Saolta

Grúpa Ollscoile Cúram Sláinte
University Health Care Group

Saolta University Health Care Group

Cancer Centre Annual Report 2016


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Foreword

Professor Michael Kerin
Chair, Cancer Strategy Group
Saolta University Health Care Group

It is a great pleasure to present the Annual Report for 2016 which catalogues the high volume, complex, multidisciplinary nature of modern cancer care and the activities of our Cancer Centre. The development of a patient focused, site specific cancer diagnosis and individualised treatment plan is the hallmark of modern cancer care and involves multidisciplinary teamwork and co-ordinated clinical care. Our Cancer Programme revolves around the activity of our Multidisciplinary Teams and the development of personalised treatment plan for all new cancer patients.

It is important to acknowledge the hard work and skill of so many across our region including clinicians across diverse areas such as Surgery, Radiology, Pathology, Medical Oncology, Radiation Oncology and multiple other health professionals from Nursing, Radiography, Laboratory and health and social care professionals and many others in the Cancer Centre and across our Saolta University Health Care Group Hospitals.

This report and the recently published National Cancer Strategy 2017 – 2026 highlights the increasing demand and volume of cancer care in Ireland. As a cogent example the number of tissue blocks (122,054) and malignant surgical specimens (6217), processed by our pathology laboratory represents a 20% increase from 2013.

Delivery of Cancer Care in a complex emergency care setting has extreme challenges. This year has being notable for difficulties with access to medical oncology, diagnostics and surgical beds. These access issues will only be solved by the development of a Cancer Centre with dedicated site specific facilities. Proper funding for Cancer Centres will represent a major investment in the health of our nation and will be an effective way of delivering a significant part of the health care requirements for Ireland. A Cancer Centre will improve outcome for patients, reduce unnecessary visits, improve co ordination and enhance treatment pathways.

Internationally, cancer care is developed and delivered by clinical specialists functioning together on a training, education and research platform. Our Cancer Centre has delivered major research outputs incorporating basis science, clinical trials, molecular and biomarker discoveries and genetic basis for cancer aetiology and risk. These developments enhance clinical care delivery by attracting leading clinicians from international cancer centres to our programme and current research outputs from the Lambe Institute for Translational Research allied to the Clinical Research Facility Clinical Trials programme are testimony to this.

Finally, I am very grateful to all who contributed to this report especially Geraldine Cooley, our Cancer Services Manager, Christine Prendergast and the Cancer Information Team, members of the Cancer Strategy Group, the clinical leadership across multiple cancer sites and the extended cancer care team across the Saolta Group.

I look forward to the ongoing development and delivery of our Cancer Programme.

Professor Michael J. Kerin

Mr Maurice Power
Chief Executive Officer
Saolta University Health Care Group

The Saolta University Health Care Group prides itself as a major cancer network and aims to develop and deliver world class services for all cancer patients across the region.

This report summarises our activity and progress in 2016 across the various cancer specialties in the Saolta University Health Care Group and I would like to sincerely thank all our cancer leads and multidisciplinary teams for their dedication and commitment in managing large volumes of activity in delivery a high quality service to all our cancer patients.

The NCCP National KPIs for cancer services continue to drive service improvement in the Saolta University Health Care Group. The KPIs are regularly presented and monitored locally at senior management level across the Saolta Group and nationally at NCCP, HSE and Department of Health level.

The high levels of activity set out in this report speak volumes and is an indicator of the demand for and successful delivery of cancer service across the Saolta Group. In 2016:

- We successfully started to refer Donegal patients, from the end of November, to the new Radiation Oncology Service at Altnagelvin Hospital in Derry. As treatment opens up to more specialties in the coming months, less patients requiring Radiation Oncology will have to travel to Galway or Dublin and will be able to go the shorter distance to Altnagelvin for treatment. This should reduce patient travel times immensely and aligns with our aim to provide appropriate care as close to home for our patients.

- Enabling works are progressing well in relation to the new Radiation Oncology Build at UHG with no anticipated delays with the new state of the art Radiation Oncology Facility at GUH with handover of the new Adult Mental Health Unit (AMHU) imminent. This will free up the site for the development of the new build in 2017 with an expected roll out in 2020.

- Our performance against national KPI's continues to be strong in all three Rapid Access Services. In 2016, the NCCP carried out a review of all Rapid Access Services across the country and recognised that our Rapid Access Prostate is the best performing RAPC in the country.

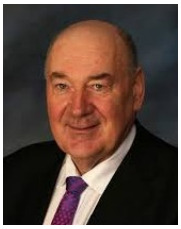
- Galway University Hospital and Mayo University Hospital have been selected by the NCCP with St James Hospital in Dublin to be part of the first phase in the national roll out of the new Medical Oncology Clinical Information System (MOCIS). We hope to be in a position to lead out nationally on this in the next few months.

On behalf to the Saolta Group, I would like to thank Professor Michael Kerin as Saolta Cancer Lead for his continued dedication and vision in cancer service developments on behalf of the organisation. We will continue to work on the delivery of a world class cancer service for the Saolta University Health Care Group in line with the new National Cancer Strategy 2017 - 2026.

Finally, as CEO of the Saolta University Health Care Group, I would like to thank all the staff across the Saolta Group for their continued professionalism and commitment in delivering a quality service to the thousands of cancer patients who use our hospitals every year and I feel this report will be instrumental in driving quality improvement and the further development of cancer services.

Mr Maurice Power, CEO

Dr John Killeen
Chair
Saolta University Health Care Group



As Chairman of the Board of the Saolta University Health Care Group, I am delighted to be associated with this publication. This report highlights the Group Cancer Care Activity in the Cancer Centre and the Saolta Group Hospitals. These activities form a key part of our Health Care Mission and I wish to acknowledge the enormous contribution of our staff in the Cancer Programme.

Dr. James J. Browne
President
National University of Ireland, Galway

It is my pleasure to endorse this report as President of National University of Ireland, Galway.

The role of an academic medical centre in the delivery of high-quality clinical care in an environment of research, education, training and innovation is highlighted in this report, which catalogues the high volume of clinical care allied to the University's research and education mission. I am delighted to see the spectrum of research opportunity that cancer care offers being harnessed in the academic manner detailed here.

The next few years offer exciting opportunities for our University and for this region. I believe that the establishment of an integrated NUI Galway / Saolta Cancer Centre will form a major component of that development.

This belief is supported by the University's development in recent years of the Lambe Institute for Translational Research; the HRB Clinical Research Facility, CÚRAM the SFI-funded Centre for Research in Medical Devices, and the extensive clinical patient flow and research opportunities which will allow coherent and sustained progress in education, training and research.

NUI Galway will continue to play a major part in this important mission.

Dr. Pat Nash
Chief Clinical Director
Saolta University Health Care Group

The Hospital's within the Saolta University Health Care Group have an extensive tradition of treating patients with cancer. The range of services available throughout the Saolta Group involves diagnosis, staging and all aspects of treatment including medical and radiation oncology. University Hospital Galway is one of the 8 cancer centres under the National Cancer Control Programme (NCCP) with a satellite centre sited at Letterkenny University Hospital.

A key priority for the Saolta Group is to promote the highest levels of patient care and safety in all cancer specialties through continuous quality improvement and clinical risk management within a multidisciplinary environment, ensuring compliance with NCCP standards and international best practice.

Significant progress has been made in relation to the development of a Clinical Strategy for the Saolta University Health Care Group with all specialties finalising individual strategies and agreeing key priorities, for the next 5 years. This will be the first Group Clinical Strategy nationally, and it is envisaged that it will be finalised in 2018. I look forward to the implementation phase, when clinic teams across all specialties will be empowered to deliver on the key priorities agreed.

Substantial developments are evolving around the Saolta Group Governance Model with a decision to move from the current vertical model towards a horizontal governance model. This model will involve establishing discrete resourced clinical business units across the Saolta Group. Cancer Services and the Women's and Children's Services have been selected as the pilot programmes to be advanced initially.

