof Jacintha O'Sullivan.
- Obtain philanthropy funding to increase the number of Ph.D. scholarships and fellowships in cancer.
- Establish collaborative education activities with industry, private hospitals, universities and charities.
- Establish structures to roll out the offering of individual cancer modules to all in the TSJCI to obtain higher level oncology education training.
- Develop flexible and personalised education pathways for all scientists and health care professionals.
- Work across the different cancer charities to develop a structured PPI outreach programme involving different patient groups.

SECTION 4 Research

4 Research

Introduction to the MDT team

Scientific cancer research at TSJCI brings together teams from TCD, SJH and other affiliated hospitals (including Tallaght University Hospital, The Coombe Women and Infants University Hospital and Children's Health Ireland). Research in cancer also includes basic biomedical and biomolecular research based at the Trinity Biomedical Science Institute (TBSI) and the Trinity Translational Medicine Institute (TTMI). Our researchers are spanned across schools of Biochemistry and Immunology, Medicine, Pharmacy and Pharmaceutical Sciences, Genetics and Microbiology, Nursing, Chemistry and Dental Science. The research vision of TSJCI is to advance cancer care and outcomes through internationally recognised translational research.

Summary Overview of Service

TSJCI have recently consolidated our research programmes. Our research strategy builds on existing strengths and integrates key research areas across 4 main themes, namely cancer prevention, molecular and precision oncology, cancer immunology and cancer survivorship and supportive care. Clinical research, encompassing cancer clinical trials, radiation oncology research, nursing research and a broad spectrum of allied health professional research fields, spans the breadth of these 4 themes and results in a horizontally and vertically interwoven, multidisciplinary, vibrant cancer research network.

Key Data on Services

- TSJCI researchers published 277 original research and review papers in 2020.
- In the 2019/2020 academic year, our researchers were awarded over 7 million euros in competitive research grant funds.
- In 2020 TSJCI established Mission Cancer Helix, a virtual cluster of experts focusing on multi-disciplinary and cross-sectoral research and innovation to combat cancer and its comorbidities. The Helix is hosted on the Crowdhelix online platform which connects a group of leading research institutions and innovating companies around the world, so that together they can plan and deliver pioneering Horizon Europe projects.
- Our cancer research seminar series "TSJCI CaRes" was launched at the end of 2020. This monthly seminar series features lunchtime talks by both national and international cancer researchers across many different specialties. Establishing this programme 'virtually' has facilitated the inclusion of international experts, allowing easy access for researchers spanned across many TJSCI locations and across the island of Ireland.

Key Achievements in 2020

Honours, invitations and awards (selected)

- Dr Michelle Leech was awarded the European Society for Radiotherapy and Oncology (ESTRO) Emmanuel van der Schueren award 2020, recognising her excellent scientific work and contribution to education and promotion of radiation oncology.
- Consultant Pathologist Stephen Finn was appointed as Translational Chair for the European Thoracic Oncology Platform.
- Dr Anne-Marie Baird was appointed as President of Lung Cancer Europe (LuCE) patient advocacy group (see spotlight below).
- Prof Mathias Senge (Chair of Organic Chemistry) was awarded the prestigious Hans Fischer Senior Fellowship at the Institute for Advanced Study at the Technical University of Munich.
- Dr Dania Movia, Senior Research Fellow in the School of Medicine, was an invited round table expert "Science lands on Instagram"(Sept. 2020) at Universita' Ca' Foscari Venezia.
- Prof Lorraine O'Driscoll (School of Pharmacy and Pharmaceutical Sciences) became an elected Fellow of the Royal Society of Biology (FRSB).
- Prof Maureen O'Sullivan (Consultant paediatric histopathologist) was elected to the board of the International Connective Tissue Oncology Society (CTOS).
- Laboratory Team of the Year award for 'Senge Group' (School of Chemistry) from the Irish Laboratory Awards (2020).
- Dr Patricia Doherty (Senior Research Programme Officer for TSJCI) was the recipient of a Trinity Research Excellence Award for 2020 in the category 'Harness our collective expertise for the greater good'.

Resources and events for patients and public (selected)

Dr Margaret Dunne released an animated video used to raise public awareness of research, as part of Clinical Trials Day 2020, Cancer Week 2020 and is also being screened in public areas of St James's Hospital.

Dr Michelle Leech held a European Citizens' Engagement webinar on the E-PRO project (Empowering European Patients in Radiation Oncology) (Nov 2020).

Prof Jacintha O'Sullivan spoke about her research on the Unravelling Science Podcast and was involved in the creation of promotional videos for Oesophageal Cancer Fund promoting Barrett's and OAC research. She was also the lead for online video resource for schools entitled "A day in the life of a cancer researcher in the Trinity St James's Cancer Institute".

Spotlights of new initiatives and developments

3 potential spotlights proposed:

1. Spotlight on Dr Anne-Marie Baird's presidency of LuCE

Dr Anne-Marie Baird is a molecular biologist, who has worked on mesothelioma, prostate and lung cancer. She is currently a Senior Research Fellow in the Trinity Translational Medicine Institute, with research interests in inflammation and immune mediators, metastatic cascade, drug resistance and disease biomarkers. Anne-Marie has been active in lung cancer patient advocacy since 2012, and in May of last year was elected president of Lung Cancer Europe (LuCE). LuCE is a non-profit umbrella organisation, which aims to be a voice for people impacted by lung cancer across Europe. Currently, the group has over 30 members representing 21 European countries. Through her role in LuCE, Anne-Marie is focused on engaging members of lung cancer organisations across Europe and promoting awareness, advocacy and education activities within the community. She also takes part in a wide array of activities such as LuCE and patient driven research, European Parliament events, patient councils and steering groups, and collaborative projects with groups such as the European Cancer Organisation. The ultimate goal of the work that LuCE undertakes is to improve outcomes for people impacted by lung cancer and to make the disease an EU health care priority.

2. New initiative: TCD/SJH Biobank Network

The TCD/SJH Biobank Network was established as a forum for education, co-ordination and policy generation for all areas relating to biobanking and associated activities across Trinity College Dublin and St James's Hospital. Some of the current themes under which the Biobank Network seeks to drive and advance include, the proposed biobank freezer farm on the SJH campus, Patient Information Leaflets and Consent Forms, HRCDC applications, Data Registries & Biobank Information Management Systems, Infrastructure, Outreach & Public/ Patient Involvement in addition to biobank accreditation (ISO 20387). As part of a biobank awareness campaign,

on World Cancer Day (February 4th, 2021) cancer researchers at the Trinity St James's Cancer Institute (TSJCI) held a biobank event to encourage patient participation in cancer research and to highlight the vital role of patients in enhancing research and improving outcomes. The event was a free, online information seminar and included talks from TSJCI clinicians and scientists, the Irish Cancer Society and a patient experience session. The patient group described their experience of the role of cancer research in the care pathway and engaging with researchers as part of public and patient involvement. The event was sponsored by the Irish Cancer Society and led by Dr Sharon O'Toole as part of an Irish Cancer Society Cancer Research Engagement Award. A total of 118 participants attended the event which reached out to a larger audience via social media and beyond. The recording of the event can be viewed at https://vimeo.com/showcase/8025168 or via the live Facebook stream of the event which can be found at https://fb.watch/3yeX2r1ME0/. Further initiatives that have been successfully executed by members of the Biobank Network include a number of videos from the different cancer biobanks across the TSJCI which were displayed on TV screens across outpatient departments in SJH (http://www.stjames.ie/aboutus/news/biobankingeventforworldcancerday.html).

In collaboration with the National Biobank Working Group and the Patient Voice in Cancer, a biobank leaflet was produced to raise awareness of biobanking (http://www.stjames.ie/cancer/research/biobanknetwork/), while a Biobank Network webpage was designed under the SJH website (http://www.stjames.ie/cancer/research/biobanknetwork/) describing the activities of each of the cancer biobanks at the TSJCI.

3. Spotlight on Mission Cancer Helix

Trinity College Dublin is pleased to launch the Mission Cancer Helix - a virtual cluster of experts focussing on multi-disciplinary and cross-sectoral research & innovation to combat cancer and its comorbidities. The Helix is hosted on the Crowdhelix platform which connects a group of leading research institutions and innovating companies around the world, so that together they can plan and deliver pioneering Horizon Europe projects.

The Mission Cancer Helix is led by Prof Lorraine O'Driscoll, a leading Principal Investigator at the Trinity St James's Cancer Institute (TSJCI), Dublin. TSJCI, Ireland's first OECI-accredited Cancer Centre, represents an ongoing dynamic collaboration between Trinity College Dublin and St James's Hospital; Ireland's largest hospital treating cancer patients.

Linked closely with the EU Policy on Cancer, Europe's Beating Cancer Plan and the activities of the Health Helix, the Cancer Helix offers a network of investigators seeking international collaborators in areas including:

- Understanding cancer including its mechanisms, risk factors, comorbidities, and impact
- Preventing what is preventable
- Optimising cancer diagnosis and treatment
- Supporting patients living longer, with better quality-of-life
- Ensuring affordable and equitable access

Members of staff have access to the platform where you can profile yourself and your expertise, post collaboration opportunities, and connect with other experts in your area. For more information about the Mission Cancer Helix, please visit https://crowdhelix.com/helixes/mission-cancer

Key Priorities for 2021 and onwards

1) Progress the development of the Mission Cancer Helix under the leadership of Prof Lorraine O'Driscoll and the CrowdHelix platform.
2) Further development and implementation of the TSJCI research strategy, encouraging greater integration between basic, translational and clinical research across all sites.
3) Deliver on the OECI quality improvement plan for research.
4) Establish a scientific advisory board for TSJCI research.
5) Develop a working model for enabling public and patient input into all TSJCI research.

New People who joined in 2020

Karen Cadoo

Prof Karen Cadoo, a consultant Cancer Geneticist and Medical Oncologist, has joined the Trinity St James's Cancer Institute from Memorial Sloan Kettering Cancer Center (MSK) in New York where she had a joint appointment in the Clinical Genetics and Gynecologic Medical Oncology Services and was the lead of the Inherited Gynecologic Cancer Genetics Program. She was awarded the Irish Society of Medical Oncology Visiting Scholar Fellowship to MSK and during her fellowship she received an ASCO Young Investigator Award for research in HSP90 inhibitors in breast cancer. Her research is centered on drug development, inherited genetics, the interplay with somatic genetics, and the potential to target these therapeutically. She has served as principal investigator for multiple therapeutic trials in ovarian cancer and is a member of the NRG Oncology Ovarian Cancer Committee. She was awarded a place on an Advanced Sequencing Technologies & Applications Program in Cold Spring Harbor Laboratory and as a member of the Niehaus Center for Inherited Cancer Genetics at MSK, she has explored the role of inherited mutations in gynecologic cancers and across multiple cancer types.

Cathal Cadogan

Cathal Cadogan is an Associate Professor in Pharmacy Practice at the School of Pharmacy and Pharmaceutical Sciences, Trinity College Dublin (TCD). Cathal completed both his BSc. (Pharm.) and PhD in TCD. He then worked as a post-doctoral researcher in the School of Pharmacy, Queen's University Belfast before being appointed as Lecturer in Pharmacy Practice in the School of Pharmacy, Royal College of Surgeons in Ireland. Cathal's research interests focus on the development, evaluation and implementation of interventions to ensure safe and effective medicine use. He is currently involved in several research programs looking at the broad areas of: prescribing of benzodiazepines and Z-drugs in primary care; prescribing of appropriate polypharmacy for older people; medication adherence in older people; medicines optimisation in older adults with cancer and patients receiving palliative care.

SECTION 5 Quality

5 Quality

Introduction

The Trinity St James's Cancer Institute (TSJCI) quality framework is dedicated to providing high quality, compassionate care to patients, with an emphasis on continuously improving the experience for the patient and their support network. This is enabled through a culture of quality, professionalism and the passion of the staff working in TSJCI to deliver evidence based patient-centered care.

This culture in TSJCI is underpinned and guided by healthcare standards, quality indicators and policy including the Organisation of European Cancer Institutes (OECI), Safer Better Healthcare (HIQA, 2012), The National Cancer Control Programme (NCCP) and the National Cancer Strategy (2017-2026) (gov.ie)

Having successfully received accreditation from OECI in 2019 the goal of TSJCI is to obtain Comprehensive Cancer Centre status by 2024. The OECI Quality Standards enable the integration of research, education and clinical care and encompass the patient journey from screening, diagnosis, treatment, survivorship and reintegration

The TSJCI Quality Coordinator, appointed in 2020, supports staff in the implementation of the OECI quality standards and to encourage greater patient and public involvement to achieve excellence in cancer care.

Quality Measures at TSJCI during 2020

The COVID-19 pandemic in 2020 brought unforeseen challenges to the provision of healthcare in Ireland. The challenge for TSJCI was to continue to provide safe, high quallity care and treatment to patients with cancer in the context of rapidly changing public health guidance.

Several innovative, multi-disciplinary approaches were introduced to minimise the risk of transmission of COVID-19 to staff and patients these included:

- Telehealth (telephone and/or video patient consultation) was introduced as a means for the healthcare providers to continue to provide clinical assessment, education and medical advice to patients.
- A pre- assessment pod was established to screen patient's pre-entry to the Haematology Oncology Daycare Centre (HODC) for signs and symptoms of COVID-19 infection. This allowed for the immediate isolation, medical assessment and COVID-19 testing of these patients prior to them entering the HODC
- On-line physiotherapy programs were made available to patients for use in their home, to improve their fitness prior to surgery, and their recovery post-surgery.
- A structured approach to virtual social visits was introduced to in-patients to reduce the isolation and loneliness they experienced as a result of visiting restrictions.
- Multidisciplinary Team Meetings (MDM) met virtually to diagnose and agree a treatment plan for patients with cancer.
- Recorded virtual webinars and teaching sessions enabled the continuous professional development of staff.
- Information was developed for patients to explain the changes made in the HOPe directorate in order to deliver safe cancer care and This information was designed to allay patients fear and anxiety about coming to the hospital during the pandemic.

Key Achievements in 2020

The quality improvement opportunities identified by the OECI in 2019 formed the ongoing quality improvement plan for the TSJCI in 2020. A one-year review of the progress of the quality improvement plan (QIP) was submitted to OECI in early December 2020. This report outlined the progress achieved and the plans for further implementation of OECI quality standards across the TSJCI.