Strategically, I welcome the recent publication of the new National Cancer Strategy 2017 – 2026 which sets out the national strategic objectives for Cancer Services for the decade to come. The National Cancer Strategy reaffirms that cancer is a major cause of mortality in Ireland. Cancer and cardiovascular disease were each responsible for about one-third of all deaths in 2013. In the population under 65, cancer was the cause of half of all deaths in women, and the cause of over one-third of all deaths in men. The percentage of deaths attributable to cancer has risen from 20% in the 1980s to over 30%. The report also indicates that four cancer types make up more than half of all newly diagnosed cancers (excluding non-melanoma skin cancer) - breast, colorectal, lung, and melanoma in women (56%), and prostate, colorectal, lung and melanoma in men (57%).

The challenge for the Saolta University Health Care Group is to be in a position to deliver on the future demands of cancer patients and to be able to offer patients timely and equitable access to safe, high quality care that incorporates evidence-based best practice and sustainable models of care. Progressing towards the establishment of a Clinical Business Unit around the Cancer Programme is therefore a timely and welcome development.

Key priorities for cancer service within the Saolta Group over the next decade:

1. The implementation of The National Cancer Strategy 2017 – 2026
2. Aligning the Saolta Health Care Group Cancer Strategy with the National Cancer Strategy
3. Developing a Saolta Group Clinical Business Model for Cancer Services that will ensure an integrated model of care for patients across the region
4. Consistently providing safe, high quality, patient centred care to all cancer patients
5. Maximising patient involvement and quality of life for cancer patients as they go through treatment and beyond
6. Advancing our diagnostic programmes including: radiology, endoscopy, histopathology, molecular diagnostics and genetics in cancer care

7. Improving and developing an IT platform across the Saolta Group for cancer related data
8. Developing a Workforce framework around cancer services
9. Enhancing our Cancer Research Infrastructure
10. Strengthening our cross border relationships with the Radiotherapy Unit at Altnagelvin Hospital in Derry following the opening of the new Radiotherapy Unit in 2016

Local launch of the Saolta Group 2015 Cancer Centre Annual Report

Ray McLaughlin, Margaret Murray, Clare Roche, Minister Simon Harris, Professor Michael Kerin, Maurice Power, Pat Nash, Chris Kane, Ann Cosgrove, Geraldine Cooley

Brid Gavin-O'Connell, Professor Michael Kerin, Ciara Howley Minister Simon Harris, Geraldine Cooley

Professor Michael Kerin, Minister Simon Harris, Maurice Power, Pat Nash

Tina Howard, Christine Prendergast

Professor Michael Kerin, Minister Simon Harris

Multidisciplinary Team Meeting

Ms. Tina Howard / Ms. Jenny Mannion
MDM Co-ordinators

The Multidisciplinary Team Meeting is a group of clinicians from varying health care disciplines, which meets together at a given time to discuss specific patients and who are each able to contribute independently to the diagnostic and treatment decisions about the patient.

Whilst the membership of each MDM can vary, it usually consists of Radiologists, Pathologists, Surgeons, Medical Oncologists, Radiation Oncologists, Clinical Nurse Specialists, and Advanced Nurse Practitioners. The primary purpose of the multidisciplinary meeting (MDM) is to ensure best practice and to standardise patient care in line with NCCP guidelines and recommendations.

In addition MDM's aim to confirm or ascertain a patient's diagnosis, establish the clinical and pathological stage of a patient's disease and by prompt, effective multi-disciplinary decision making recommendations on a suitable clinical pathway of treatment and care for each patient.

The MDM meetings are supported by MDM co-ordinator's whose primary role is to provide administrative management and support to a number of multidisciplinary meetings on a hospital and group wide basis. In 2016 a second MDM coordinator was appointed, which has enabled a greater number of MDM's to have the essential supports to function effectively.

There are 12 MDM's now in operation, which meet on a scheduled basis and through teleconferencing these are able to link with other hospital sites, both regionally and nationally.

A dedicated In-House software application allows for patient data to be inputted and captured both prior to the MDM, during the MDM and recommendations for each patient are also recorded after each MDM.

Whilst there are some challenges in the MDM pathway, we are constantly trying to improve and streamline our processes in order to enhance and strengthen the multidisciplinary function across the Saolta Group.

The following table highlights the schedule and activity of each of the MDM's in 2016.

Hospital/ Group activity at MDM full year 2015/2016 *(Data Source: MDM Co-ordinators)*

No	Cancer site MDM team	Day & Time of Meeting	Frequency of Meetings	Outside link ups at MDM	2015 Activity	2016 Activity
1	Breast	Thurs 8am	Weekly	LUH, SUH, MUH	2044 GUH 516 LUH *2560 Total*	2035 GUH 515 LUH *2550 Total*
2	Colorectal Screening (Polyp)	Thurs12.15pm	Weekly	SUH, RUH	269 GUH 172 RUH *441 Total*	259 GUH 170 RUH *429 Total*
3	Combined Oncology	Tues 8am	3 per month	No link up	288 patients	274 MDM co-ordinator since July 2016
4	Endocrine	Mon 8am	Fortnightly	St Luke's	283 approx	203 MDM co-ordinator since July 2016

5	Gastroenterology	Fri 9am	Weekly	LUH,SUH,MUH, PUH,RUH	2150 No. of patients listed for discussion	1828 No. of patients fully discussed
6	Gynae/Oncology	Fri 8am	3 per month	MUH	153	247
7	Haematology	Mon12pm	Weekly	No link up	No Data	281
8	Head and Neck	Fri 12pm	Weekly	No link up	447	493
9	Lung	Mon 4.30pm	Weekly	SUH, MUH, RUH	772	933.
10	Lymphoma	Fri 8am	Fortnightly	SUH	159	227
11	Melanoma	Mon 1pm	3 per month	RUH	650 approx	540 MDM co-ordinator since June 2016
12	Urology	Wed 8am	Fortnightly	SUH	650 approx	700 MDM co-ordinator since June 2016

This comprehensive programme of multidisciplinary meetings is supported by extensive Radiology and Pathology Programmes across the Saolta Hospital Group in conjunction with the vibrant Medical and Radiation Oncology Programmes.

Activity generated by Cancer Patients in 2016

This year we were interested in the activity generated by cancer patients at University Hospital Galway in an effort to quantify the Cancer Centre Hospital Activity.

We have recently addressed the workload related to new diagnosed cancer patients over the 12 months of 2016.

The difference in patient pathways to diagnosis, therapy and co-morbidity management are striking.

The table shows the number of visits related to newly diagnosed patients with 5 different primary tumours.

Episodes of Care Recorded for Patients Diagnosed with Cancer by Tumour Site in 2016 *(Data Source: PAS)*

	OPD	Inpatient	Day Case
Symptomatic Breast (332 patients)	2970	191	2454
Lung (190 patients)	1678	284	1323
Prostate (317 patients)	1885	44	1384
Rectal (64 patients)	604	84	784
Oesophageal (103 patients)	629	100	613

1.0 Cancer Specialities

1.1 Symptomatic Breast Cancer

Mr. Ray McLaughlin
Consultant Breast Surgeon
Lead Clinician, Symptomatic Breast Unit

Judith McLucas, Business Manager

I am pleased to report that 2016 was another successful year for the Symptomatic Breast Service across the Saolta University Health Care Group with over 13,199 outpatient attendances, 396 new breast care diagnoses and a cancer detection rate of 5.9 per 100 new patients seen across the Group. The Symptomatic Breast Service continues to be a high volume multidisciplinary cancer service with the number of GP referrals remaining consistently high with little change in referral patterns.

The continued success of the breast service is made possible by the consistent contribution and commitment of the multidisciplinary teams across the group. I wish to extend my sincere thanks to all those who work very hard to ensure that the breast programme continues to perform as a world class service for patients and service users across the group. The involvement of disciplines including Radiology, Pathology, Surgery, Medical and Radiation Oncology facilitates a cohesive multidisciplinary approach which works very effectively. This approach ensures that patients who are diagnosed, staged and treated in a timely manner, have a better experience and improved outcomes overall.

I would also like to take this opportunity to acknowledge the continued hard work and dedication of all staff involved in the delivery of the breast service; and to thank them for their valued contributions.

Our performance against the NCCP KPIs remains consistently high as patients with urgent symptoms are seen within two weeks and have their imaging and biopsies performed on the same day. Access for routine referrals continues to be challenging despite our best efforts in terms of proactive management. Triple assessment clinics continue to be held at the Symptomatic Breast Centre in University Hospital Galway each morning Monday to Friday and triple assessment full day clinics are also held at our satellite centre in Letterkenny University Hospital every Monday and Thursday.

We are privileged to be linked to the Breast Cancer Research Facility which is a world class research programme based in the Lambe Institute for Translational Research and led by Professor Michael Kerin. My consultant colleagues and I are actively involved in research contributing to and leading out on major publications on an ongoing basis.

The following tables depict breast activity across the Saolta University Health Care Group for 2016:

Symptomatic Breast Outpatient Clinic Attendance data 2016 (*Data Source: SBU***)**

Outpatient Clinic Statistics	GUH	LUH	Total
No. of OPD Clinics per week	11	6	17
Designated Cancer OPD Clinics	5	3	8
New patients	4914	1728	6642
Review patients	5379	1178	6557
Total No. of patients seen	10293	2906	13199

Symptomatic Breast Service Cancer diagnoses 2016 *(Data Source: SBU)*

Performance Parameter	GUH	LUH	Total
No. of new patients diagnosed with cancer	307	89	**396**

Symptomatic Breast Cancer Surgical Interventions 2016 (*Data Source: SBU)*

Surgical Intervention	GUH	LUH
Wide Local Excision	199	53
Excision of Margins	25	4
Mastectomy	71	18
Sentinel Node Biopsy	200	48
Axillary Clearance	65	12
Breast Reconstruction procedures (immediate)	21	12

Breast Episodes 2016 *(Data Source: HIPE)*

Diagnosis	Number of Episodes
Benign neoplasm of breast	246
Carcinoma in situ of breast	34
Malignant neoplasm of breast	942
Neoplasm of uncertain or unknown behaviour of other and unspecified sites	1
Grand Total	**1295**

Breast Cancer Procedures 2016 *(Data Source: HIPE)*

Description	Inpatient	Day Case	Total	Inpatient Bed Days
Excision procedures on lymph node of axilla	26	29	55	205
Excision of lesion of breast	175	389	564	795
Biopsy of breast	24	473	497	471
Examination procedures on breast	20	95	115	55
Simple mastectomy	103	1	104	937
Reconstruction procedures on breast	59	16	75	497
Removal of or adjustment to breast prosthesis / tissue expander	6	3	9	14
Augmentation mammoplasty	2	-	2	10

1.2 BreastCheck

Dr. Aideen Larke
Clinical Director & Lead Consultant Radiologist
BreastCheck West

BreastCheck – The National Breast Screening Programme plays a central role in diagnosis and management of breast cancer in Ireland, providing free mammograms to women aged 50-65 every two years. BreastCheck, a national population based screening programme, lies within the Health & Wellbeing Directorate.

Breast cancer remains the most commonly diagnosed cancer in women in Ireland with over 2,700 women diagnosed each year. Survival has improved as a result of screening, symptomatic detection and improved treatment options. Through providing regular mammograms, BreastCheck works to reduce mortality by detecting breast cancer at the earliest stage, when a woman has more treatment options available and her chosen treatment is likely to be less extensive and more successful.

The BreastCheck Western Unit opened in Galway December 2007 to deliver a high quality screening service to almost 80,000 women in the large geographical catchment area in the West and North West of Ireland. This includes counties Galway, Mayo, Sligo, Donegal, Roscommon, Leitrim, Clare and Tipperary North Riding. Eligible women are invited to attend either the BreastCheck Screening Unit in Galway University Hospital or one of the BreastCheck mobile units across the region, for mammographic screening on a two year call and re-call programme.

In accordance with best practice, international guidelines, and the BreastCheck Clients' Charter, each mammogram is read by two independent experienced breast radiologists. Women with abnormal mammogram results are asked to return to a triple-assessment clinic with additional mammographic views and ultrasound examinations. If any suspicion of cancer remains, an ultrasound- or stereotactically-guided biopsy is performed. All biopsy results are discussed at a multi-disciplinary team meeting, and patients are informed of their result within five working days.

The BreastCheck West Team	
Clinical Director	Dr. Aideen Larke
Unit Manager	Ms. Jennifer Kelly
RSM	Ms. Joan Raftery
Radiologists	Dr. Aideen Larke (Lead)
	Dr. Anna Marie O'Connell
	Dr. Catherine Glynn
Lead Pathologist	Dr. Margaret Sheehan
Lead Surgeon	Mr. Karl Sweeney

Pictured: Joan Raftery, RSM, Karl Sweeney, Lead Consultant Surgeon, Jennifer Kelly, Unit Manager & Dr. Aideen Larke, Clinical Director

Performance Parameters for Western Region 2016

Performance Parameter	Western 2016
Number of women screened	26,271
Number of women re-called for assessment	1184
Re-call rate	4.5%
Number of woman diagnosed with cancer	166

In 2016, 44817 women were invited for a screening mammogram and 34,474 attended, representing an uptake rate of 76% which compares favourably with other screening services.

1,184 women had an abnormal mammogram and were recalled to triple assessment clinic.

In 2016, the BreastCheck Western Unit diagnosed a total of 166 women with breast cancer. This cancer detection rate (6.32 per 1000) is similar to other national and international breast screening services.

BreastCheck delivers an annual programme evaluation report. This confirms that the targets laid out at the beginning of each year are being met and that the level of high quality service is consistent.

BreastCheck commenced the first stage of age expansion rollout in 2015. The programme age will extend to 69 years of age; however that is to be phased in incrementally by one year, every year for the next 5 years. Therefore as of 2015, the age now includes women aged 65.

BreastCheck is part of the National Cancer Screening Service, which also encompasses CervicalCheck - The National Cervical Screening Programme, BowelScreen - The National Bowel Screening Programme and Diabetic Retina Screen - The National Diabetic Retinal Screening Programme.

BreastCheck
An Clár Náisiúnta Scagthástála Cíoch
The National Breast Screening Programme

1.3 Urological Cancer

Mr Garrett Durkan
Rapid Access Prostate Clinic (RAPC)
Consultant Urological Surgeon
Lead Clinician

Mr Eamonn Rogers, Saolta Lead Consultant Urological Surgeon
Mr Frank D'Arcy, Consultant Urological Surgeon
Ms Catherine Dowling, Consultant Urological Surgeon
Mr Syed Jaffry, Consultant Urological Surgeon
Mr Nadeem Nusrat, Consultant Urological Surgeon
Mr. Paddy O'Malley, Consultant Urological Surgeon
Mr Killian Walsh, Consultant Urological Surgeon

Muriel Moloney, CNMII, RAP
Rachel Dalton, CNS, RAP
Deirdre Horan, Staff Nurse, RAP
Muriel Walsh, Staff Nurse, RAP

This report and the excellent work carried out in the Rapid Access Prostate Clinic is dedicated to the memory of our late and dearly beloved colleague, Mr Michael Corcoran, Consultant Urologist, who sadly passed away after a short illness in August 2016. Ar dheis De go raibh a anam.

Rapid Access Prostate Clinic (RAPC)

The recently published National Cancer Strategy 2017 – 2026 projects that there will be a significant increase in the number of patients diagnosed with cancer over the coming decades and confirms that four cancer types make up more than half of all newly diagnosed cancers (excluding non-melanoma skin cancer) - breast, colorectal, lung, and melanoma in women (56%), and prostate, colorectal, lung and melanoma in men (57%).