- Following a recruitment drive from September 2020, the first TSJCI Patient Representative Group (PRG) was established. The first meeting of the members took place in November 2020. The TSJCI PRG aims to enable the patient voice in the provision of cancer care and services. Their work with staff at TSJCI will encourage and empower patients to be partners in their care.
- Patient Pathway development in EPR continued with collaboration and co-design facilitated between the multidisciplinary teams and IMS. Development of this documentation will support structured recording of clinical care and facilitates the development and measurement of appropriate quality metrics supporting safe quality care for all patients.
- The Breast Care team and the National Cancer Control Programme (NCCP) continued their collaboration to define and develop 'summary of care' documentation for breast cancer patients. This project will inform development of local and national 'summary of care' documentation for all patients treated for cancer at TSJCI enabling better access for patients to their care plans. This work aligns with SJH, the national strategies and supports the achievement of key OECI standards.
- In line with the National Cancer Strategy and the TSJCI QIP, an Acute Haematology Oncology Clinical Nurse Specialist post was introduced to the HODC. The purpose of this service is to limit the need for the acutely unwell cancer patient to attend the Emergency Department.
- The plan in 2019 was to roll out the National Cancer Information System (NCIS) in quarter three 2020. Despite the redeployment of staff and continued COVID-19 restrictions work continued in the latter half of 2020 to progress the introduction of NCIS. Plans for roll out have now been extended to quarter three 2021.
- The first animated patient education video was made by TSJCI and uploaded to Twitter. The video explained the measures taken within the Haematology Oncology Day Centre to keep patients safe during the pandemic. This was in response to feedback from patients expressing concerns about attending the Hospital during the first level five COVID-19 restrictions. The video went live on Twitter during Cancer Week 2020 and received over 3000 hits.
- Feedback from OECI relating to the one- year review of the Quality Improvement Plan was received in early 2021. It was a favorable response to the progress made relating to the Quality Improvement Plan, including a special mention of the exceptional standard of the TSJCI Annual Report for 2019.

Spotlights of new initiatives and developments

The first Patient Representative Group (PRG) for Cancer Care was established in St James's Hospital in 2020. Members of the PRG include patients who have had a cancer diagnosis, and carer's who have supported a family member through their cancer journey.

The role of the PRG is to contribute and progress quality improvements in cancer care within TSJCI, bringing the voice of the patient to the center of TSJCI this includes:

- Improving the patient experience throughout their cancer journey from screening, the development of symptoms, to diagnosis, through treatment, follow-up care, survivorship and reintegration post cancer diagnosis and treatment.
- Contributing to the co-design of healthcare services (healthcare designed by patients and healthcare providers) and clinical research that will result in better outcomes for everyone.
- Assisting the healthcare professionals in the setting of priorities for cancer programmes and cancer research.
- Providing an insight into the type of supports that patients need throughout their cancer journey.
- Providing advice and feedback to healthcare professionals related to a quality improvement initiative or research projects.
- Assisting in the development of patient information to assist patients navigate their cancer pathway.
- Assisting in the design of patient feedback surveys and the collation of results to the patient experience for the purpose of quality improvements.

Dedicated subgroups of PRG members will be formed as appropriate to progress research and quality improvement projects.

The TSJCI PRG are also aligned with the long established Patient Representative Group in St James's Hospital. The TSJCI PRG engages with the Trinity College Dublin based HRB-Ignite group and the University College Dublin based Conway Institute, PPI group.

If you have a project plan or research proposal that you would like to share with and receive feedback from the TSJCI PRG please email the Quality Coordinator at thecancerinstitute@stjames.ie

Towards a digital TSJCI 2020

The Informatics department have partnered with the Cancer Institute in undertaking a digital transformation of multi-disciplinary meetings which were previously recorded on paper.

Services engaged so far include upper Gastrointestinal, Colorectal, Gynaecology, Urology and Haematology (Myeloma). This is being conducted iteratively, discipline-by-discipline and in close consultation with the teams to ensure that end-users are driving the process and any recommendations are fully implementable.

The approach taken includes workflow mapping, identification of bottlenecks and obtaining consensus on structured recording of cancer-related information including diagnoses, types and subtypes. Message centre notification workflows have been implemented and recording of outcomes has been working successfully in real time using customised power forms.

A number of the team have worked with the National Cancer Information System (NCIS) local implementation team to implement new EPR records for the Haematology Oncology Day Centre teams to facilitate smooth digital workflows when NCIS is implemented. This will improve the availability of information to enable improved clinical decision making. Informatics have delivered a number of service improvements to deliver practical clinical value, one of which was the amendment to the textual rendition for the EPR 'Problems and Diagnoses' section so that rendered documents display more legibly and only contain pertinent information.

The next steps will be to revisit the disciplines who have engaged with us, to optimise the workflows and to close the recording loop in those areas who opted to record outcomes only.

Key Priorities for 2021 and onwards

TSJCI quality initiatives and commitments for 2021:

- Development of a Memorandum of Understanding between Trinity College Dublin and St James's Hospital
- Complete and close off the remaining patient feedback quality improvement initiatives from the 2020 quality improvement plan
- Complete the 'Memorandum of Understanding' between Trinity College, Dublin and St James's Hospital to formalise governance structures between the two institutions within TSJCI
- Complete a cost benefit analysis for the proposed physical infrastructure of the TSJCI.
- Support the introduction of the National Electronic Chemotherapy Prescribing System by end of 2021
- Collaborate with IMS in the development of a system to identify all patients with cancer within the hospital to achieve full oversight of this patient cohort.
- Continue to support the development of agreed patient pathways and to help promote an increase in the number of therapeutic clinical trials available to patients within the TSJCI.
- Progress the development of a standardised disease specific TSJCI complications registry to capture complications of care experienced by cancer patients for the purpose of review and learning
- To continue to improve communications and the sharing of relevant patient data between St James' Hospital and referring centres through fully implementing standardised online GDPR compliant patient referral forms for multi-disciplinary team meetings and patient follow-up post treatment
- Develop a Digital Strategy for the TSJCI
- Continue to develop EPR documentation to record patient data in a structured way to facilitate recording, reporting and summary of care documentation for patients and GPs. Define appropriate quality metrics and dashboards for cancer services
- Further develop survivorship/surveillance pathways to support unmet needs of patients
- Expand the capture of patient experience/feedback to guide quality improvements in the delivery of patient services.
- Engagement of the TSJCI Patient Representative Group in advancing the quality framework to improve patient outcomes and experience.
- Continuation of work to progress opportunities for improvement identified by OECI
- Support structure for OECI annual self-assessment and continue to roll out the OECI quality standards across all areas of cancer care.

New People who joined your service in 2020

Siobhan Kiernan joined the TSJCI Programme Office in the role of Administrator.

Peig Carroll joined the TSJCI Programme Office in the role of Quality Coordinator.

Appendix 1 Publications

1 **Appendix 1** Publications

Abdel-Mohsen, H. T.; Abood, A.; Flanagan, K. J.; Meindl, A.; Senge, M. O.; El Diwani H. I. (2020). Synthesis, crystal structure, and ADME prediction studies of novel imidazopyrimidines as antibacterial and cytotoxic agents. Archiv der Pharmazie – Chemistry in Life Sciences, 353, e1900271. doi: 10.1002/ardp.201900271.

Abou-Alfa, G.K., Macarulla, T., Javle, M.M. and 23 more (...) (2020). Ivosidenib in IDH1-mutant, chemotherapy-refractory cholangiocarcinoma (ClarIDHy): a multicentre, randomised, double-blind, placebo-controlled, phase 3 study. The Lancet Oncology,21(6) 796-807.

Ahern, J., Toner, M., Van Harten, M. and 1 more (...) (2020). The detection of oral cancer and potentially malignant disorders in Ireland: An observational study of 100 cases. Journal of Public Health Dentistry,80(4) 333-337.

Ahmed Al-Hadhrami, N., Ladwig, A., Rahman, A., Rozas, I., Paul G. Malthouse, J., Evans, P. (2020). Synthesis of 2-guanidinyl pyridines and their trypsin inhibition and docking. Bioorg and Med Chem, 28 (16), 115612.

Alberti, M., Prina-Mello, A. (2020). Smart model of intrinsic loss power of SPIONs in hyperthermia treatment. J. Magnetism and Magnetic Materials, 502, 166493.

Ali, A., Zhang, F., Maguire, A. and 9 more (...) (2020). HDAC6 degradation inhibits the growth of high-grade serous ovarian cancer cells. Cancers,12(12) 1-20.

Alken, S., Owens, C., Gilham, C. and 8 more (...) (2020). Survival of childhood and adolescent/young adult (AYA) cancer patients in Ireland during 1994–2013: comparisons by age. Irish Journal of Medical Science,189(4) 1223-1236.

Algasem, M.A., Fergus, C., Southern, J.M., Connon, S.J., Kelly, V.P. (2020). The eukaryotic tRNA-guanine transglycosylase enzyme inserts queuine into tRNA: Via a sequential bi-bi mechanism. Chemical Communications, 56: 3915-3918.

Allott, E.H., Csizmadi, I., Howard, L.E. and 5 more (...) (2020). Statin use and longitudinal changes in prostate volume; results from the REduction by DUtasteride of prostate Cancer Events (REDUCE) trial. BJU International,125(2) 226-233.

Allott, E.H., Ebot, E.M., Stopsack, K.H. and 17 more (...) (2020). Statin use is associated with lower risk of PTEN-null and lethal prostate cancer. Clinical Cancer Research,26(5) 1086-1093.

Alzoubaidi, D., Ragunath, K., Wani, S. and 27 more (...) (2020). Quality indicators for Barrett's endotherapy (QBET): UK consensus statements for patients undergoing endoscopic therapy for Barrett's neoplasia. Frontline Gastroenterology,11(4) 259-271.

Amer, A., Whelan, A., Al-Hebshi, N.N. Healy, C. and Moran G.P. (2020). Acetaldehyde production by Rothia mucilaginosa isolates from patients with oral leukoplakia. Journal of Oral Microbiology,12(1): 1743066.

Angiari, S., Runtsch, M.C., Sutton, C.E., Palsson-McDermott, E.M., Kelly, B., Rana, N., Kane, H., Papadopoulou, G., Pearce, E.L., Mills, K.H.G., O'Neill, L.A.J. (2020). Pharmacological Activation of Pyruvate Kinase M2 Inhibits CD4+ T Cell Pathogenicity and Suppresses Autoimmunity. Cell Metabolism, 31 (2): 391-405.

Annett, S., Moore, G., Short, A. and 23 more (incl O'Toole, S., O'Leary, J., Bates, M.) (2020). FKBPL-based peptide, ALM201, targets angiogenesis and cancer stem cells in ovarian cancer. British Journal of Cancer,122(3) 361-371.

Asbun, H.J., Moekotte, A.L., Vissers, F.L. and 71 more (...) (2020). The Miami International Evidence-based Guidelines on Minimally Invasive Pancreas Resection. Annals of Surgery,271(1) 1-14.

Baiocchi, G.L., Giacopuzzi, S., Reim, D. and 28 more (...) (2020). Incidence and grading of complications after gastrectomy for cancer using the GASTRODATA registry a european retrospective observational study. Annals of Surgery,272(5) 807-813.

Bancroft, E.K., Saya, S., Brown, E., Thomas, S., Taylor, N., Rothwell, J., Pope, J., Chamberlain, A., Page, E., Benafif, S., Hanson, H., DIas, A., Mikropoulos, C., Izatt, L., Side, L., Walker, L., Donaldson, A., Cook, J.A., Barwell, J., Wiles, V., Limb, L., Eccles, D.M., Leach, M.O., Shanley, S., Gilbert, F.J., Gallagher, D., Rajashanker, B., Whitehouse, R.W., Koh, D.-M., Sohaib, S.A., Evans, D.G., Eeles, R.A., Walker, L.G. (2020). Psychosocial effects of whole-body MRI screening in adult high-risk pathogenic TP53 mutation carriers: A case-controlled study (SIGNIFY). Journal of Medical Genetics, 57 (4): 226-236.

Barber, G., Anand, A., Katarzyna Oficjalska and 16 more (incl Reynolds, J.V., O'Sullivan, J., Creagh E.M.) (2020)..Characterizing caspase-1 involvement during esophageal disease progression. Cancer Immunology, Immunotherapy,69(12) 2635-2649.

Barrett, M., Uí Dhuibhir, P., Njoroge, C. and 4 more (...) (2020). Diet and nutrition information on nine national cancer organisation websites: A critical review. European Journal of Cancer Care,29(5):e13280.

Barry, C.P., MacDhabheid, C., Tobin, K. Stassen, L.F., Lennon, P., Toner, M., O'Regan, E. and Clark, J.R. (2020). 'Out of house' virtual surgical planning for mandible reconstruction after cancer resection: is it oncologically safe?. International Journal of Oral and Maxillofacial Surgery, Dec 13. S0901-5027 (20)30424-0.

Bates, M., Boland, A., McDermott, N. and 1 more (...) (2020). YB-1: The key to personalised prostate cancer management?. Cancer Letters,49066-75.

Bates, M., Furlong, F., Gallagher, M.F. and 4 more (...) (2020). Too MAD or not MAD enough: The duplicitous role of the spindle assembly checkpoint protein MAD2 in cancer. Cancer Letters,46911-21.

Bates, M., Spillane, C.D., Gallagher, M.F. and 10 more (...) (2020). The role of the MAD2-TLR4-MyD88 axis in paclitaxel resistance in ovarian cancer. PLoS ONE,15(12).

Beauvais, D., Danhof, S., Hayden, P.J. Einsele, H., Yakoub-Agha, I. (2020). Clinical data, limitations and perspectives on chimeric antigen receptor T-cell therapy in multiple myeloma. Current opinion in oncology,32(5) 418-426.

Behl, I., Calado, G., Malkin, A. Flint, S., Galvin, S., Healy C.M., Pimentel, M.L., Byrne, H.J., Lyng, F.M. (2020). A pilot study for early detection of oral premalignant diseases using oral cytology and Raman micro-spectroscopy: Assessment of confounding factors. Journal of Biophotonics,13(11): e202000079.

Bennett, A.E., O'Neill, L., Connolly, D., Guinan, E., Boland, L., Doyle, S., O'Sullivan, J., Reynolds, J.V. and Hussey, J. (2020). Perspectives of Esophageal Cancer Survivors on Diagnosis, Treatment, and Recovery. Cancers Dec 31;13(1):100.

Berghmans, T., Lievens, Y., Aapro, M. and 15 more (...) (2020). European Cancer Organisation Essential Requirements for Quality Cancer Care (ERQCC): Lung cancer. Lung Cancer,150221-239.

Blagden, S.P., Cook, A.D., Poole, C., Howells, L., McNeish, I.A., Dean, A., Kim, J.-W., O'Donnell, D.M., Hook, J., James, E.C., White, I.R., Perren, T., Lord, R., Dark, G., Earl, H.M., Hall, M., Kaplan, R., Ledermann, J.A., Clamp, A.R. (2020). Weekly platinum-based chemotherapy versus 3-weekly platinum-based chemotherapy for newly diagnosed ovarian cancer (ICON8): quality-of-life results of a phase 3, randomised, controlled trial. The Lancet Oncology, 21 (7): 969-977.

Boekel, N.B., Duane, F.K., Jacobse, J.N., Hauptmann, M., Schaapveld, M., Sonke, G.S., Gietema, J.A., Hooning, M.J., Seynaeve, C.M., Maas, A.H.E.M., Darby, S.C., Aleman, B.M.P., Taylor, C.W., van Leeuwen, F.E. (2020). Heart failure after treatment for breast cancer. European Journal of Heart Failure, 22 (2): 366-374.