Prostate cancer is the second leading cause of cancer death in men, exceeded only by lung cancer. It accounts for 33% of all male cancers and 10 % of male cancer-related deaths. The disease is histologically evident in as many as 34% of men during their fifth decade of life and in up to 70% of men aged 80 years old and older.

Men with suspected prostate cancer are referred by GP's across the Saolta University Health Care Group (and beyond) to The Rapid Access Prostate Clinic (RAPC) located at University Hospital Galway, where they are seen within 20 working days of receipt of referral. In 2016, the NCCP reviewed Rapid Access Prostate Services across the 8 designated cancer centres and recognised the Rapid Access Prostate Clinic in Galway was the busiest and best performing prostate service in the country. This reflects the unusually high incidence of prostate cancer in the West and the contribution made by the two newly appointed consultant urologists in 2015 to the existing team. Their skill sets have greatly complemented those already in the Department and allowed us to see and treat even the most challenging urological cancer cases at University Hospital Galway.

'One-stop' prostate assessment clinics take place each week lead by Consultant Urologists, Mr Garrett Durkan and Mr Paddy O'Malley. Professor Peter McCarthy and Dr Claire Roche provide two additional biopsy clinics in Radiology. Patients attend review clinics at RAPC for biopsy results and to have further investigations arranged. Patients with localised/locally advanced prostate cancer patients are treated with robotic assisted radical prostatectomy (RARP), open radical prostatectomy (ORP), or combinations of seed brachytherapy, external beam radiotherapy (EBRT) and hormone therapy. Our Donegal patients are now in a position to receive EBRT in Altnagelvin Hospital in Derry with the opening of the new Radiotherapy Unit in November 2016.

The Urology and Radiation Oncology Services at UHG continue work in close collaboration and regularly cross-refer patients for surgery, radiotherapy and brachytherapy. Transperineal template biopsies, now considered the new gold standard in prostate cancer diagnosis, are performed in the brachytherapy suite, facilitated by the Radiation Oncology team. Cases are also performed in the main urology theatre. They are

used to detect prostate cancer in high-risk men with previous negative prostate biopsies, and men who developed uro-sepsis after a prior transrectal prostate biopsy. On average, 70 transperineal biopsies are performed at UHG each year with increasing demand.

Ger O'Boyle, ANP in Radiation Oncology provides a specialised erectile dysfunction clinic for men suffering this complaint following radiotherapy and radical prostatectomy treatment for prostate cancer after completing a programme of supervised training. Dr Mary Rogan, GP and Psycho-Sexual Counsellor provides a counselling service for men experiencing distress as a result of erectile dysfunction.

The successful robotic assisted radical prostatectomy programme continues for public patients attending RAPC in partnership with the Galway Clinic with 64 patients undergoing robotic prostatectomy in 2016 delivered jointly by Mr Durkan, Mr O'Malley and Mr Bouchier-Hayes.

Patients from Limerick, who require radical prostatectomy travel to GUH for their surgery having attended Mr Durkan's Rapid Access Prostate Clinic at University Hospital Limerick. Referrals with suspected prostate cancer falling outside NCCP guidelines are seen in general Urology clinics by all urologists in the Department.

Multidisciplinary Team (MDT) Meetings

The MDT programme remains extremely busy with over 700 patient discussions in 2016. The Uro-Oncology MDT meets fortnightly with excellent support from colleagues in Radiology and Pathology. Our colleagues from SUH and LUH participate by videoconferencing so that urological cancer cases from across the Saolta University Health Care Group are discussed at one forum. Our Radiation Oncology and Medical Oncology teams also attend the MDT facilitating close collaboration, inclusion of patients in clinical trials and streamlines rapid treatment for patients. We hope in 2018 to increase the frequency of our Uro-Oncology MDT to once weekly and incorporate a dedicated Prostate Cancer MDT to exclusively discuss prostate cancer cases given the high incidence of this disease in our region.

National Cancer Control Programme Key Performance Indicators

As our population grows and ages the incidence of cancer is expected to double in the next 20 years. Strategically, we need to position cancer services so that we can meet the future needs of the large population we serve. At a minimum, we need an enhanced in-patient bed allocation, dedicated access to the Surgical Day Ward, an additional full time main operating theatre to compliment Theatre 5 and regular emergency theatre access to run a safe and timely urological cancer surgery programme to deliver a service in line with the requirements of the NCCP. Key Performance reports for the Rapid Access Prostate Programme are submitted to the NCCP on a monthly, quarterly and annual basis. The reports confirm the high level of clinic attendances and measure performance in terms of the length of time from referral to first appointment, from biopsy to authorisation of biopsy report, the time waiting for surgery, with national targets.

Rapid Access Prostate Clinic (RAPC) Attendance 2016 (*Data Source: KPI Monthly Returns 2016)*

Rapid Access Prostate Programme UHG full year 2016						
	Q1.	Q2	Q3	Q4	2016	Access KPI
Attendance at RAPC	143	165	158	138	604	
Attended within 20 working days	137	95	146	136	514	**85%**
Diagnoses by quarterly classification	68	83	82	79	312	
Number of Prostate Surgeries					103	
Robotic Surgeries in Galway Clinic					64	

Rapid Access Prostate Clinic (RAPC) Attendance 2016 (*Data Source: KPI Monthly Returns 2016)*

Patient Type	Number of Attendance
Total of new patients	604
Total of review patients	2349
Grand Total	2953
Total number of new primary diagnoses	**312**

Programme Performance Indicators 2016

In 2016 we continued to provide men with support, advice and education following a prostate cancer diagnosis. To increase awareness surrounding prostate cancer and treatment related side effects and their management, we held 3 prostate cancer information evenings across the west of Ireland, a cancer awareness information event in GUH, along with multiple radio interviews.

The CNS also contributed to nursing education facilitating seminars for NUIG mini med school, community oncology programme, post graduate oncology nursing programme and undergraduate nursing programmes throughout 2016.

In December 2016 a nurse led PSA and review clinic for post operative patients was developed by Mr Garrett Durkan Lead Consultant and Rachael Dalton CNS. Patients who are one year following their operation are referred to attend this nurse led clinic which occurs alongside Mr Durkan rapid access prostate clinics. Patients are monitored for cancer recurrence and a holistic needs assessment is performed. Patients who full fill particular criteria following their initial nurse led assessment may then enter into telephone follow up. This means patients no longer need to travel such long distances for follow up, reducing the amount of patients who attend the hospital for assessments and allowing the medical team more time to care for more complex cases. It is hoped that the cohort of patients who attend this clinic will expand in the near future.

Rachael Dalton CNS completed a certificate in nurse prescribing in 2016 and will introduce this practice into the nurse led clinics shortly.

Fionnuala Creighton, Ger O'Boyle, Rachel Dalton, Pamela Normoyle at the Prostate Cancer Information evening held in Mayo.

Ger O'Boyle, Therese Kelly, Thomas Samuel, Rachel Dalton, Dr. Mary Rogan, Pamela Normoyle, attending the Prostate Cancer Information evening in Galway.

Urological Cancer Procedures 2016 (*Data Source: HIPE*)

Description	Inpatient	Day Case	Total	Inpatient Bed Days
Endoscopic resection bladder lesion/tissue	94	1	95	757
Examination procedures on bladder	55	102	157	579
Radical nephrectomy	49	-	49	505
Transurethral prostatectomy	46	2	48	276
Open prostatectomy	43	-	43	350
Other excision procedures on bladder	24	-	24	180
Partial nephrectomy	16	-	16	158
Orchidectomy	16	-	16	73
Others including complex	162	610	772	2668

1.4 Upper Gastrointestinal Cancer

Mr. Chris Collins
Consultant Surgeon
Lead Clinician

Professor Oliver Mc Anena, Consultant Surgeon
Anna O Mara, CNS, Upper GI Cancer

According to the projections by the National Cancer Registry, cancer numbers are expected to increase significantly for all cancer types in the coming years. Malignancies of the upper gastrointestinal tract are expected to increase by over one hundred percent by 2040.