Boland PA, Kelly ME, Donlon NE, Bolger JC, Larkin JO, Mehigan BJ, McCormick PH. Management options for chronic anal fissure: a systematic review of randomised controlled trials. Int J Colorectal Dis. 2020 Oct;35(10):1807-1815.

Boland PA, Kelly ME, Donlon NE, Bolger JC, Mehigan BJ, McCormick PH, Larkin JO. Prophylactic negative pressure wound therapy for closed laparotomy wounds: a systematic review and meta-analysis of randomised controlled trials Ir J Med Sci. 2021 Feb;190(1):261-267.

Boland, M.R., Ryan, É.J., Nugent, T. and 7 more (...) (2020). Impact of progesterone receptor status on response to neoadjuvant chemotherapy in estrogen receptor-positive breast cancer patients. Journal of Surgical Oncology,122(5) 861-868.

Boland, V., Brady, A.-M., Drury, A. (2020). The physical, psychological and social experiences of alopecia among women receiving chemotherapy: An integrative literature review. European Journal of Oncology Nursing,49.

Börger, V., Weiss, D.J., Anderson, J.D. and 28 more (...) (2020). International Society for Extracellular Vesicles and International Society for Cell and Gene Therapy statement on extracellular vesicles from mesenchymal stromal cells and other cells: considerations for potential therapeutic agents to suppress coronavirus disease-19. Cytotherapy,22(9) 482-485.

Brady, L., Hayes, B., Sheill, G. and 24 more (...) (2020). Platelet cloaking of circulating tumour cells in patients with metastatic prostate cancer: Results from ExPeCT, a randomised controlled trial. PLoS ONE,15(12).

Brennan, K., Martin, K., FitzGerald, S.P. O'Sullivan J and 4 more (...) (2020). A comparison of methods for the isolation and separation of extracellular vesicles from protein and lipid particles in human serum. Scientific Reports,10(1).

Browning, J., Rooney, M., Hams, E. and 5 more (...) (2020). Highly efficient CRISPR-targeting of the murine Hipp11 intergenic region supports inducible human transgene expression. Molecular Biology Reports,47(2) 1491-1498.

Buckley, A.M., Dunne, M.R., Morrissey, M.E., Kennedy, S.A., Nolan, A., Davern, M., Foley, E., Clarke, N., Lysaght, J., Ravi, N., MacCarthy, F., O'Toole, D., Reynolds, J.V., Kennedy, B.N. and O'Sullivan, J. (2020). Real-time metabolic profiling of oesophageal tumours reveals an alatered metabolic phenotype to different oxygen tensions and to treatment with Pyrazinib. Scientific Reports. Jul 21;10(1):12105.

Buckley, A.M., Lynam-Lennon, N., O'Neill, H. and 1 more (...) (2020). Targeting hallmarks of cancer to enhance radiosensitivity in gastrointestinal cancers. Nature Reviews Gastroenterology and Hepatology,17(5) 298-313.

Buoso, E., Masi, M., Long, A. and 4 more (...) (2020). Ribosomes as a nexus between translation and cancer progression: Focus on ribosomal Receptor for Activated C Kinase 1 (RACK1) in breast cancer. British Journal of Pharmacology, Jul 29. doi: 10.1111/bph.15218.

Burgess, J.T., Bolderson, E., Adams, M.N. and 6 more (...) (2020). SASH1 is a prognostic indicator and potential therapeutic target in non-small cell lung cancer. Scientific Reports,10(1).

Butler, E., Collier, S., Boland, M. and 3 more (...) (2020). Self-concept and health anxiety relate to psychological outcomes for BRCA1/2 carriers. Psycho-Oncology,29(10) 1638-1645.

Butler, E., Collier, S., Hevey, D. (2020). The factors associated with distress a minimum of six months after BRCA1/2 confirmation: A systematic review. Journal of Psychosocial Oncology,Oct 22; 1-27.

Butler, J., Finley, C., Norell, C.H. and 29 more (...) (2020). New approaches to cancer care in a COVID-19 world. The Lancet Oncology,21(7) e339-e340.

Butt, W.T., Reynolds, J.V. (2020). Isolated oesophageal adenocarcinoma metastasis at percutaneous endoscopic gastrostomy (PEG) site. BMJ case reports,13(6).

Cannon, A., Clarke, N., MacCarthy, F. and 5 more (...) (2020). Effect of cigarette smoke extract on the intestinal microenvironment of ulcerative colitis tissue. JGH Open,4(6) 1191-1198.

Carr, M., Knox, A.J.S., Nevin, D.K., O'Boyle, N., Wang, S., Egan, B., McCabe, T., Twamley, B., Zisterer, D.M., Lloyd, D.G., Meegan, M.J. (2020). Optimisation of estrogen receptor subtype-selectivity of a 4-Aryl-4H-chromene scaffold previously identified by virtual screening. Bioorg and Med Chem, 28 (5), 115261.

Catalano, M., O'Driscoll, L. (2020). Inhibiting extracellular vesicles formation and release: a review of EV inhibitors. Journal of Extracellular Vesicles,9(1).

Cercek, A., Boerner, T., Tan, B.R., Chou, J.F., Gönen, M., Boucher, T.M., Hauser, H.F., Do, R.K.G., Lowery, M.A., Harding, J.J., Varghese, A.M., Reidy-Lagunes, D., Saltz, L., Schultz, N., Kingham, T.P., D'Angelica, M.I., Dematteo, R.P., Drebin, J.A., Allen, P.J., Balachandran, V.P., Lim, K.-H., Sanchez-Vega, F., Vachharajani, N., Majella Doyle, M.B., Fields, R.C., Hawkins, W.G., Strasberg, S.M., Chapman, W.C., Diaz, L.A., Jr., Kemeny, N.E., Jarnagin, W.R. (2020). Assessment of Hepatic Arterial Infusion of Floxuridine in Combination with Systemic Gemcitabine and Oxaliplatin in Patients with Unresectable Intrahepatic Cholangiocarcinoma: A Phase 2 Clinical Trial. JAMA Oncology, 6 (1): 60-67.

Chaekal OK, Scaradavou A, Masson Frenet E, Albano MS, Cushing M, Desai P, Dobrila L, Gergis U, Guarneri D, Hsu JM, Lee S, Mayer SA, Phillips AA, Orfali N, Ritchie EK, Roboz GJ, Romeo C, Samuel MS, Shore T, van Besien K. (2020) Adoptive immunotherapy with CB following chemotherapy for patients with refractory myeloid malignancy: chimerism and response. Blood Adv. 4(20):5146-5156.

Chana K, Frankish N, Zhanga T, Ece A, Cannon A, O'Sullivan J, Sheridan H. (2020). Bioactive indanes: Insight into the bioactivity of indane dimers related to the lead anti-inflammatory molecule PH46A. Journal of Pharmacy and Pharmacology, Jul; 72(7):929-937.

Chellamuthu, A., Gray, S.G. (2020). The RNA Methyltransferase NSUN2 and its potential roles in cancer. Cells (MDPI) 9, 1758; doi:10.3390/cells9081758

Chen, C., Lohavanichbutr, P., Zhang, Y. and 28 more (...) (2020). Prediction of survival of HPV16-negative, p16-negative oral cavity cancer patients using a 13-gene signature: A multicenter study using FFPE samples. Oral Oncology,100.

Choi, C., Finlay, D.K. (2020). Diverse immunoregulatory roles of oxysterols— the oxidized cholesterol metabolites. Metabolites, 10 (10):1-24.

Connolly-Zubot, A., Timulak, L., Hession, N. and 1 more (...) (2020). Emotion-Focused Therapy for Anxiety and Depression in Women with Breast Cancer. Journal of Contemporary Psychotherapy,50(2) 113-122.

Conroy, M.J., Lysaght, J. (2020). CX3CL1 Signaling in the Tumor Microenvironment. Advances in Experimental Medicine and Biology,1231:1-12.

COVIDSurg Collaborative (2020). Delaying surgery for patients with a previous SARS-CoV-2 infection. British Journal of Surgery, 107 (12): e601-e602.

COVIDSurg Collaborative (2020). Safety of hospital discharge before return of bowel function after elective colorectal surgery. British Journal of Surgery, 107 (5): 552-559.

COVIDSurg Collaborative (2020). Safety and efficacy of non-steroidal anti-inflammatory drugs to reduce ileus after colorectal surgery. British Journal of Surgery, 107 (2): e161-e169.

Crampe, M., Langabeer, S.E., O'Brien, D. and 2 more (...) (2020). Philadelphia chromosome-positive acute lymphoblastic leukemia with an e14a3 BCR-ABL1 fusion: The role of molecular monitoring. Hematology/ Oncology and Stem Cell Therapy,13(3) 166-167.

Cummins, D., O'Sullivan, S., Dunne, M., McDermott, R., Keys, M., Fitzpatrick, D., Faul, C., Javadpour, M., Skourou, C. (2020). Determining normal tissue dose in intracranial stereotactic radiosurgery: A diameter-based predictive nomogram. Journal of Radiosurgery and SBRT, 7 (1): 67-75.

Daly, N., Demaio, A., Daly, R. and 1 more (...) (2020). Laparoscopic Boari flap formation in advanced ovarian carcinoma. International Journal of Gynecological Cancer,30(7).

Dambal, S., Howard, L.E., Allott, E.H. and 6 more (...) (2020). Serum Lipids prior to Starting Androgen Deprivation Therapy and Risk of Castration Resistant Prostate Cancer and Metastasis: Results from the SEARCH Database. The Journal of urology,203(1) 120-127.

Davern, M., Lysaght, J. (2020). Cooperation between chemotherapy and immunotherapy in gastroesophageal cancers. Cancer Letters,49589-99.

Devenney, K., Murphy, N., Ryan, R. and 7 more (…) (2020). The feasibility of implementing an exercise programme for deconditioned cancer survivors in a national cancer centre: FIXCAS Study [version 2; peer review: 2 approved]. HRB Open Res 2020, 2:24 (https://doi.org/10.12688/hrbopenres.12925.2)

Di Bella, C.M., Howard, L.E., Oyekunle, T. and 5 more (...) (2020). Abdominal and pelvic adipose tissue distribution and risk of prostate cancer recurrence after radiation therapy. Prostate,80(14) 1244-1252

Dinneen, K., Timlin, D.M., O'Hare, K. and 9 more (...) (2020). Incidence of single hit Bcl-2 and Bcl-6 rearrangements in DLBCL: The Irish experience. Journal of Clinical Pathology,73(10) 689-690.

Domingo-Domènech, E., Boumendil, A., Climent, F. and 12 more (incl Vandenberghe, E.) (2020). Allogeneic hematopoietic stem cell transplantation for patients with relapsed/refractory systemic anaplastic large cell lymphoma. A retrospective analysis of the Lymphoma Working Party of the European Society for Blood and Marrow Transplantation. Bone Marrow Transplantation,55(3) 633-640.

Donlon, N.E., Elliott, J.A., Donohoe, C.L. and 6 more (incl Ravi, N., Reynolds, J.R.) (2020). Adverse Biology in Adenocarcinoma of the Esophagus and Esophagogastric Junction Impacts Survival and Response to Neoadjuvant Therapy Independent of Anatomic Subtype. Annals of surgery,272(5) 814-819.

Donlon, N.E., Sheppard, A., Davern, M. and 16 more (...) (2020). Linking circulating serum proteins with clinical outcomes in esophageal adenocarcinoma—an emerging role for chemokines. Cancers,12(11) 1-20.

Donohoe, C.L., Reilly, F., Donnelly, S., Cahill, R.A. (2020). Is There Variability in Scoring of Student Surgical OSCE Performance Based on Examiner Experience and Expertise? J. Surgical Education. 77 (5): 1202-1210.

Drury, A., Payne, S., Brady, A.-M. (2020). Colorectal cancer survivors' quality of life: A qualitative study of unmet need. BMJ Supportive and Palliative Care, June 2020. doi: 10.1136/bmjspcare-2020-002190.

Drury, A., Payne, S., Brady, A.-M. (2020). Identifying associations between quality of life outcomes and healthcare-related variables among colorectal cancer survivors: A cross-sectional survey study. International Journal of Nursing Studies,101: 103434.

Duane, F., Kerr, A., Aznar, M. and 2 more (...) (2020). Exposure of the oesophagus in breast cancer radiotherapy: A systematic review of oesophageal doses published 2013–2018. European Journal of Cancer,138S83-S84.

Duffton, A., Li, W., Forde, E. (2020). The Pivotal Role of the Therapeutic Radiographer/Radiation Therapist in Image-guided Radiotherapy Research and Development. Clinical Oncology,32(12) 852-860.

Dunne, M.R., Phelan, J.J., Michielsen, A.J. and 10 more (...) (2020). Characterising the prognostic potential of HLA-DR during colorectal cancer development. Cancer Immunology, Immunotherapy,69(8) 1577-1588.

Eichholz, K.F., Woods, I., Riffault, M. and 8 more (...) (2020). Human bone marrow stem/stromal cell osteogenesis is regulated via mechanically activated osteocyte-derived extracellular vesicles. Stem Cells Translational Medicine,9(11) 1431-1447.

Esposito, I., Cicconi, P., D'Alise, A.M., and 49 more (incl. Bergin, C; Gardiner, C) behalf of the PEACHI Consortium. (2020). MHC class II invariant chain-adjuvanted viral vectored vaccines enhances T cell responses in humans. Sci Trans Med, 12 (548), eaaz7715.

Fan, B., Mellinghoff, I.K., Wen, P.Y. and 13 more (incl Lowery, M.A.) (2020). Clinical pharmacokinetics and pharmacodynamics of ivosidenib, an oral, targeted inhibitor of mutant IDH1, in patients with advanced solid tumors. Investigational New Drugs,38(2) 433-444.

Fearon, N.M., Mohan, H.M., Fanning, M., Ravi, N., Reynolds, J.V. (2020). Colonic interposition, a contemporary experience: technical aspects and outcomes. Updates in Surgery. Nov 12 Epub.

Fitzmaurice, G.J., Ryan, R.J., Young, V.K. and 6 more (...) (2020). Thoracic Surgical Oncology: Maintaining a High-Volume Surgical Program During the COVID-19 Pandemic. Annals of Thoracic Surgery,110(5) e451-e452.

Fitzpatrick, J.-M., Minogue, E., Curham, L. and 4 more (...) (2020). MyD88-dependent and -independent signalling via TLR3 and TLR4 are differentially modulated by Δ9-tetrahydrocannabinol and cannabidiol in human macrophages. Journal of Neuroimmunology,343.

Flynn, L., Barr, M.P., Baird, A.-M. and 10 more (...) (2020). Prostate cancer-derived holoclones: a novel and effective model for evaluating cancer stemness. Scientific Reports,10(1).

Fogarty, H., Dowling, A., O'Brien, D. and 12 more (...) (2020). Biclonal lymphoproliferative disorders: another association with NOTCH1-mutated chronic lymphocytic leukaemias. Irish Journal of Medical Science, Oct 17. doi:10.1007/s11845-020-02389-1.

Fogarty H, Townsend L, Ni Cheallaigh C, Bergin C, Martin-Loeches I, Browne P, Bacon CL, Gaule R, Gillett A, Byrne M, Ryan K, O'Connell N, O'Sullivan JM, Conlon N, O'Donnell JS. (2020). COVID-19 coagulopathy in Caucasian patients. Br J Haematol. 189(6):1044-1049.

Fogarty H, Townsend L, Ni Cheallaigh C, Bergin C, Martin-Loeches I, Browne P, Bacon CL, Gaule R, Gillett A, Byrne M, Ryan K, O'Connell N, O'Sullivan JM, Conlon N, O'Donnell JS. (2020). More on COVID-19 coagulopathy in Caucasian patients. Br J Haematol. 189(6):1060-1061.

Franco, P., Tesio, V., Bertholet, J. and 16 more (...) (2020). The role of alexithymia and empathy on radiation therapists' professional quality of life. Technical Innovations and Patient Support in Radiation Oncology,1529-36.

Franco, P., Tesio, V., Bertholet, J. and 16 more (...) (2020). Professional quality of life and burnout amongst radiation oncologists: The impact of alexithymia and empathy. Radiotherapy and Oncology,147162-168.

Galera, P., Flavin, R., Savage, N.M. and 8 more (...) (2020). Epstein-Barr Virus-negative Marginal Zone Lymphoma as an Uncommon Form of Monomorphic Posttransplant Lymphoproliferative Disorder. American Journal of Surgical Pathology,44(10) 1340-1352.

Garderet, L., Morris, C., Beksac, M. and 4 more (incl Hayden, P.J.) (2020). Are Autologous Stem Cell Transplants Still Required to Treat Myeloma in the Era of Novel Therapies? A Review from the Chronic Malignancies Working Party of the EBMT. Biology of Blood and Marrow Transplantation,26(9) 1559-1566.

Ghaffari, M., Tezval, J., Rakhshanderou, S. and 3 more (...) (2020). Skin cancer preventive behaviours among rural Illam farmers, western Iran: applying protection motivation theory. Rural Society,29(2) 89-99.

Gierlich, P., Mata, A.I., Donohoe, C. and 3 more (...) (2020). Ligand-Targeted Delivery of Photosensitizers for Cancer Treatment. Molecules (Basel, Switzerland),25(22).

Giubilato, E., Cazzagon, V., Amorim, M.J.B. and 23 more (...) (2020). Risk management framework for nano-biomaterials used in medical devices and advanced therapy medicinal products. Materials,13(20) 1-29.

Gleeson, L.E., Gary Lee, Y.C. (2020). Predicting Patient Outcome in the Evolving Field of Malignant Pleural Effusion. Journal of Bronchology and Interventional Pulmonology,27(1) 1-3.

Gomez-Arteaga A, Orfali N, Guarneri D, Cushing MM, Gergis U, Hsu J, Hsu YS, Mayer SA, Phillips AA, Chase SA, Mokhtar AE, Shore TB, Van Besien K. (2020) Cord blood transplants supported by unrelated donor CD34+ progenitor cells. Bone Marrow Transplant. 55(12):2298-2307.

González-Barca, E., Boumendil, A., Blaise, D. and 26 more (...) (2020). Outcome in patients with diffuse large B-cell lymphoma who relapse after autologous stem cell transplantation and receive active therapy. A retrospective analysis of the Lymphoma Working Party of the European Society for Blood and Marrow Transplantation (EBMT). Bone Marrow Transplantation,55(2) 393-399.

Gorry, C., McCullagh, L., Barry, M. (2020). Economic Evaluation of Systemic Treatments for Advanced Melanoma: A Systematic Review. Value in Health,23(1) 52-60.

Gray, S.G. & Mutti, L. "Immunotherapy for mesothelioma: a critical review of current clinical trials and future perspectives" (2020). Transl Lung Cancer Res. Feb;9(Suppl 1):S100-S119.

Grover, J., Trujillo, C., Saad, M., Emandi, G., Stipanov, N., Bernhard, S. S. R., Guédin, A., Mergny, J.-L., Senge, M. O.; Rozas, I. (2020): Dual-binding conjugates of diaromatic guanidines and porphyrins for recognition of G-quadruplexes.Organic & Biomolecular Chemistry 18, 5617–5624.

Haberlin, C., O'Donnell, D.M., Moran, J. and 1 more (...) (2020). Perceptions of ehealth-enabled physical activity interventions among cancer survivors: Mixed methods study. JMIR Cancer,6(1).

Haddada, M.B., Movia, D., Prina-Mello, A., Spadavecchia, J. (2020). Docetaxel gold complex nanoflowers: A chemo-biological evaluation for their use as nanotherapeutics. Colloids and Surfaces B: Biointerfaces,194: 111172.

Hall, A.L., Kromhout, H., Schüz, J. and 33 more (...) (2020). Laryngeal Cancer Risks in Workers Exposed to Lung Carcinogens: Exposure-Effect Analyses Using a Quantitative Job Exposure Matrix. Epidemiology (Cambridge, Mass.),31(1) 145-154.

Hand, F., Ryan, E.J., Harrington, C. and 5 more (incl O'Farrelly, C.) (2020). Chemotherapy and repeat resection abrogate the prognostic value of neutrophil lymphocyte ratio in colorectal liver metastases. HPB,22(5) 670-676.

Hanhauser Y.P., McGarrigle Sarah A, Carol Spillane, Niamh Byrne, Geraldine Prizeman, Amanda Drury, Elizabeth M. Connolly, Anne-Marie Brady. Risk management options for BRCA mutation carrier; a decision-making needs assessment. Poster presentation accepted for ABS May 2021

Hardy NP, McEntee PD, McCormick PH, Mehigan BJ, Larkin JO. Sigmoid volvulus: definitive surgery is safe and should be considered in all instances. Ir J Med Sci. 2021 Jul 29. doi: 10.1007/s11845-021-02713-0. Online ahead of print.

Harmon, C., O'Farrelly, C., Robinson, M.W. (2020). The Immune Consequences of Lactate in the Tumor Microenvironment. Advances in Experimental Medicine and Biology,1259113-124.

Harrold, E.C., Idris, A.F., Keegan, N.M., Corrigan, L., Teo, M.Y., O'Donnell, M., Tee Lim, S., Duff, E., O'Donnell, D.M., Kennedy, M.J., Sukor, S., Grant, C., Gallagher, D.G., Collier, S., Kingston, T., O'Dwyer, A.M., Cuffe, S. (2020). Prevalence of insomnia in an oncology patient population: An Irish tertiary referral center experience. JNCCN, 18 (12): 1623-1630.

Hashim, D., Gonzalez-Feliciano, A.G., Ahearn, T.U. and 14 more (incl Finn,S.P.) (2020). Family history of prostate cancer and the incidence of ERG- and phosphatase and tensin homolog-defined prostate cancer. International Journal of Cancer,146(10) 2694-2702.

Hayden, P.J., Iacobelli, S., Pérez-Simón, J.A. and 22 more (...) (2020). Conditioning-based outcomes after allogeneic transplantation for myeloma following a prior autologous transplant (1991-2012) on behalf of EBMT CMWP. European Journal of Haematology,104(3) 181-189.

Hayes, P., Fergus, C., Ghanim, M. and 6 more (...) (2020). Queuine micronutrient deficiency promotes warburg metabolism and reversal of the mitochondrial ATP synthase in hela cells. Nutrients,12(3).

Healy, E., Bracken, A.P. (2020). If You Like It Then You Shoulda Put Two "RINGs" on It: Delineating the Roles of vPRC1 and cPRC1. Molecular Cell,77(4) 685-687.

Hohlfeld, B. F., Gitter, B., Flanagan, K. J., Kingsbury, C. J., Kulak, N., Senge, M. O., Wiehe A. (2020). Exploring the relationship between structure and activity in BODIPYs designed for antimicrobial phototherapy. Organic & Biomolecular Chemistry, 18, 2416–2431.

Hooftman, A., Angiari, S., Hester, S. and 11 more (...) (2020). The Immunomodulatory Metabolite Itaconate Modifies NLRP3 and Inhibits Inflammasome Activation. Cell Metabolism,32(3) 468-478.e7.

Hu, L., Shen, D., Liang, D. and 15 more (...) (2020). Thyroid receptor-interacting protein 13 and EGFR form a feedforward loop promoting glioblastoma growth. Cancer Letters,493156-166.

Ibrahim, O., O'Sullivan, J. (2020). Iron chelators in cancer therapy. BioMetals,33(4-5) 201-215.

Ismail, M.S., Aoko, O., Sihag, S. and 8 more (...) (2020). Lower gastrointestinal symptoms and symptoms-based triaging systems are poor predictors of clinical significant disease on colonoscopy. BMJ Open Gastroenterology,7(1).

Jalali, A., Foley, R.W., Maweni, R.M. and 10 more (incl Lynch, T.) (2020). A risk calculator to inform the need for a prostate biopsy: A rapid access clinic cohort. BMC Medical Informatics and Decision Making,20(1): 148.

Jie, A.W., Marignol, L. (2020). Pro-con of proton: Dosimetric advantages of intensity-modulation over passive scatter for thoracic malignancies. Technical Innovations and Patient Support in Radiation Oncology,1537-46.

Kabak, E.C., Fernández-Pérez, J., Ahearne, M. (2020). Development and validation of a 3D in vitro model to study the chemotactic behavior of corneal stromal fibroblasts. Methods in Molecular Biology,2145185-196.

Kalachand, R.D., O'Riain, C., Toomey, S. and 13 more (...) (2020). Prevalence of tumor BRCA1 and BRCA2 dysfunction in unselected patients with ovarian cancer. Obstetrics and Gynecology Science,63(5) 643-654.

Kalachand, R.D., Stordal, B., Madden, S. and 31 more (incl O'Toole, S., O'Leary, J.J.) (2020). BRCA1 Promoter Methylation and Clinical Outcomes in Ovarian Cancer: An Individual Patient Data Meta-Analysis. Journal of the National Cancer Institute,112(12) 1190-1203.

Kauczor, H.-U., Baird, A.-M., Blum, T.G. and 24 more (...) (2020). ESR/ERS statement paper on lung cancer screening. European Radiology,30(6) 3277-3294.

Keane, K.G., Inder, M.S., McIntyre, C. and 7 more (...) (2020). Implementation of a nurse-led lower urinary tract symptoms (LUTS) clinic reduces general urology clinic workload in a Model 4 Hospital: a pilot study in Tallaght University Hospital. Irish Journal of Medical Science, Nov 14: 1-6. doi: 10.1007/s11845-020-02428-8.

Keane, N.A., Lane, L.M., Canniff, E. and 11 more (incl Meaney, J., O'Connell, B., Vandenberghe, E.) (2020). A surviving case of acanthamoeba granulomatous amebic encephalitis in a hematopoietic stem cell transplant recipient. American Journal of Case Reports,21: e923219-1-e9232319-6.

Kearney, L., Crampe, M., Conneally, E. and 6 more (...) (2020). Molecular responses in e19a2 BCR-ABL1 chronic myeloid leukemia. Leukemia Research Reports,13.

Kearney, L., Crampe, M., Langabeer, S.E. (2020). Frequency and spectrum of atypical BCR-ABL1 transcripts in chronic myeloid leukemia. Experimental Oncology,42(1) 78-79.

Kearns, C., Feighery, R., Caffrey, J.M. and 18 more (...) (2020). Understanding and attitudes toward cancer clinical trials among patients with a cancer diagnosis: National study through cancer trials Ireland. Cancers,12(7) 1-26.

Kennedy, S.A., Morrissey, M.E., Dunne, M.R. and 9 more (...) (2020). Combining 1,4-dihydroxy quininib with Bevacizumab/FOLFOX alters angiogenic and inflammatory secretions in ex vivo colorectal tumors. BMC Cancer,20(1).

Kenny, M., Darcy-Bewick, S., Martin, A. and 11 more (...) (2020). You are at rock bottom: A qualitative systematic review of the needs of bereaved parents as they journey through the death of their child to cancer. Journal of Psychosocial Oncology,38(6) 761-781.

Kerr, C., Heskin, J., Moran, B., Sadlier, C and Bergin, C. (2020). Anal cancer screening and Pap testing acceptability among HIV-positive men who have sex with men populations. Journal of the European Academy of Dermatology and Venereology,34(5) e226-e228.

Khan, N., Donohoe, C.L., Phillips, A.W. and 2 more (...) (2020). Signet ring gastric and esophageal adenocarcinomas: characteristics and prognostic implications. Diseases of the Esophagus,33(11) 1-7.

Khan, T., Relitti, N., Brindisi, M. and 5 more (incl Zisterer, D.) (2020). Autophagy modulators for the treatment of oral and esophageal squamous cell carcinomas. Medicinal Research Reviews,40(3) 1002-1060.

Kirwan, M., Mee, B., Clarke, N. and 13 more (...) (2020). What GDPR and the Health Research Regulations (HRRs) mean for Ireland: "explicit consent"—a legal analysis. Irish Journal of Medical Science, Jul 30. doi: 10.1007/s11845-020-02331-2.

LaMarche, N.M., Kane L., Kohlgruber, A.C., Dong, H., Lynch, L., Brenner, M.B. (2020). Distinct iNKT Cell Populations Use IFNΔor ER Stress-Induced IL-10 to Control Adipose Tissue Homeostasis. Cell Metabolism, 32 (2): 243-258.

Lambe, G., Durand, M., Buckley, A. Nicholson, S., McDermott, R (2020). Adenocarcinoma of the lung: from BAC to the future. Insights into Imaging,11:69.

Langabeer, S.E. (2020). Calr mutations in myeloproliferative neoplasms: An unfolding story. EXCLI Journal,191399-1400.

Langabeer, S.E. (2020). Concurrent chronic myeloid leukemia and calr-mutated myeloproliferative neoplasm. EXCLI Journal, 1986-88.

Langabeer, S.E. (2020). Screening for an underlying myeloproliferative neoplasm in patients with thrombocytosis post-induction chemotherapy for acute myeloid leukemia. Leukemia Research Reports,14: 100218.

Langabeer, S.E. (2020). The JAK2 V617F mutation in breast cancer?. Breast Journal,26(3).

Langabeer SE, O'Brien D, McCarron S, Bacon CL, Vandenberghe E. (2020). Real-world experience of BRAF V600E mutation testing in hairy cell leukaemia. J Clin Pathol. 2020: 207246.

Leech, M., Katz, M.S., Kazmierska, J. and 2 more (...) (2020). Empowering patients in decision-making in radiation oncology – can we do better?. Molecular Oncology,14(7) 1442-1460.