As one of the four designated upper GI cancer centres in the country, Galway University Hospital continues to provide a client centred high quality holistic service for patients. In total there were one hundred and four newly diagnosed upper GI malignancies in 2016. This included fifty five oesophageal and thirty nine gastric cancers. Almost seventy percent of the oesophageal cancers were adenocarcinomas with the remaining being squamous cell type.

The incidence rates for adenocarcinomas are increasing annually in developed countries and research is attributing this to western lifestyles. The Upper GI service has an extensive Multidisciplinary programme, where patients are discussed on a weekly basis and care plans for individual patients are agreed by the MDM team of specialists. This is a shared MDM with our lower GI colleagues and links with specialist across the Saolta University Health Care Group. In 2016, there was 1828 full patient discussion at the GI MDM. In line with the NCCP Key Performance Indicators (KPIs), all Upper GI cancer patients were discussed at MDM.

Surgical resection offers the chance of long-term survival for selected patients with early stage cancer. The majority of patients with tumours suitable for resection require multi-modality treatments including radiation, chemotherapy then resection. In 2016, nineteen patients had radical surgery as their first treatment, 5 patients with oesophageal and 14 with gastric tumours. A further nineteen patient had surgery following neo adjuvant treatment. Of these two patients had a three stage oesophagectomy and the remainder had total gastrectomies/transhiatal/transthoracic surgery. 96% of patients who underwent a gastrectomy were discharged within 21 days with only 1 readmission within 30 days following discharge.

Unfortunately oesophageal cancers are rarely diagnosed early as symptoms of early tumours are vague and non-specific. In 2016 only five patients had a T2 tumour diagnosis and went directly to surgery. Seven patients presented with high grade dysplasia and were diagnosed with surveillance endoscopy.

Over fifty-percent of the patients diagnosed in the Upper GI Cancer service presented with inoperable non curative disease requiring palliative and non-surgical treatments such as radiotherapy, palliative chemotherapy, stenting or supportive care. These treatments are all determined by our specialist multidisciplinary team with many being provided in the tertiary referring hospital according to best clinical guidelines.

This report confirms the regional basis of the programme, the challenges, improving outcomes by earlier diagnoses, the multi disciplinary nature of the therapeutic pathways and the increased prevalence of the disease.

(Data Source: KPI Returns 2016)

NCCP Upper GI Returns 2016	GUH	GUH	Total
	Jan - June	July – Dec	Full Year
New Diagnosis Patients	52	52	104
Newly diagnosed patients with radical surgery as their first treatment	23	15	38

Upper GI Cancer Procedures 2016 *(Data Source: HIPE)*

Description	Inpatient	Day Case	Total	Inpatient Bed Days
Therapeutic Panendoscopy	58	30	88	1128
Gastrectomy	36	1	37	717
Oesophagectomy	17	-	17	281
Dilation of oesophagus	10	11	21	178
Resection of small intestine	5	-	5	202
Exam / stenting of gallbladder or biliary tract	10	-	10	272

Oesophageal Cancer Fund Day from left to right: Olivia Dunleavy, Mr. Chris Collins, Anna O Mara, Bríd Ní Fhionnagáin, Professor Oliver McAnena

1.5 Colorectal Cancer

Mr Mark Regan
Consultant Surgeon
Lead Clinician

Professor Oliver McAnena, Consultant Surgeon
Mr Myles Joyce, Consultant Surgeon
Mr Eddie Myers, Consultant Surgeon
Olivia Dunleavy, CNS/Cathy Butler CNS
Mary Quigley, Stoma Care Nurse Specialist

Colorectal cancer is one of the four cancer types making up more than half of all newly diagnosed cancers in Ireland (excluding non-melanoma skin cancer) - breast, colorectal, lung, and melanoma in women (56%), and prostate, colorectal, lung and melanoma in men (57%). Over the period 1994 – 2014, Colorectal Cancer accounted for 12% of all cancer types in women and 14% of all cancers in men. This represents an average annual increase in the number of colorectal cancers diagnosed of 1.8% in women and 2.4% in men. 70% of malignancies occur in the colon (the large intestine) and 30% appear in the rectum.

Taking into account demographics only, by 2025, it is projected that there will be a 49% increase in the number of colorectal cancers in women and a 59% increase in the numbers of colorectal cancers in men with this trend continuing into the decades to follow.

The Colorectal Service at University Hospital Galway operates under the National Cancer Control Programme and is required to deliver care in line with a national suite of Key Performance Indicators (KPI's). All patients referred are discussed at the weekly Multidisciplinary Meeting attended by Colorectal Surgeons, GI Radiologists, Pathologists, Medical, Radiation Oncologists and the supporting nursing team. This is a multisite MDT, with links to our colleagues from across the Saolta University Health Care Group.

Following staging, patients follow a standard treatment pathway to primary surgery, neo adjuvant chemo-radiotherapy or primary chemotherapy. Patients' progress and response to treatment is regularly reviewed through the MDT forum. The colorectal programme is closely aligned with the Medical Gastroenterology service with referrals from the Bowel Screening programme being discussed at the Colorectal MDT meeting on a regular basis.

There were 64 new rectal cancers diagnosed in 2016 with 53% having radical surgery as highlighted in the table below:

(Data Source: NCCP KPI Returns 2016)

NCCP Rectal Cancer Returns 2016	**GUH**	**GUH**	**Total**
	Jan - June	July – Dec	Full Year
Newly Diagnosed Patients	26	38	64
Radical Surgical Procedure (APR)	15	19	34
BowelCheck Radical Surgical Procedure (APR)	4	2	6

The service is supported by a Clinical Nurse Specialist (CNS) who assists and supports patients through the treatment pathway. We wish to thank Cathy Butler for her sterling work and support to patients while Olivia was on leave. Mary Quigley runs the Stoma Therapy Service, which is a vital and growing component of the colorectal programme at Galway University Hospital providing guidance and support to patients at a very difficult time.

Most Frequent Colorectal Cancer Procedures 2016 *(Data Source: HIPE)*

Description	Inpatient	Day Case	Total	Inpatient Bed Days
Colectomy	132	-	132	1968
Anterior resection of rectum	40	-	40	704
Fibreoptic colonoscopy with excision	28	470	498	349
Rectosigmoidectomy or proctectomy	19	-	19	553
Fibreoptic colonoscopy	17	31	48	533
Endosc ins; replace; R/O ureteric stent	12	-	12	299
Stomas of small intestine	11	-	11	221
Total proctocolectomy	7	-	7	71
Panendoscopy with excision	7	37	44	403
Resection of small intestine	6	-	6	227
Other stomas of large intestine	4	-	4	87
Excision lesion or tissue rectum or anus	4	1	5	59

Stoma Care Activity 2016 *(Data Source: Mary Quigley, Stoma Care CNM)*

Pre-assessment clinic activity	34
Pre-op siting/counselling *(no stoma created)*	55
New Stoma created *(64.1% oncology related)*	198
Reversal of Stoma	31
Inpatient review *(established stoma patients with problems e.g. chemo/radiotherapy related)*	299
Outpatient clinic appointments	743
PEG consultations (oncology related)	13
Entercutaneous Fistula	12
Telephone triage/support (oncology related)	2060

Colorectal/Stoma Care OPD 2016

For the past 3 years, with our colleague in Portiuncula University Hospital, we have been hosting "*A Stoma in your life*" a patient information evening at a local Hotel in Galway City. The focus is on "Quality of Life" and "Peer Support". We have a few short talks on issues which are relevant and of interest to all ostomates, such as, diet & nutrition, sexual & psychological health, hernia prevention, abdominal core exercises, and travel & holiday information. The evening is self financing with the companies displaying products charged a small fee to cover costs. This is an opportunity for ostomates to get together and make contact with people who have been through a similar experience, have a cup of tea, view products and maybe win a spot prize! The most successful part

of our program is "***A Stoma in my Life, Patient experiences***", where people with an ostomy share their stories and talk about their lives as they live today.