Leyden, S., Kolarova, T., Bouvier, C. and 17 more (...) (2020). Unmet needs in the international neuroendocrine tumor (NET) community: Assessment of major gaps from the perspective of patients, patient advocates and NET health care professionals. International Journal of Cancer,146(5) 1316-1323.

Liong, S., Oseghale, O., To, E.E., Brassington, K., Erlich, J.R., Luong, R., Liong, F., Brooks, R., Martin, C., O'Toole, S., Vinh, A., O'Neill, L.A.J., Bozinovski, S., Vlahos, R., Papagianis, P.C., O'Leary, J.J., Brooks, D.A., Selemidis, S. (2020). Influenza A virus causes maternal and fetal pathology via innate and adaptive vascular inflammation in mice. Proc Natl Acad Sci U S A. Sep 21:202006905. doi: 10.1073/pnas.2006905117.

Lorton, C.M., Griffin, O., Higgins, K. and 6 more (...) (2020). Late referral of cancer patients with malnutrition to dietitians: a prospective study of clinical practice. Supportive Care in Cancer,28(5) 2351-2360.

Lowery, M.A. (2020). Genotype–phenotype correlation in BRCA1/2 mutation-associated pancreatic cancer. British Journal of Cancer,122(3) 293-294.

Luszczak, S., Kumar, C., Sathyadevan, V.K. and 4 more (...) (2020). PIM kinase inhibition: co-targeted therapeutic approaches in prostate cancer. Signal Transduction and Targeted Therapy,5(1).

Luszczak, S., Simpson, B.S., Stopka-Farooqui, U. and 16 more (...) (2020). Co-targeting PIM and PI3K/mTOR using multikinase inhibitor AUM302 and a combination of AZD-1208 and BEZ235 in prostate cancer. Scientific Reports,10(1).

Maguire, P.J., Sobota, A., Mulholland, D. and 2 more (...) (2020). Incidence, management, and sequelae of ureteric obstruction in women with cervical cancer. Supportive Care in Cancer,28(2) 725-730.

Malebari, A.M., Fayne, D., Nathwani, S.M. and 7 more (...) (2020). ΔLactams with antiproliferative and antiapoptotic activity in breast and chemoresistant colon cancer cells. European Journal of Medicinal Chemistry,189.

Malone, T., Schäfer, L., Simon, N., Heavey, S., Cuffe, S., Finn, S., Moore, G., Gately, K. (2020). Current perspectives on targeting PIM kinases to overcome mechanisms of drug resistance and immune evasion in cancer. Pharmacology and Therapeutics,207:107454.

Mansoor, N., McKenna, L., Molloy, O. and 5 more (...) (2020). Emergence of lymphomatoid papulosis during treatment with brentuximab vedotin. International Journal of Dermatology,59(9) e332-e334.

Martin, P., O'Leary, E., Deady, S. and 1 more (...) (2020). The Uptake and Efficacy of Neoadjuvant Therapy in Older Adults with Locally Advanced Esophogastric Cancer. Journal of Gastrointestinal Cancer,51(3) 893-900.

Martínez-Carmona, M., Ho, Q.P., Morand, J. and 8 more (incl Ruiz-Hernandez, E.) (2020). Amino-Functionalized Mesoporous Silica Nanoparticle-Encapsulated Octahedral Organoruthenium Complex as an Efficient Platform for Combatting Cancer. Inorganic Chemistry,59(14) 10275-10284.

May, P., Normand, C., Morrison, R.S. (2020). Economics of palliative care for cancer: Interpreting current evidence, mapping future priorities for research. Journal of Clinical Oncology,38(9) 980-986.

Maynard, H., Stadler, Z.K., Berger, M.F. and 12 more (...) (2020). Germline alterations in patients with biliary tract cancers: A spectrum of significant and previously underappreciated findings. Cancer,126(9) 1995-2002.

McAleese, T., Broderick, J.M., Stanley, E. and 1 more (...) (2020). Thyroid radiation shields: A potential source of intraoperative infection. Journal of Orthopaedics,22300-303.

McEntee, P.D., McCormick, P.H., Kearney, D.E. (2020). Metachronous colorectal adenocarcinoma at colostomy site 14 years after primary resection. BMJ case reports,13(3).

McGarrigle, S., Prizeman, G., Spillane, C., Byrne, N., Drury, A., Mockler, D., Connolly, E., Brady, A. and Hanhauser, Y., 2021. Decision aids for female BRCA mutation carriers: a scoping review protocol. BMJ Open, 11(7), p.e045075.

McGarrigle, S., Hanhauser, Y., Mockler, D., Gallagher, D., Kennedy, M., Bennett, K. and Connolly, E., 2018. Risk prediction models for familial breast cancer. Cochrane Database of Systematic Reviews.

McGettrick, A.F., O'Neill, L.A.J. (2020). The Role of HIF in Immunity and Inflammation. Cell Metabolism,32(4) 524-536.

Mc Kendry K, Duff S, Huang Y, Redha M, Scanlon A, Abu Saadeh F, Gleeson N, O Leary J, O Toole S. A novel biomarker panel of HE4 and D-dimer improves ovarian cancer diagnosis in postmenopausal women presenting with symptomatic pelvic masses: a prospective cohort study. Preprinted on Authorea://DOI: 10.22541/au.159285543.32048696

McKiernan, P.J., Smith, S.G.J., Durham, A.L. and 3 more (...) (2020). The Estrogen-Induced miR-19 Downregulates Secretory Leucoprotease Inhibitor Expression in Monocytes. Journal of Innate Immunity,12(1) 90-102.

McLornan, D.P., Malpassuti, V., Lippinkhof-Kozijn, A. and 23 more (...) (2020). Outcome of allogeneic haematopoietic stem cell transplantation in myeloproliferative neoplasm, unclassifiable: a retrospective study by the Chronic Malignancies Working Party of the EBMT. British Journal of Haematology,190(3) 437-441.
McLoughlin, E.C., O'Boyle, N.M. (2020). Colchicine-binding site inhibitors from chemistry to clinic: A review. Pharmaceuticals, 13 (1).

Mee, B., Kirwan, M., Clarke, N. et al. What GDPR and the Health Research Regulations (HRRs) mean for Ireland: a research perspective. Ir J Med Sci 190, 505–514 (2021). https://doi.org/10.1007/s11845-020-02330-3

Melissari, Z., Sample, H. C., Twamley, B., Williams, R. M., Senge, M. O. (2020): Synthesis and Spectral Properties of gem-Dimethyl Chlorin Photosensitizers. ChemPhotoChem 4, 601–611. doi: 10.1002/cptc.202000051.

Mellett, C., O'Donovan, A., Hayes, C. (2020). The development of outcome key performance indicators for systemic anti-cancer therapy using a modified Delphi method. European Journal of Cancer Care,29(4).

Melo, A.M., Conroy, M.J., Foley, E.K. and 5 more (...) (2020). CD1d expression and invariant natural killer T-cell numbers are reduced in patients with upper gastrointestinal cancers and are further impaired by commonly used chemotherapies. Cancer Immunology, Immunotherapy,69(6) 969-982.

Melo, A.M., Maher, S.G., O'Leary, S.M. and 2 more (...) (2020). Selective effects of radiotherapy on viability and function of invariant natural killer T cells in vitro. Radiotherapy and Oncology,145128-136.

Meunier, A., Marignol, L. (2020). The radiotherapy cancer patient: female inclusive, but male dominated. International Journal of Radiation Biology, 96 (7): 851-856.

Michallet, M., Dreger, P., Sobh, M. and 22 more (...) (2020). Ibrutinib as a salvage therapy after allogeneic HCT for chronic lymphocytic leukemia. Bone Marrow Transplantation,55(5) 884-890.

Mihalco, S.P., Keeling, S.B., Murphy, S.F. O'Keeffe, S.A. (2020). Comparison of the utility of clinical breast examination and MRI in the surveillance of women with a high risk of breast cancer. Clinical Radiology,75(3) 194-199.

Mohammed Nur, M., Al Saadi, M., O'Regan, E.M. and 2 more (...) (2020). Small and Thin Oral Squamous Cell Carcinomas may Exhibit Adverse Pathologic Prognostic Features. Head and Neck Pathology,. https://doi.org/10.1007/s12105-020-01218-z.

Molina-Vila, M.-A., Stahel, R.A., Dafni, U. and 23 more (incl. Cuffe, S.) (2020). Evolution and Clinical Impact of EGFR Mutations in Circulating Free DNA in the BELIEF Trial. Journal of Thoracic Oncology,15(3) 416-425.

Moloney, B.M., Gilligan, K.E., Joyce, D.P. and 17 more (...) (2020). Investigating the Potential and Pitfalls of EV-Encapsulated MicroRNAs as Circulating Biomarkers of Breast Cancer. Cells,9(1).

Molony, P., Werner, R., Martin, C. and 4 more (...) (2020). Tumour Cell Anaplasia and Multinucleation as Prognosticators in Oropharyngeal Squamous Cell Carcinoma. Head and Neck Pathology,14(3) 606-615.

Molony, P., Werner, R., Martin, C. and 6 more (...) (2020). The role of tumour morphology in assigning HPV status in oropharyngeal squamous cell carcinoma. Oral Oncology,105.

Moran, G.P., Al-Hebshi, N. (2020). Editorial: The Human Microbiome and Cancer. Frontiers in Microbiology,11. doi.org/10.3389/fmicb.2020.01514.

Morris, C., Chabannon, C., Masszi, T. and 17 more (...) (2020). Results from a multicenter, noninterventional registry study for multiple myeloma patients who received stem cell mobilization regimens with and without plerixafor. Bone Marrow Transplantation,55(2) 356-366.

Morrissey, M.E., Byrne, R., Nulty, C. and 14 more (...) (2020). The tumour microenvironment of the upper and lower gastrointestinal tract differentially influences dendritic cell maturation. BMC Cancer,20(1).

Mostafaei, S., Vahidi Manesh, P., Sadri Nahand, J. and 10 more (...) (2020). The role of Epstein-Barr virus-expressed genes in breast cancer development. Breast Journal,26(11) 2323-2326.

Movia, D., Bruni-Favier, S., Prina-Mello, A. (2020) In vitro Alternatives to Acute Inhalation Toxicity Studies in Animal Models—A Perspective. Frontiers in Bioengineering and Biotechnology, 8 (549).

Movia, D., Prina-Mello, A. (2020). Preclinical development of orally inhaled drugs (Oids)—are animal models predictive or shall we move towards in vitro non-animal models?. Animals,10(8) 1-16.

Murphy M, Bennett K, Ryan S, Hughes CM, Lavan AH, Cadogan CA, A systematic scoping review of interventions to optimise medication prescribing and adherence in older adults with cancer. Research in Social and Administrative Pharmacy, Dec;16(12): 1627-1631.

Murphy, M., Bennett, K., Hughes, C.M. and 2 more (...) (2020). Interventions to optimise medication prescribing and adherence in older people with cancer: A systematic scoping review. Research in Social and Administrative Pharmacy,16(12) 1627-1631.

Murray, C., Al Shehhi, A., Ó'Riain, C. Dunne, B., Maguire, A. (2020). Evaluation of an enhanced pathological examination protocol for sentinel lymph nodes from patients with breast carcinoma. Journal of Clinical Pathology. http://dx.doi.org/10.1136/jclinpath-2020-206629.

Naughton, A.P., Ryan, É.J., Bardon, C.T. and 8 more (...) (2020). Endoscopic management versus transanal surgery for early primary or early locally recurrent rectal neoplasms—a systematic review and meta-analysis. International Journal of Colorectal Disease,35(12) 2347-2359.

Nevin, M., Hynes, G., Smith, V. (2020). Healthcare providers' views and experiences of non-specialist palliative care in hospitals: A qualitative systematic review and thematic synthesis. Palliative Medicine,34(5) 605-618.

Noel, M., O'Reilly, E.M., Wolpin, B.M. and 12 more (...) (2020). Phase 1b study of a small molecule antagonist of human chemokine (C-C motif) receptor 2 (PF-04136309) in combination with nab-paclitaxel/gemcitabine in first-line treatment of metastatic pancreatic ductal adenocarcinoma. Investigational New Drugs,38(3) 800-811.

Nolan, J.C., Salvucci, M., Carberry, S. and 6 more (...) (2020). A Context-Dependent Role for MiR-124-3p on Cell Phenotype, Viability and Chemosensitivity in Neuroblastoma in vitro. Frontiers in Cell and Developmental Biology,8: 559553. eCollection 2020.

Norell, C.H., Butler, J., Farrell, R. and 20 more (incl. O'Donnell, D.) (2020). Exploring international differences in ovarian cancer treatment: A comparison of clinical practice guidelines and patterns of care. International Journal of Gynecological Cancer,30(11) 1748-1756.

Norris LA, Papadakis E. A new journal in a brave new world. Thrombosis Update 2020:1; 100019.

Norris LA, Ward MP, O'Toole SA, Marchocki Z, Ibrahim N, Khashan AS, Abu Saadeh F, Gleeson N. (2020) A risk score for prediction of venous thromboembolism in gynecologic cancer: The Thrombogyn score. Res Pract Thromb Haemost. May 28;4(5):848-859. doi: 10.1002/rth2.12342. eCollection 2020 Jul.

Norvaiša, K.; Kielmann, M.; Senge, M. O. (2020): Porphyrins as Colorimetric and Photometric Biosensors in Modern Bioanalytical Systems. ChemBioChem 21, 1793-1807.

Nugent, K., Trousdell, J.J., Driscoll, H.O., Cleary, S., Quinlan, E., Williams, J., Dunne, M., McArdle, O., Duane, F. (2020). Effects of adjuvant breast radiotherapy delivered over one week (+/– sequential hypofractionated tumour bed boost): Prospective observational study confirming acceptable acute skin toxicity. Eur. J. Cancer, 138: S113

Nyberg, T., Frost, D., Barrowdale, D. and 29 more (...) (2020). Prostate Cancer Risks for Male BRCA1[Formula presented] and BRCA2 Mutation Carriers: A Prospective Cohort Study. European Urology,77(1) 24-35.

Nyberg, T., Frost, D., Barrowdale, D. and 30 more (...) (2020). Prostate Cancer Risk by BRCA2 Genomic Regions. European Urology,78(4) 494-497.

Orfali N, van Besien K. (2020) Combining haplo-identical and cord blood stem cell grafts - might the whole be greater than the sum of its parts? Leuk Lymphoma. 61(4):753-756.

Orfali N, O'Donovan TR, Cahill MR, Benjamin D, Nanus DM, McKenna SL, Gudas LJ, Mongan NP. (2020). All-trans retinoic acid (ATRA)-induced TFEB expression is required for myeloid differentiation in acute promyelocytic leukemia (APL). Eur J Haematol. 104(3):236-250.