The evening is social & informative and the numbers attending have been in excess of 240 this year. The feedback has been extremely positive and we have had plenty of suggestions for topics to be addressed and volunteers to speak for next year already.

Attendances at 'A stoma in your life' patient information evening

Portiuncula University Hospital

Colorectal and Stoma CNS PUH- Aine Kennedy

There are approx between 90 -100 newly diagnosed colorectal cancer patients in Portiuncula University Hospital yearly. Referrals are through ED and Out Patient Department as well as through BowelScreen and other hospitals within the Saolta Hospital Group. All patients are discussed at a weekly MDM in GUH, with PUH connecting to via video link, as per the NCCP guidelines.

This service is coordinated by the Colorectal and Stoma CNS who collates the NCCP key performance indicator data as well as coordinating patient care in conjunction with the oncology services in PUH and other hospitals within the Saolta Group. There are on average approx between 50- 60 patients reviewed monthly, which include both inpatients and outpatients.

BowelScreen Awareness Event held at PUH, Left to Right: Aine Kennedy, CNS Colorectal & Stoma Specialist, Louise Anne McGrath, CNMI, Dr. Michael Cassidy and Mr. Eddie Myers, Consultant Surgeon

1.6 BowelScreen Programme

Dr. Eoin Slattery
Consultant Gastroenterologist
Lead Clinician

Elaine Prendergast, General Manager Roscommon University Hospital

Mary Cassidy, BowelScreen RANP, SUH
Amy Carroll, BowelScreen CNS, RUH
Deirdre Diver, BowelScreen RANP, LUH
Deirdre Gallagher, BowelScreen RN, GUH

University Hospital Galway, BowelScreen

GUH commenced screening in May 2013 as part of the National BowelScreen Programme, currently aimed at those aged 60-69 years old. To date over 1500 colonoscopies have been performed following a positive FIT, or Faecal Immunochemical Test. GUH Pathology Department reports on all the pathology detected in BowelScreen colonoscopies carried out in Saolta University Health Care Group.

In 2016, over 300 colonoscopies were performed with an adenoma detection rate of 63.82%, the second highest ADR of all BowelScreen units throughout the country. These were all reported on by our dedicated GI Pathologists involved in BowelScreen and reviewed at our weekly polyp MDM.

Similarly all surgeries on cancers detected as part of BowelScreen in the Saolta Group are treated in GUH, after discussion and planning at the GI Cancer MDM.

A multi-disciplinary approach and commitment from all involved has continued to maintain the standards of this programme.

Letterkenny University Hospital, BowelScreen

Letterkenny University Hospital commenced the BowelScreen Programme in November 2014 and at the end of December 2016 a total of 400 clients had a screening colonoscopy. The service provides bowel screening for 60 – 69 year olds in most of Co. Donegal (south Donegal is covered by BowelScreen in Sligo University Hospital). Dr Chris Steele is the Endoscopy Clinical Lead at LUH. The BowelScreen service in LUH is facilitated by the Registered Advanced Nurse Practitioner (RANP) in Gastroenterology. Deirdre Diver was accredited as the RANP in Gastroenterology by the National Nursing & Midwifery Board of Ireland (NMBI) in October 2016.

All BowelScreen patients are pre-assessed by the RANP; suitable clients attend for colonoscopy to LUH. To date we have detected 22 colorectal cancers. The continuing care pathway for these clients includes referral to the surgical and or wider MDT at GUH.

The success of bowel screening at LUH is attributed to the huge dedication and commitment of the Endoscopy and wider MDT team. The Endoscopy Unit at LUH continues to demonstrate its commitment to maintain and develop a quality endoscopy service for the people of Donegal.

Pictured: Deirdre Diver LUH, RANP in Gastroenterology

Roscommon University Hospital, BowelScreen

In 2016, Roscommon University Hospital entered its third year as a screening site with the National BowelScreen Programme. The screening patients are supported and guided through their experience within Roscommon University Hospital, and possible referral onwards, not just by the BowelScreen CNS, but by a wide team of dedicated staff. The whole team strives towards providing all patients that attend the endoscopy service in Roscommon University Hospital with a positive patient's experience.

In 2016, RUH performed 207 colonoscopies of whom 107 had polyps detected and 10 had cancers detected.

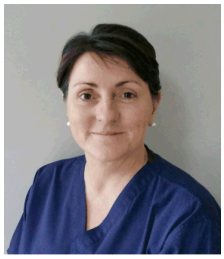
Pictured: staff members with Minister Simon Harris at the open new Endoscopy Unit at RUH

Sligo University Hospital, BowelScreen

Sligo University Hospital commenced the BowelScreen Programme in May 2013, by the end of 2016 over 600 patients were screened by Clinical lead Dr. Kevin Walsh, Consultant Gastroenterologist. The primary objective of this service is to reduce mortality from colorectal cancer by removing pre cancerous adenomas in the bowel lining, thus preventing the incidence of colorectal cancer.

From May 2013 to May 2016 (Round 1) an audit carried out by Mary Cassidy, Registered Advanced Nurse Practitioner (RANP) highlighted that the Adenoma Detection Rate in Sligo University Hospital remained consistently higher than the national average at 61%. By the end of 2016, over 39 patients had been referred to University Hospital Galway for surgical follow up, including 26 who had a detected malignancy.

Throughout the year, BowelScreen in Sligo University Hospital continued to deliver care in a timely, dedicated and professional manner to all patients accessing the service particularly those who attended the endoscopy unit in SUH and those who required the wider continuum of care provided by the Multidisciplinary Team (MDT) in UCHG.



Pictured: Mary Cassidy, SUH, RANP, Gastroenterology

BowelScreen
An Clár Náisiúnta Scagthástála Putóige
The National Bowel Screening Programme

1.7 Skin Cancer

Mr Padraic Regan
Saolta Group National Skin Cancer Lead
Galway University Hospitals

Whilst it is widely acknowledged that Non-melanoma skin cancer is the most common cancer in Ireland, the prevalence of malignant melanoma, both invasive and in-situ is rising across all age groups. In the twenty year period 1994-2014, melanoma accounted for 5% of all cancers in women and 3% in men (*National Cancer Strategy 2017 – 2026*). In 2016 within GUH and RUH, 1369 patients were diagnosed with basal cell cancer and 904 with squamous cell cancer both invasive and insitu. 115 diagnosis of malignant melanoma were made and there were 152 individuals diagnosed with Malignant Melanoma in-situ. Interestingly, within the same period, there were also some rarer malignancies identified such as Pilar Tumor, Leiomyosarcoma, Lymphoma, and Myeloid Sarcoma. *See table below:*

Skin Cancer Data 2016 (*Data Source: Pathology*)

Basal Cell Carcinoma	Squamous Cell Carcinoma	Squamous Cell Carcinoma in situ	Malignant Melanoma	Malignant Melanoma in situ	Other Cancers
1369	829	75	115	152	108

Across the Saolta University Health Care Group, there are a number of clinics and facilities for patients with pigmented lesions. In GUH, there are designated triage clinics to assist in the diagnosis of urgent pigmented lesions, and there are also monthly "see and treat clinics". In RUH, three 'See and Treat Clinic' which are held weekly, and PUH holds a monthly See and Treat Clinic where patients are seen by a general surgeon and subsequently referred to GUH for treatment.

Patients are also facilitated in the Plastic Surgery and Dermatology General Outpatients. *See table below:*

Total New Patients seen 2016 (Data *Source: PAS*)

	Triage Clinic GUH	See and Treat Clinic GUH	See and Treat Clinic RUH	Plastic Surgery Outpatients (GUH & RUH)
New	864	260	152	3197

The Saolta University Health Care Group Skin cancer MDM's have been established in GUH for a number of years and are held three times each month and all patients with a diagnosis of malignant melanoma are discussed. The MDM is attended by Consultant Plastic Surgeons, Consultant Dermatologists, Consultant Medical Oncologists and Consultant Radiation Oncologists, Consultant Radiologists and Consultant Pathologists. In 2016 the Skin Cancer MDM process was enhanced by the appointment of a MDM co-coordinator, who provides administrative support and management to the MDM process.

In 2016, Mr Padraic Regan became the Saolta University Health Care Group nominee on the NCCP National Skin Cancer Clinicians Lead Group. The purpose of the Group is to ensure that the eight Cancer Centres and associated hospitals develop a cohesive national network by devising standardised clinical guidelines, referral pathways and Key Performance Indicators for patients with skin cancer.

1.8 Lung Cancer

Dr David Breen
Consultant Respiratory Physician
Lead Clinician
Interventional Pulmonologist

Imelda Fleming, CNMII
Claire Davy, CNS
Jacinta Murphy, SN

The Rapid Access Lung Clinic (RALC) at Galway University Hospital is one of the eight NCCP centres in Ireland established for the diagnosis of lung cancer. Lung Cancer is one of the four most common cancers in Ireland, accounting for 10% of cancer in women and 13% of cancer in men in the period 1994 – 2014 (National Cancer Strategy 2017 – 2026). Projections for the period 2015 – 2040 point to further significant increases in the numbers expected to be diagnosed in the coming decades.

The Rapid Access Lung Programme at GUH provides a comprehensive multidisciplinary service seeing patients with a suspected diagnosis of lung cancer within a two week period of referral as per the recommendations of National Cancer Control Programme. The majority of lung referrals are received from GP's across the Saolta University Health Care Group and beyond. Internal hospital consults and referrals from external hospitals make up the rest of the referrals received. The volume of referrals is at a consistently high level with almost 500 new patients seen at a RALC in 2016 as depicted in the table below. Over 91% of these were seen within 10 working days.

All patients with a definitive diagnosis of lung cancer are discussed at our weekly Multidisciplinary Meeting to ensure an evidence based individual treatment plan is agreed for each patient. In 2016, there were 933 patient discussions at our Multidisciplinary Meeting, representing a 20% increase in the 12 month period from 2015. The Rapid Access Lung cancer service is a truly multidisciplinary programme with services provided by the lead Respiratory Consultant, Radiology Consultants, Histopathology Consultants, Thoracic Surgeons, Medical and Radiation Oncologists.

At the Joint Thoracic clinic held each Thursday, patients have access to all the relevant specialists at this '*One Stop'* clinic where each patient can see multiple consultants to go through the individual parts of their treatment plan, thus saving patients having to return to several consultant clinics to meet with individual specialists. This model of care is unique to the Rapid Access Clinic at GUH. This clinic has been running over the past 2 years and has allowed significant streamlining of the thoracic oncology service at GUH.

I wish to thank all involved in the Rapid Access Lung Service at GUH, it would not function without the ongoing work and support of all members of the team – including teams from respiratory medicine, lung cancer nurses, endoscopy nurses, respiratory scientists, the radiology department for diagnostic radiology and interventional radiology. In addition treatment is provided by a dedicated thoracic surgery department, medical and radiation oncology and palliative care, all of whom are extremely supportive of the Lung Programme.

Strategically, further advances are planned over the coming years including a dedicated location for thoracic oncology and enhanced facilities. Further extension of services including a nodule clinic and smoking cessation clinic are also planned. In addition the team are exploring the development of cardiopulmonary testing for better patient selection and new clinics such as survivorship clinics and pre treatment rehabilitation services.

Rapid Access Lung Clinic (RAL) Attendance 2016 (*Data Source: KPI Monthly Returns 2016)*

Rapid Access Lung Programme 2016 as NCCP Returns					Total
Reporting period	Q1 Jan - March	Q2 April- June	Q3 July- Sept	Q4 Oct - Dec	2016
Attendances at RAL	124	127	107	140	498
Attended within 10 working days	111	115	100	129	455
KPI Performance	-	-	-	-	91%
Total number of review patient attendances					1634
Total attendances at the Rapid Access Lung Programme					2,132

Pictured: RAL Nursing Staff: Jacinta Murphy, Imelda Fleming, Claire Davey

Thoracic Surgery at GUH

Dr Alan Soo
Consultant Cardiothoracic Surgeon
(Thoracic Surgery Lead)

Marie Cloonan, CMNIII

The Department of Thoracic Surgery at GUH is dedicated to treatment of diseases of the chest. We aim to provide surgical treatment for thoracic diseases to the highest standard to ensure patients receive the best care and outcome. In order to do that, we continue to expand treatment options for patients, utilizing minimally-invasive procedures, including video-assisted thoracic surgery (VATS).

The thoracic surgery service at GUH is delivered by a multi disciplinary team of surgeons (Professor Mark Da Costa, Mr Dave Veerasingam and Mr Alan Soo), specialised nurses and allied health professionals. The service works closely with the respiratory service and provides cover for patients referred from all hospitals within the Saolta University Healthcare Group. In GUH, the thoracic surgery department provides an extensive complex thoracic surgery programme.

Patients are in general referred from the Joint Thoracic Clinic following the lung MDM. The department also receive direct referral from physicians and GPs. All referred patients undergo a pre assessment to assess suitability of surgery. Here, patients also get an opportunity to further discuss their surgery with the surgeon and discharge planning is instituted. The patients are then discussed at a weekly Multidisciplinary Meeting whereby potential complications are identified and counter measures planned.

Patients are admitted the evening prior to or the morning of surgery (DOSA- Day of Surgery Admission) and will go to the PACU (Post Anaesthesia Care Unit) for one night following surgery. This is for close monitoring of vital signs, analgesia and chest drainage.

All patients going through the unit will be enrolled in the ERAS programme (Enhanced Recovery After Surgery).

The Thoracic ERAS programme in UHG includes the following:-

- Detailed pre assessment, a pre-habilitation programme with the physiotherapy unit at Merlin Park University Hospital, whereby the patients undergo mobility assessment, exercise testing including a six minute walk test and Shuttle test. Following that, a personalised exercise programme developed for each patient prior to surgery.
- Post op pain management in conjunction with the Pain service at UHG. Patients are given a prescription for pre operative pain relief at their pre assessment appointment.
- Carbohydrate Loading pre-operatively
- Digital monitored chest drain (Medala Thopaz suction unit) is used post operatively in keeping with international best practice. Post-op- research suggests that this reduces the LOS by 1 day as a standardised algorithm used to inform clinicians to remove the chest drains.

Thoracic Surgery Activity 2016 *(Data Source: Thoracic Surgery, GUH)*

Patients Pre-assessed from RALC	**86**		
Surgical procedures carried out	**110**		
Lobectomy	43	Pleurodesis/decortications/blebectomy	15
Bi Lobectomy	6	Thymectomy	4
Wedge resection	20	Mediasinoscopy	4
Pneumonectomy	3	Thoracotomy (other)	5
VATS Biopsy	10	-	-

1.9 Head and Neck Cancer

Ms. Orla Young
Consultant Otolaryngologist, Head & Neck Surgeon
Lead Clinician

Carol Brennan, CNS ENT

The Head and Neck Cancer Programme at GUH is the referral centre for the West of Ireland, extending from Donegal to Clare. Patient referrals come directly from GPs and other regional hospitals in the Saolta University Health Care Group. The Head and Neck Cancer Programme is provided by the Otolaryngology, Head and Neck Department (ENT) and the Department of Maxillofacial Surgery.

The ENT Department consists of five consultant surgeons; Professor Ivan Keogh, Mr Peter Gormley, Mr John Lang, Ms Mona Thornton & Ms Orla Young and a team that includes a senior and junior SpR ,registrars, two SHO and one intern. Outpatient clinics are held on a daily basis at GUH, once a week in MUH and once fortnightly in RUH. The Maxillofacial department consists of two consultants Mr Patrick McCann and Mr Tom Barry and a team of registrars. Maxillofacial outpatients are held at GUH and PUH.