O'Byrne, L.M., Witherspoon, J., Verhage, R.J.J. and 23 more (incl O'Sullivan, J., Donohoe, C.L., Ravi, N., O'Toole, D and Reynolds, J.V.) (2020). Barrett's Registry Collaboration of academic centers in Ireland reveals high progression rate of low-grade dysplasia and low risk from nondysplastic Barrett's esophagus: report of the RIBBON network. Diseases of the Esophagus,33(10):doaa009.

O'Connell, K., Looby, S., Gou, P. and 5 more (incl Flavin R.) (2020). CNS lymphoma, the Irish experience: A retrospective review of neuropathologically confirmed cases over 10 years. Clinical Neuropathology,39(9) 212-220.

O'Connor, E.B., Muñoz-Wolf, N., Leon, G. and 4 more (...) (2020). UCP3 reciprocally controls CD4+ Th17 and Treg cell differentiation. PLoS ONE,15(11).

O'Connor, M., O'Donovan, B., Waller, J. and 5 more (...) (2020). The role of healthcare professionals in HPV communication with head and neck cancer patients: A narrative synthesis of qualitative studies. European Journal of Cancer Care,29(4).

O'Dwyer, J., Cullen, M., Fattah, S. and 8 more (...) (2020). Development of a sustained release nano-in-gel delivery system for the chemotactic and angiogenic growth factor stromal-derived factor 1Δ Pharmaceutics,12(6): 5113.

O'Meara, S., Bhatt, N.R., Flynn, R.J. Manecksha, R.P., Thomas, A.Z. (2020). Bladder cancer in Ireland: a 21-year review. Irish Journal of Medical Science. 190(2): 531-538.

O'Reilly, E.M., Lee, J.W., Zalupski, M. and 17 more (...) (2020). Randomized, multicenter, phase II trial of gemcitabine and cisplatin with or without veliparib in patients with pancreas adenocarcinoma and a germline BRCA/ PALB2 mutation. Journal of Clinical Oncology,38(13) 1378-1388.

O'Reilly, M., Mellotte, G., Ryan, B., O'Connor, A. (2020). Gastrointestinal side effects of cancer treatments. Therapeutic Advances in Chronic Disease,11: 2040622320970354.

O'Sullivan, S., Wang, J., Radomski, M.W. and 2 more (...) (2020). Novel barbiturate-nitrate compounds inhibit the upregulation of matrix metalloproteinase-9 gene expression in intestinal inflammation through a CGMP-mediated pathway. Biomolecules,10(5).

O'Toole, S.A., Spillane, C., Huang, Y. and 15 more (...) (2020). Circulating tumour cell enumeration does not correlate with Miller–Payne grade in a cohort of breast cancer patients undergoing neoadjuvant chemotherapy. Breast Cancer Research and Treatment,181(3) 571-580.

O'Connor M, O'Donovan B, Waller J, Ó Céilleachair A, Gallagher P, Martin CM, O'Leary J, Sharp L. Communicating about HPV in the context of head and neck cancer: A systematic review of quantitative studies. Patient Educ Couns. 2020 Mar;103(3):462-472. doi:10.1016/j.pec.2019.09.017.

O'Connor, M., Waller, J., Gallagher, P. and 9 more (incl Timon, C., Martin, C., O'Leary, J.J.) (2020). Barriers and facilitators to discussing HPV with head and neck cancer patients: A qualitative study using the theoretical domains framework. Patient Education and Counseling,103(12) 2451-2459.

O'Donovan, A., Leech, M. (2020). Personalised treatment for older adults with cancer: The role of frailty assessment. Technical Innovations and Patient Support in Radiation Oncology,1630-38.

O'Driscoll, L. (2020). Extracellular vesicles from mesenchymal stem cells as a COVID-19 treatment. Drug Discovery Today, 25 (7): 1124-1125.

O'Driscoll, L. (2020). When E-Cadherin Becomes Unstuck in Cancer. New England Journal of Medicine,383(9) 871-873.

O'Gorman P, Naimimohasses S, Monaghan A, Kennedy M, Finn SP, Moore JB, Gormley J, Norris S. (2020). Letter: proving the benefit of exercise intervention in metabolic associated fatty liver disease-authors' reply. Aliment Pharmacol Ther, 52(8):1426-1427.

O'Gorman P, Naimimohasses S, Monaghan A, Kennedy M, Melo AM, Ní Fhloinn D, Doherty DG, Beddy P, Finn SP, Moore JB, Gormley J, Norris S. (2020). Improvement in histological endpoints of MAFLD following a 12-week aerobic exercise intervention. Aliment Pharmacol Ther, 52(8):1387-1398.

O'Grady, I., Anderson, A., O'Sullivan, J. (2020). The interplay of the oral microbiome and alcohol consumption in oral squamous cell carcinomas. Oral Oncology,110. doi: 10.1016/j.oraloncology.2020.105011.

Okkelman, I.A., Neto, N., Papkovsky, D.B. Monaghan, M.G. and Dmitriev, R.I. (2020). A deeper understanding of intestinal organoid metabolism revealed by combining fluorescence lifetime imaging microscopy (FLIM) and extracellular flux analyses. Redox Biology, 30: 101420.

O'Neill, L., Guinan, E., Doyle, S., Connolly, D., O'Sullivan, J., Bennett, A., Sheill, G., Segurado, R., Knapp, P., Fairman, C., Normand, C., Geoghegan, J., Conlon, K., Reynolds, J.V., Hussey, J. (2020). Rehabilitation strategies following oesophagogastric and Hepatopancreaticobiliary cancer (ReStOre II): a protocol for a randomized controlled trial. BMC Cancer. May 13;20(1):415.

O'Neill, L., Knapp, P., Doyle, S.L., Guinan, E., Parker, A., Segurado, R., Connolly, D., O'Sullivan, J., Reynolds, J.V., Hussey, J. (2020) Patient and family co-developed participant information to improve recruitment rates, retention, and patient understanding in the Rehabilitation Strategies Following Oesophago-gastric and Hepatopancreaticobiliary Cancer (ReStOre II) trial: Protocol for a study within a trial (SWAT). HRB Open Res. Nov 10;2:27.

O'Neill, L., Reynolds, S., Sheill, G., Guinan, E., Mockler, D., Geoghegan, J., Conlon, K., Reynolds, J.V., Hussey, J. (2020). Physical function in patients with resectable cancer of the pancreas and liver–a systematic review. J. Cancer Survivorship. 14 (4): 527-544.

O'Rourke, C., Welaratne, I., Cournane, S. and 4 more (...) (2020) .Diagnostic accuracy of SUVmax in predicting malignancy of supraclavicular lymph nodes from primary oesophageal cancer. European Journal of Radiology,125, 108860.

O'Sullivan, S., McDermott, R., Keys, M., O'Sullivan, M., Armstrong, J., Faul, C. (2020). Imaging response assessment following stereotactic body radiotherapy for solid tumour metastases of the spine: Current challenges and future directions. Journal of Medical Imaging and Radiation Oncology, 64 (3): 385-397.

O'Toole, S.A., Huang, Y., Norris, L., Power Foley M., Shireen, R., McDonald, S., Kamran, W., Ibrahim, N., Ward, M., Thompson, C., Murphy, C., D'Arcy, T., Farah, N., Heron, E., O'Leary, J.J., Abu Saadeh, F., Gleeson, N. HE4 and CA125 as preoperative risk stratifiers for lymph node metastasis in endometrioid carcinoma of the endometrium: A retrospective study in a cohort with histological proof of lymph node status. Gynecol Oncol. 2020 Nov 16:S0090-8258(20)34112-3.

Pålsson-McDermott, E.M., O'Neill, L.A.J. (2020). Targeting immunometabolism as an anti-inflammatory strategy. Cell Research,30(4) 300-314.

Park, D.S., Luddy, K.A., Robertson-Tessi, M. and 3 more (...) (2020). Searching for goldilocks: How evolution and ecology can help uncover more effective patient-specific chemotherapies. Cancer Research,80(23) 5147-5154.

Perri, G., Marchegiani, G., Frigerio, I. and 4 more (...) (2020). Management of Pancreatic Cystic Lesions. Digestive Surgery,37(1) 1-9.

Peters, S., Danson, S., Hasan, B. and 35 more (incl Cuffe, S.) (2020).A Randomized Open-Label Phase III Trial Evaluating the Addition of Denosumab to Standard First-Line Treatment in Advanced NSCLC: The European Thoracic Oncology Platform (ETOP) and European Organisation for Research and Treatment of Cancer (EORTC) SPLENDOUR Trial. Journal of Thoracic Oncology,15(10) 1647-1656.

Phipps, S.M., Garry, C.E., Kamal, S. and 5 more (...) (2020). High Content Imaging of Barrett's-Associated High-Grade Dysplasia Cells After siRNA Library Screening Reveals Acid-Responsive Regulators of Cellular Transitions. Cellular and Molecular Gastroenterology and Hepatology,10(3) 601-622.

Pisani, P., Airoldi, M., Allais, A. and 34 more (...) (2020). Metastatic disease in head & neck oncology. Acta Otorhinolaryngologica Italica,40(2) S1-S86.

Pouw, R.E., Klaver, E., Phoa, K.N. and 13 more (...) (2020). Radiofrequency ablation for low-grade dysplasia in Barrett's esophagus: long-term outcome of a randomized trial. Gastrointestinal Endoscopy,92(3) 569-574.

Power Foley, M., Kelly, M.E., Kerr, C. and 7 more (...) (2020). Management of anal intraepithelial neoplasia and anal squamous cell carcinoma at a tertiary referral centre with a dedicated infectious diseases unit: an 18-year review. International Journal of Colorectal Disease,35(10) 1855-1864.

Power, R., Leavy, C., Nolan, C. and 5 more (...) (2020). Prevalence of pancreaticobiliary cancers in Irish families with pathogenic BRCA1 and BRCA2 variants. Familial Cancer, 20(2):97-101.

Power, R., Lowery, M.A., Reynolds, J.V. and 1 more (...) (2020). The Cancer-Immune Set Point in Oesophageal Cancer. Frontiers in Oncology,10: 891.

Previtali, V., Mihigo, H.B., Amet, R. and 3 more (...) (2020). Exploring the anti-cancer mechanism of novel 3,4Δsubstituted diaryl guanidinium derivatives. Pharmaceuticals,13(12) 1-24.

Quilty, F., Byrne, A.-M., Aird, J. and 5 more (...) (2020). Impact of deoxycholic acid on oesophageal adenocarcinoma invasion: Effect on matrix metalloproteinases. International Journal of Molecular Sciences,21(21) 1-14.

Quinn L, Scott KR, Finn SP, Hayes M and Gray SG. (2020). An in vitro study determining the anti-inflammatory activities of sinapinic acid-containing extracts generated from Irish rapeseed meal. Medical Research Archives. 8(10).

Relitti, N., Saraswati, A.P., Federico, S. and 7 more (...) (2020). Telomerase-based cancer therapeutics: A review on their clinical trials. Current Topics in Medicinal Chemistry,20(6) 433-457.

Roche, S., O'Neill, F., Murphy, J. and 14 more (...) (2020). Establishment and characterisation by expression microarray of patient-derived xenograft panel of human pancreatic adenocarcinoma patients. International Journal of Molecular Sciences,21(3).

Royds, J., Conroy, M.J., Dunne, M.R., Cassidy, H., Matallanas, D., Lysaght, J., McCrory, C. (2020). Examination and characterisation of burst spinal cord stimulation on cerebrospinal fluid cellular and protein constituents in patient responders with chronic neuropathic pain - A Pilot Study. Journal of Neuroimmunology, 344: 577249.

Royds, J., Conroy, M.J., Dunne, M.R., McCrory, C., Lysaght, J. (2020). An investigation into the modulation of T cell phenotypes by amitriptyline and nortriptyline. European Neuropsychopharmacology, 31: 131-144.

Royds, J., Cassidy, H., Conroy, M.J., Dunne, M.R., Matallanas, D., Lysaght, J., McCrory, C. (2020). An Investigation into Proteomic Constituents of Cerebrospinal Fluid in Patients with Chronic Peripheral Neuropathic Pain Medicated with Opioids- a Pilot Study. Journal of Neuroimmune Pharmacology. Nov 20 Epub.

Ruvio, G., Solimene, R., Cuccaro, A. and 7 more (...) (2020). Multimodal breast phantoms for microwave, ultrasound, mammography, magnetic resonance and computed tomography imaging. Sensors (Switzerland),20(8).

Ryan, D.G., O'Neill, L.A.J. (2020). Krebs Cycle Reborn in Macrophage Immunometabolism. Annual Review of Immunology,38289-313.

Sadlier, C., Lynam, A., Kerr, C. Sheils, O and Bergin, C. (2020). Anal cancer in people living with HIV: A case series. International Journal of STD and AIDS,31(1) 82-84.

Salvatore M, Laplante JM, Soave R, Orfali N, Plate M, van Besien K, St George K. (2020). Baloxavir for the treatment of Influenza in allogeneic hematopoietic stem cell transplant recipients previously treated with oseltamivir. Transpl Infect Dis. 22(4):e13336.

Saraswati, A.P., Relitti, N., Brindisi, M., Osko, J.D., Chemi, G., Federico, S., Grillo, A., Brogi, S., McCabe, N.H., Turkington, R.C., Ibrahim, O., O'Sullivan, J., Lamponi, S., Ghanim, M., Kelly, V.P., Zisterer, D., Amet, R., Hannon Barroeta, P., Vanni, F., Ulivieri, C., Herp, D., Sarno, F., Di Costanzo, A., Saccoccia, F., Ruberti, G., Jung, M., Altucci, L., Gemma, S., Butini, S., Christianson, D.W., Campiani, G. (2020). Spiroindoline-Capped Selective HDAC6 Inhibitors: Design, Synthesis, Structural Analysis, and Biological Evaluation. ACS Medicinal Chemistry Letters, 11 (11): 2268-2276.

Scarfò, L., Chatzikonstantinou, T., Rigolin, G.M. and 79 more (incl. Vandenberghe, E.). (2020). COVID-19 severity and mortality in patients with chronic lymphocytic leukemia: a joint study by ERIC, the European Research Initiative on CLL, and CLL Campus. Leukemia, 34 (9): 2354-2363.

Sellner, L., Schetelig, J., Koster, L. and 24 more (...) (2020). Idelalisib exposure before allogeneic stem cell transplantation in patients with follicular lymphoma: an EBMT survey. Bone Marrow Transplantation,55(12) 2335-2338.

Selo, M.A., Delmas, A.-S., Springer, L. and 9 more (...) (2020). Tobacco Smoke and Inhaled Drugs Alter Expression and Activity of Multidrug Resistance-Associated Protein-1 (MRP1) in Human Distal Lung Epithelial Cells in vitro. Frontiers in Bioengineering and Biotechnology,8.

Shahabuddin Y., Gleeson N., Maguire PJ. Surgeon-administered ilioinguinal and pudendal nerve blocks for vulval oncology surgery: An observational evaluation study with Visual Analogue Pain Scoring Preprinted on Authorea https://doi.org/10.22541/au.160527249.97875924/v1

Sheill, G., Reynolds, S., O'Neill, L., Mockler, D., Reynolds, J.V., Hussey, J., Guinan, E. (2020). Cardiopulmonary Exercise Testing in Oesophagogastric Surgery: a Systematic Review. J. Gastro Surg, 24 (11): 2667-2678.

Sheill, G., Guinan, E., O'Neill, L. and 8 more (...) (2020). Preoperative exercise to improve fitness in patients undergoing complex surgery for cancer of the lung or oesophagus (PRE-HIIT): Protocol for a randomized controlled trial. BMC Cancer,20(1).

Sheppard, A.D., Lysaght, J. (2020). Immunometabolism and Its Potential to Improve the Current Limitations of Immunotherapy. Methods in Molecular Biology,2184233-263.

Silva, R., Moran, B., Russell, N.M. and 7 more (...) (2020). Evaluating liquid biopsies for methylomic profiling of prostate cancer. Epigenetics,15(6-7) 715-727.

Sinclair, D., Savage, E., O' Brien, M., O'Reilly, A., Mullaney, C., Killeen, M., O'Reilly, O., Field, C.A., Fitzpatrick, P., Murrin, C., Connolly, D., Patterson, A., Denieffe, S., Elmusharaf, K., Hickey, A., Mellon, L., Flood, M., Sweeney, M.R. (2020). Developing a national undergraduate standardized curriculum for future healthcare professionals on "Making Every Contact Count" for chronic disease prevention in the Republic of Ireland. J. Interprofessional Care, 34 (4): 561-565.

Sitte, E., Senge, M. O. (2020). The Red Color of Life Transformed – Synthetic Advances and Emerging Applications of Protoporphyrin IX in Chemical Biology. European Journal of Organic Chemistry, 3171-3191. doi: 10.1002/ejoc.202000074.

Slater, K., Heeran, A.B., Garcia-Mulero, S. and 15 more (...) (2020). High cysteinyl leukotriene receptor 1 expression correlates with poor survival of uveal melanoma patients and cognate antagonist drugs modulate the growth, cancer secretome, and metabolism of uveal melanoma cells. Cancers,12(10) 1-27.

Soekmadji, C., Li, B., Huang, Y. and 23 more (...) (2020). The future of Extracellular Vesicles as Theranostics–an ISEV meeting report. Journal of Extracellular Vesicles,9(1).

Sui, J.S.Y., Martin, P., Gray, S.G. (2020). Pre-clinical models of Small Cell Lung Cancer and the validation of therapeutic targets. Expert Opin Ther Targets. 24(3):187-204.

Sullivan, G.P., O'Connor, H., Henry, C.M. and 5 more (...) (2020). TRAIL Receptors Serve as Stress-Associated Molecular Patterns to Promote ER-Stress-Induced Inflammation. Developmental Cell,52(6) 714-730.e5.

Sun, Q., Bai, X., Sofias, A.M. and 9 more (incl Ruiz-Hernandez, E.) (2020). Cancer nanomedicine meets immunotherapy: opportunities and challenges. Acta Pharmacologica Sinica,41(7) 954-958.

Thunnissen, E., Kerr, K.M., Dafni, U. and 83 more (incl Finn, S.P., Gray, S.G., Gately, K., Barr, M.P.). (2020). Programmed death-ligand 1 expression influenced by tissue sample size. Scoring based on tissue microarrays' and cross-validation with resections, in patients with, stage I–III, non-small cell lung carcinoma of the European Thoracic Oncology Platform Lungscape cohort. Modern Pathology 33: 792–801.

Thunnissen, E., Weynand, B., Udovicic-Gagula, D. and 18 more (...) (2020). Lung cancer biomarker testing: Perspective from Europe. Translational Lung Cancer Research,9(3) 887-897.

To, E.E., O'Leary, J.J., O'Neill, L.A.J., Vlahos, R., Bozinovski, S., Porter, C.J.H., Brooks, R.D., Brooks, D.A., Selemidis, S. (2020). Spatial Properties of Reactive Oxygen Species Govern Pathogen-Specific Immune System Responses. Antioxid Redox Signal. May 1;32(13):982-992. doi: 10.1089/ars.2020.8027.

Tonry, C., Finn, S., Armstrong, J. Pennington, S.R. (2020). Clinical proteomics for prostate cancer: understanding prostate cancer pathology and protein biomarkers for improved disease management. Clinical Proteomics,17(41).

Toomey, S., Carr, A., Mezynski, M.J. and 25 more (...) (2020). Identification and clinical impact of potentially actionable somatic oncogenic mutations in solid tumor samples. Journal of Translational Medicine,18(1).

Tsiapalis, D., O'Driscoll, L. (2020). Mesenchymal Stem Cell Derived Extracellular Vesicles for Tissue Engineering and Regenerative Medicine Applications. Cells, 9 (4).

Turro, E., Astle, W.J., Megy, K. and 500 more (...) (2020). Whole-genome sequencing of patients with rare diseases in a national health system. Nature,583(7814) 96-102.

Uí Dhuibhir, P., Barrett, M., O'Donoghue, N. and 3 more (...) (2020). Self-reported and objective taste and smell evaluation in treatment-naive solid tumour patients. Supportive Care in Cancer,28(5) 2389-2396.

Umbreit, E.C., McIntosh, A.G., Suk-ouichai, C. and 11 more (...) (2020). Intraoperative and early postoperative complications in postchemotherapy retroperitoneal lymphadenectomy among patients with germ cell tumors using validated grading classifications. Cancer,126(22) 4878-4885.

Useckaite, Z., Mukhopadhya, A., Moran, B., O'Driscoll, L. (2020). Extracellular vesicles report on the MET status of their cells of origin regardless of the method used for their isolation. Scientific Reports,10: 19020.

van Besien K, Orfali N, Shore T. (2020). Allogeneic Transplant Conditioning Regimens for Patients With Non-Hodgkin Lymphoma. JAMA Oncol. 6(12):1983-1984.

Van Den Heerik, A.S.V.M., Horeweg, N., Nout, R.A., Lutgens, L.C.H.W., Van Der Steen-Banasik, E.M., Westerveld, G.H., Van Den Berg, H.A., Slot, A., Koppe, F.L.A., Kommoss, S., Mens, J.W.M., Nowee, M.E., Bijmolt, S., Cibula, D., Stam, T.C., Jurgenliemk-Schulz, I.M., Snyers, A., Hamann, M., Zwanenburg, A.G., Coen, V.L.M.A., Vandecasteele, K., Gillham, C., Chargari, C., Verhoeven-Adema, K.W., Putter, H., Van Den Hout, W.B., Wortman, B.G., Nijman, H.W., Bosse, T., Creutzberg, C.L. (2020). PORTEC-4a: International randomized trial of molecular profile-based adjuvant treatment for women with high-intermediate risk endometrial cancer. International Journal of Gynaecological Cancer, 30 (12): 2002-2007.

van den Hoogen, B., Santoni, A., Sciume, G., Bowie.A., O'Farrelly, C., O'Neill., L., Anthonsen, M., Pardali, K., Young, S., Bergthaler, A., Manel, N., Zahn, R., Kikkert, M., Snijder, E., van Kuppeveld., F., Fouchier, R., Hiscott, J. (2020). Immunometabolism pathways as the basis for innovative anti-viral strategies (INITIATE): A Marie Sklodowska-Curie innovative training network. Virus Research, 287, 198094.

Van Roessel, S., Van Veldhuisen, E., Klompmaker, S. and 41 more (...) (2020). Evaluation of Adjuvant Chemotherapy in Patients with Resected Pancreatic Cancer after Neoadjuvant FOLFIRINOX Treatment. JAMA Oncology,6(11) 1733-1740.

Vaughan-Shaw, P.G., Buijs, L.F., Blackmur, J.P. and 5 more (...) (2020). The effect of vitamin D supplementation on survival in patients with colorectal cancer: systematic review and meta-analysis of randomised controlled trials. British Journal of Cancer,123(11) 1705-1712.

Vaughan-Shaw, P.G., Zgaga, L., Ooi, L.Y. and 11 more (...) (2020). Low plasma Vitamin D is associated with adverse colorectal cancer survival after surgical resection, independent of systemic inflammatory response. Gut,69(1) 103-111.

Veeraraghavan, H., Friedman, C.F., DeLair, D.F., and 19 more (incl Cadoo, K.A.). (2020). Machine learning-based prediction of microsatellite instability and high tumor mutation burden from contrast-enhanced computed tomography in endometrial cancers. Sci. Reports, 10 (1), 17769.

Volpari, T., De Santis, F., Bracken, A.P. and 13 more (...) (2020). Anticancer innovative therapy: Highlights from the ninth annual meeting. Cytokine and Growth Factor Reviews,511-9.

Walls, J.F., Subleski, J.J., Palmieri, E.M., Gonzalez-Cotto, M., Gardiner, C.M., McVicar, D.W., Finlay, D.K. (2020). Metabolic but not transcriptional regulation by PKM2 is important for natural killer cell responses. Elife. Aug 19;9:e59166.

Walsh M, McDermott S, O'Leary N, A retrospective cohort study of hospitalised patients with COVID-19 receiving specialist palliative care support, Supportive Care in Cancer, MASCC/ISOO2021, Virtual, June 24-26, 2021

Weisel, K., Dimopoulos, M., Moreau, P. and 23 more (...) (2020). Health-related quality-of-life results from the phase 3 OPTIMISMM study: pomalidomide, bortezomib, and low-dose dexamethasone versus bortezomib and low-dose dexamethasone in relapsed or refractory multiple myeloma. Leukemia and Lymphoma,61(8) 1850-1859.

Wen, Y.L., Leech, M. (2020). Review of the role of radiomics in tumour risk classification and prognosis of cancer. Anticancer Research,40(7) 3605-3618.

White, C.M., Bakhiet, S., Bates, M. and 11 more (...) (2020). Exposure to tobacco smoke measured by urinary nicotine metabolites increases risk of p16/Ki-67 co-expression and high-grade cervical neoplasia in HPV positive women: A two year prospective study. Cancer Epidemiology, 68, 101793.

Wiggins, E.K., Oyekunle, T., Howard, L.E. and 8 more (...) (2020). Sleep quality and prostate cancer aggressiveness: Results from the REDUCE trial. Prostate,80(15) 1304-1313.

Winters, E., Poole, C. (2020). Challenges and impact of patient obesity in radiation therapy practice. Radiography,26(3) e158-e163.

Woodham, B.L., Chmelo, J., Donohoe, C.L., Madhavan, A., Phillips, A.W. (2020). Prognostic Significance of Lymphatic, Venous and Perineural Invasion After Neoadjuvant Chemotherapy in Patients with Gastric Adenocarcinoma. Annals of Surgical Oncology, 27 (9): 3296-3304.

Xue, Y., Zhu, X., Meehan, B. and 16 more (...) (2020). SMARCB1 loss induces druggable cyclin D1 deficiency via upregulation of MIR17HG in atypical teratoid rhabdoid tumors. Journal of Pathology,252(1) 77-87.

Yakoub-Agha, I., Chabannon, C., Bader, P. and 23 more (...) (2020). Management of adults and children undergoing chimeric antigen receptor T-cell therapy: Best practice recommendations of the European Society for Blood and Marrow Transplantation (EBMT) and the Joint Accreditation Committee of ISCT and EBMT (JACIE). Haematologica,105(2) 297-316.

Yi, D., Johnston, B.M., Ryan, K. and 9 more (...) (2020). Drivers of care costs and quality in the last 3 months of life among older people receiving palliative care: A multinational mortality follow-back survey across England, Ireland and the United States. Palliative Medicine,34(4) 513-523.

Zgaga, L. (2020). Heterogeneity of the Effect of Vitamin D Supplementation in Randomized Controlled Trials on Cancer Prevention. JAMA Network Open,3(11).

Zhang, B., Leech, M. (2020). A review of stereotactic body radiation therapy in the management of oligometastatic prostate cancer. Anticancer Research,40(5) 2419-2428.

Appendix 2 Cancer Clinical Trials

2 Appendix 2 Cancer Clinical Trials

List of trials

MSD
Cliona Grant
MK3476-630
A Phase 3, Randomized, Double-blind, Placebo-controlled Study to Evaluate pembrolizumab versus placebo as adjuvant therapy following surgery and radiation in participants with high-risk locally advanced cutaneous squamous cell

Alliance
Dearbhaile O'Donnell
Tiger
A randomized phase III trial comparing conventional-dose chemotherapy using Paclitaxel, Ifosfamide, and Cisplatin (TIP) with high-dose chemotherapy using Mobilizing Paclitaxel plus Ifosfamide followed by high-dose Carboplatin and Etoposide (TI-CE) as first salvage treatment in relapsed or refractory germ cell tumors

Roche
Elisabeth Vandenberghe
MO40598
A phase II, open-label, multicenter, randomized study evaluating the safety and efficacy of polatuzumab vedotin in combination with rituximab plus gemcitabine plus oxaliplatin (r-gemox) versus r-gemox alone in patients with relapsed/refractory diffuse large b-cell lymphoma

Beigene
Elisabeth Vandenberghe
BGB-3111-306
A Phase 3 Randomized, Open-Label, Multicenter Study Comparing Zanubrutinib (BGB-3111) plus Rituximab Versus Bendamustine plus Rituximab in Patients with Previously Untreated Mantle Cell Lymphoma Who Are Ineligible for Stem Cell Transplantation

Nordic Nanovector
Elisabeth Vandenberghe
Lymrit
A phase I/II study of lutetium (177Lu) lilotomab satetraxetan (Betalutin®) antibody-radionuclide-conjugate for treatment of relapsed non-Hodgkin lymphoma

BMS
John Kennedy
Ca209-7FL
A randomized, multicenter, double-blind, placebo-controlled phase 3 Study of Nivolumab Versus Placebo in Combination With neoadjuvant chemotherapy and adjuvant endocrine therapy in the treatment of high-risk, Stage II-III estrogen receptor-positive (ER+), human epidermal growth factor receptor 2-negative (HER2-) breast cancer

MSD
John Kennedy
MK3475-756
A Randomized, Double-Blind, Phase III Study of Pembrolizumab versus Placebo in Combination with Neoadjuvant Chemotherapy and Adjuvant Endocrine Therapy for the Treatment of High-Risk Early-Stage Hormone Receptor-Positive, Human Epidermal Growth Factor Receptor 2-Negative (HR+/HER2–) Breast Cancer (KEYNOTE-756)

Basilea
Maeve Lowery
DZB-CS-301
A pivotal study of derazantinib in patients with inoperable or advanced intrahepatic cholangiocarcinoma and FGFR2 gene fusions or FGFR2 gene mutations or amplifications

Astellas
Maeve Lowery
Astellas GLOW
A Phase 3, Global, Multi-Center, Double-Blind, Randomized, Efficacy Study of IMAB362 plus CAPOX Compared with Placebo Plus CAPOX as First-line Treatment of Subjects with Claudin (CLDN) 18.2-Positive, HER2-Negative, Locally Advanced Unresectable or Metastatic Gastric or Gastroesophageal Junction (GEJ) Adenocarcinoma.

MSD
Sinéad Cuffe
MK3475-671
A Phase III, Randomized, Double-blind Trial of Platinum Doublet chemotherapy +/- Pembrolizumab as neo-adjuvant/ adjuvant therapy for participants with resectable stage IIb or IIIa non-small cell lung cancer

Abbvie
Sinéad Cuffe
M14-239
Phase 2, Open-Label Safety and Efficacy Study of Telisotuzumab Vedotin (ABBV-399) in Subjects with Previously Treated c-Met+ Non-Small Cell Lung Cancer

BMS
Sinéad Cuffe
Ca209-73L
A Phase 3, Randomized, Open Label Study to Compare Nivolumab plus Concurrent Chemoradiotherapy (CCRT) followed by Nivolumab plus Ipilimumab or Nivolumab plus CCRT Followed by Nivolumab vs CCRT followed by Durvalumab in Previously Untreated, Locally Advanced Non-small Cell Lung Cancer

Blueprint
Sinéad Cuffe
BLU-667-2303
A Randomized, Open-Label, Phase 3 Study of Pralsetinib (formerly known as BLU-667) versus Standard of Care for First Line RET-fusion, Metastatic Non-Small Cell Lung Cancer.

MSD
Maeve Lowery
MK3475-811
A Phase III, Randomized, Double-blind Trial Comparing Trastuzumab Plus Chemotherapy and Pembrolizumab or Placebo as First-line Treatment in Participants With HER2 Positive Metastatic Gastric or Gastroesophageal Junction Adenocarcinoma (KEYNOTE 811)

Incyte Biosciences
Eibhlin Conneally
Calls
A cohort study to establish the prevalence of mutations in patients with CML who meet the ELN criteria for warning or failure and patients with Ph+ ALL with detectable BCR-ABL currently being treated with first or subsequent TKI therapy in the UK using next-generation sequencing

GSK
Cliona Grant
GSK 209227
A Randomized, Open-label, Phase III Study of GSK3359609 in Combination with Pembrolizumab ± Platinum-based Chemotherapy Doublets versus Pembrolizumab plus 5FU/Platinum Chemotherapy for First-Line Treatment of Recurrent/Metastatic Head and Neck Squamous Cell Carcinoma

GSK
Cliona Grant
GSK 209229
A Randomized, Open-label, Adaptive, Phase II/III Study of Pembrolizumab with or without GSK3359609 for First-Line Treatment of Recurrent/Metastatic Head and Neck Squamous Cell Carcinoma

TRIO
John Kennedy
Natalee
NATALEE/ TRIO033: A phase III, multicenter, randomized, open-label trial to evaluate efficacy and safety of ribociclib with endocrine therapy as an adjuvant treatment in patients with hormone receptor-positive, HER2-negative, early breast cancer (New Adjuvant TriAl with Ribociclib [LEE011]:NATALEE).

Cancer Trials Ireland
John Reynolds
Neo-Aegis
Neo-AEGIS (NEO-adjuvant trial in Adenocarcinoma of the oEsophagus and oesophagoGastric junction International Study): Randomised Clinical Trial of neoadjuvant and adjuvant chemotherapy (Investigator's choice Modified MAGIC or FLOT regimen) vs. gastric junctionneoadjuvant chemoradiation (CROSS protocol) in adenocarcinoma of the oesophagus and oesophago-gastric junction

MSD
Karen Cadoo
Mk7902-001
A Phase 3 Randomized, Open-Label, Study of Pembrolizumab (MK-3475) Plus Lenvatinib (E7080/MK-7902) Versus Chemotherapy for First-line Treatment of Advanced or Recurrent Endometrial Carcinoma (LEAP-001)

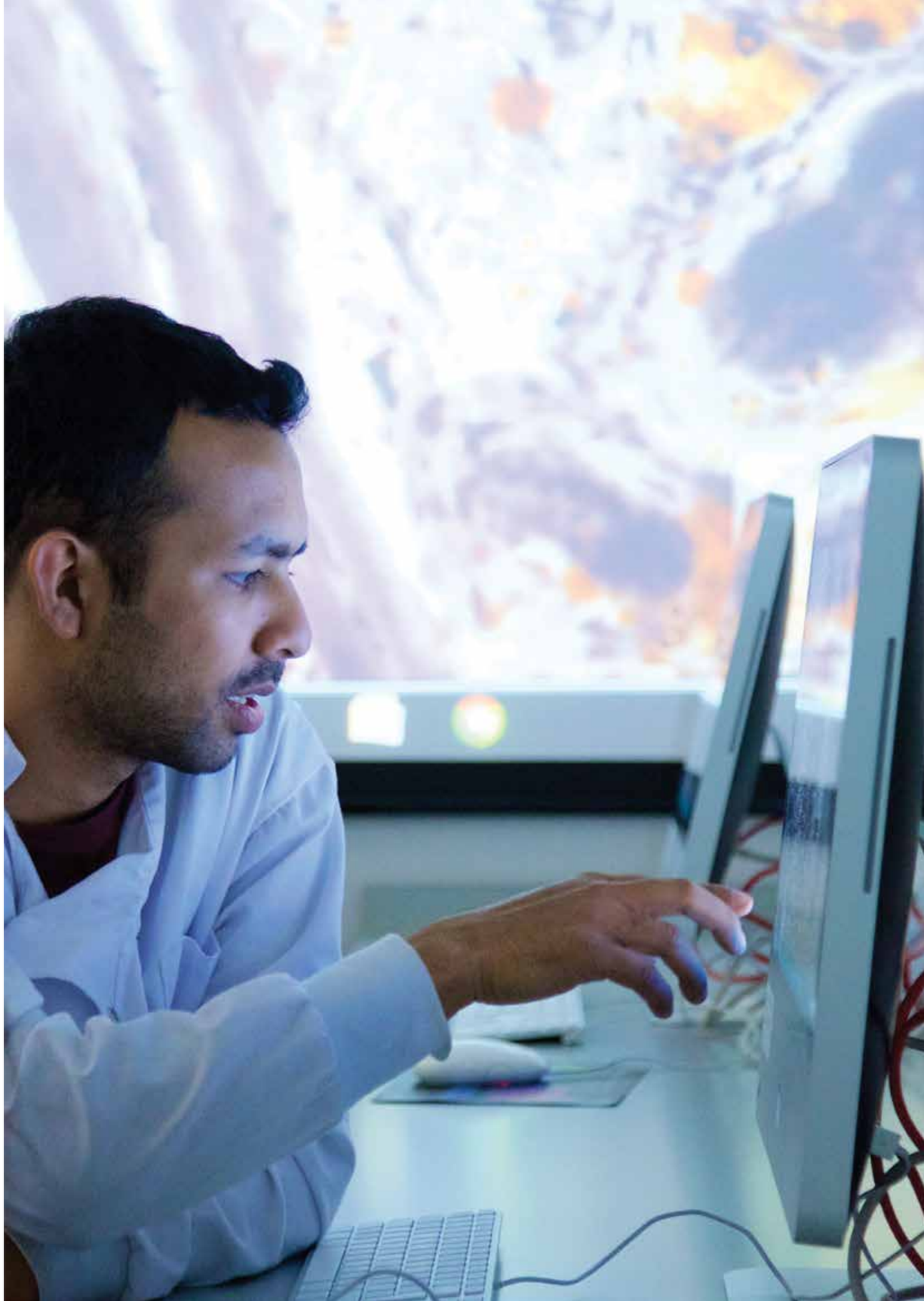
MSD
Maeve Lowery
MK3475-859
Phase 3, randomized, double-blind clinical study of pembrolizumab (MK-3475) plus chemotherapy versus placebo plus chemotherapy as first-line treatment in participants with previously untreated, HER2 negative, advanced gastric or gastroesophageal junction adenocarcinoma

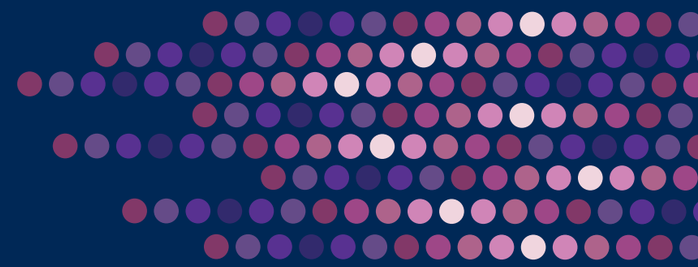
ImmunoGen
Karen Cadoo
"SORAYA"
A phase III single arm trial to evaluate mirvetuximab monotherapy in women with folate receptor alpha (FRa) high platinum resistant ovarian cancer who have been previously treated with Avastin® (bevacizumab).

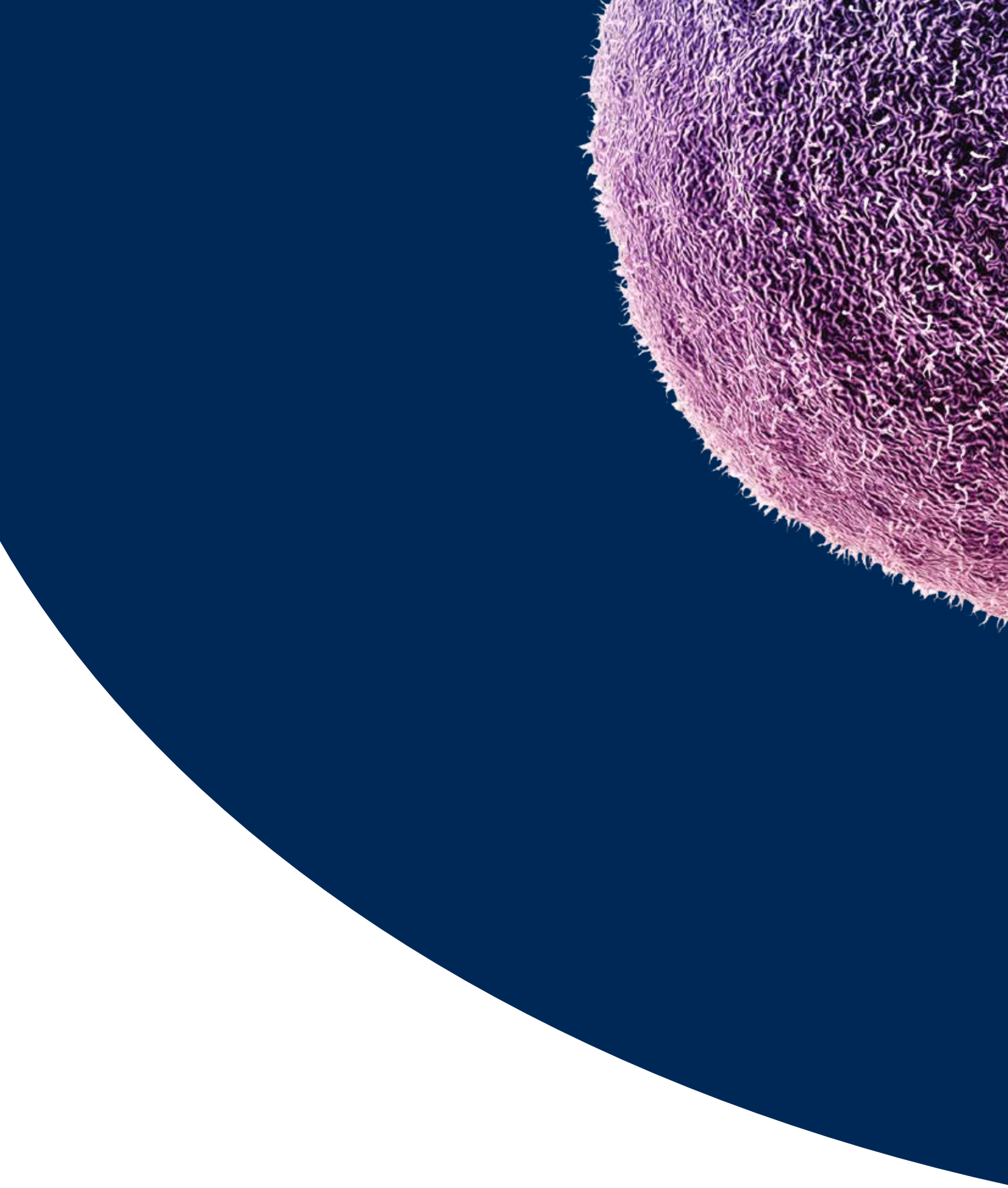
Appendix 3 Glossary of terms

4 **Appendix 2** Glossary of terms

Term	Descriptions
AYA	Adolescent and Young Adults
BRCA	Breast Cancer Gene
BI	Power BI
CLD	Centre for Learning and Development
CMD	Cancer Molecular Diagnostic
CNM	Clinical Nurse Manager
CNS	Clinical Nurse Specialist
CWIUH	Coombe Women's and Infants
EBMT	European Group for Blood and Marrow Transplantation
ENT	Ear, Nose and Throat
EPR	Electronic Patient Record
ERAS	Enhanced Recovery After Surgery
GDPR	General Data Protection Regulation
HDU	High Dependency Unit
HEPA	High Efficiency Particulate Air Filter
HIQA	Health Information and Quality Authority
HIPEC	Hyperthermic intra-peritoneal chemotherapy
ICU	Intensive Care Unit
ISCT	International Society for Cellular Therapy
ISGOPPI	Irish Society of Gynaecological Oncology Public and patient Involvement Group
JACIE	Joint Accreditation Committee of the International Society for Cellular Therapy and the European Group for Blood and Marrow Transplantation
KPI	Key Performance Indicator
MDM	Multi-Disciplinary Meeting
MDT	Multi-Disciplinary Team
NCCP	National Cancer Control Programme
NCIS	National Cancer Information System
NMBI	Nursing and Midwifery Board of Ireland
NOCA	National Office of Clinical Audit
OECI	Organisation of European Cancer Institutes
PPI	Public Patient Involvement
PRG	Patient Representative Group
QIP	Quality Improvement Plan
RAC	Rapid Access Clinic
RALC	Rapid Access Lung Centres
RANP	Registered Advanced Nurse Practitioner
RCOG	Royal College of Obstetricians and Gynaecologists
RCSI	Royal College of Surgeons in Ireland
RVEEH	Royal Victoria Eye and Ear Hospital
SABR	Stereotactic Ablative Radiotherapy
SACT	Systemic Anti-Cancer Therapy
SCT	Stem Cell Transplant
SOP	Standard Operating Procedure
TSJCI	Trinity St James's Cancer Institute
TUH	Tallaght University Hospital
WTE	Whole Time Equivalent







Trinity College Dublin
Coláiste na Tríonóide, Baile Átha Cliath
The University of Dublin

ST JAMES'S HOSPITAL

Design by mmcreative.ie