Carol Brennan is the fulltime Clinical Nurse Specialist for the Head and Neck Cancer Unit. Carol provides a crucial link between Surgical Oncology Services in ENT and Maxillofacial Departments and the Radiation and Medical Oncology Services. She provides support; information and advice to the HANO patients from investigation stages to diagnosis, through treatment and for long term follow up.

A Senior Speech & Language Therapist, Karen Malherbe is also attached to the unit and provides support for patients with swallowing and speech issues. She attends to inpatients and outpatients with the Head and Neck Oncology Service.

Head and Neck oncology had 42 MDM meetings in 2016 at which a total of 493 patients were discussed by the Multidisplinary Team which consists of Consultant Surgeons, Medical Oncologists, Radiation Oncologists, Radiologists, Pathologists, Clinical Nurse Specialists, Speech and Language Therapist and MDM Co-ordinator.

Last year there were 121 head and neck cancer patients diagnosed and treated within this centre.

There have now been 55 consecutive cases of early glottic carcinoma treated using Trans Oral Laser Microsurgery (TLM) since the introduction of a new Carbon Dioxide Laser to theatre in GUH in 2014. This means patients have avoided a lengthy seven week course of radiotherapy treatment, freeing up invaluable radiotherapy slots for other oncology patients within GUH. These figures show that GUH is among the highest volume Trans Oral Laser Microsurgery (TLM) centres in the country.

The NCCP held its second ever Head & Neck Oncology Meeting in November 2016, attended by Ms Orla Young and Mr Patrick McCann on behalf of GUH. National Cancer Registry figures were presented for audit and validation, which confirmed GUH to be the third highest volume hospital for head and neck cancer nationally. GUH received recognition for its multidisciplinary strength, with the presence of Head & Neck surgeons from both ENT & Maxillofacial departments who work closely with Plastic surgery department for major reconstructive surgery. The presence of Radiation Oncology & Medical Oncology onsite also, along with dedicated SLT support and Palliative Care services provides GUH with a unique position to deliver multidisciplinary care to Head & Neck Cancer patients throughout the West, Northwest and Midwest regions.

Head & Neck Procedures 2016 *(Data Source: Operative Logbook, GUH)*

Procedure	Number
Parotidectomy	31
Neck Dissection	17
Cervical lymph node excision	47
Laryngectomy	6
Tongue lesion / hemiglossectomy	8
Submandibular gland excision	6
Excision oral lesion	16
Panendoscopy	55
Microlaryngoscopy	88

1.10 Endocrine/Endocrinological Cancer

Dr Marcia Bell
Consultant Endocrinologist
Lead Clinician

The Endocrine Cancer Programme based at Galway University Hospital is an extremely busy service providing integrated care to patients with thyroid and endocrinal cancer.

The Endocrine Programme at GUH is led by Dr Marcia Bell with 6 endocrinologists, 3 endocrine surgeons, supported by a team of experts from radiology, chemical pathology, medical and radiation oncology.

The Multidisciplinary Meeting (MDM) occurs twice monthly, where consultant experts discuss individual patients and outcomes. The primary purpose of the MDM is to ensure best practice and to standardise patient care. Care pathways for each individual are decided at the MDM. Outcomes and recorded by the MDM coordinator and documented on the MDM database post discussion. This multisite MDM links with St Luke's University Hospital. In 2016, we warmly welcomed an MDM Co-ordinator to provide administrative management and support to the Endocrine MDM's.

The GUH Endocrinology team participate in several other MDMs including:-

1. National Neuro Endocrine Cancer Control Tumour Programme in St. Vincent's in Dublin
2. Thyroid in GUH
3. Pituitary in GUH

The catchment area for the Endocrinology Service extends beyond the Saolta Group to parts of Clare, Limerick, and Cork. Complex cancer cases are referred from the other hospitals within the Saolta University Health Care Group to University Hospital Galway for therapeutic care.

As well as offering genetic testing to our patients, dealing with cancer survivorship it will be critical to the delivery of care in the future. Survivorship begins at the time of diagnosis and continues until end of life. According to the National Cancer Strategy, survival for some common cancers has greatly improved in recent years. Thyroid five year survival is now over 90%. The increased number of survivors underscores the importance of addressing survivor health and care needs within our Thyroid Programme and others at University Hospital Galway.

In 2016, there were 110 thyroidectomies performed at Galway University Hospital.

Outpatient Activity Relating to Endocrine 2016 *(Data Source: PAS)*

	New	Review	Grand Total
Endocrine	369	1317	1686

1.11 Radiology

Dr Clare Roche
Group Clinical Director

Mary Murphy, Business Manager

The Radiology Departments across the Saolta Group provided a range of diagnostic, staging and surveillance imaging studies for oncology patients in 2016, including Computed Tomography, Ultrasound, Nuclear Medicine and Magnetic Resonance Imaging.

Total Overall Activity Radiology - Saolta Group 2016: *Data Source: Radiology, Saolta Group)*

Activity	GUH (GUH&MPUH)	SUH	LUH	MUH	PUH	RUH
Total	**179,159**	**99,418**	**85,176**	**100,645**	**63,988**	**24,004**
PXR	113,486	65,925	56,286	67,995	40,531	14,738
Ultrasound	13,235	9,526	9,319	9,199	6,780	3,170
CT	19,531	13,788	9,845	15,559	10,576	5,989
MRI	7,159	4,212	3,225	5,199	1,400	0
Interventional	3,721	721	730	536	64	32
Fluoroscopy	904	258	835	483	216	75
Nuclear Medicine	2,182	396	-	-	-	-
Mammography	8,125	-	2,706	975	-	-
US Breast	4,732	-	1,571	163	-	-
Dexa Scan	372	-	659	-	703	-
Theatre	3,528	-	-	-	-	-

Additional Capacity	GUH	RUH
MRI (Weekends)	1,160	-
CT (to RUH)	1,772	-
CT (MPIC)	3,721	-
MRI (MPIC)	2,456	-
Mammography (SLIGO MOBILE)	52	-
MRI (PUH)	-	216

PET-CT scans for oncology patients are performed at the Galway Clinic and reported by radiologists in GUH. In 2016, there were 365 PET-CT scans performed in Galway Clinic referred from GUH.

In 2016 we installed the new 128-slice CT scanner. This has improved our capability to scan more complex cases e.g. CT Angios, CT Coronary scans, as well as reducing our CT waiting list.

The MRI waiting list was at an unacceptable high level in 2016 posing significant challenges to reduce it. The Radiology Directorate got agreement from Group Management to outsource 50 scans per week to private institution in early 2016. Added to this we continued with our in sourcing initiative during 2016 by performing 40 extra scans per week by scanning at the weekend. These combined initiatives have resulted in a very significant reduction in the MRI waiting list. Our wait time for a routine MRI scan is now one year (down from over 2 years) and the number of patients waiting has reduced from 771 to 388.

Current Challenges

Demand capacity mismatch in MRI, CT and Ultrasound, in particular. UCHG has only one MRI scanner which is 15 years old; St James's Hospital (of comparable size but with a smaller catchment area) has four MRI scanners.

In 2016, funding was provided to support weekend MRI scanning on a temporary basis, but a more viable long-term solution requires the installation and staffing of at least one more MRI scanner.

A business plan for a new MRI scanner has been submitted to Saolta EMT several times over the past 3 years and this has been forwarded to HSE Estates, but is not yet included in capital development projects.

Ultrasound out-patient waiting times for routine scans are almost two years at GUH. Waiting times for high-priority out-patient oncology patients is up to 60 days. The decision in 2015 to expand Ultrasound services to include referrals by GPs without an appropriate accompanying expansion of resources has lead to even longer waiting times for non-urgent referrals. Further expansion of Ultrasound services to facilitate other initiatives such as ovarian cancer screening will not be possible without additional equipment and suitably trained staff.

PACS integration across the Saolta network is needed to facilitate image transfer and interpretation and streamline imaging for patients and clinicians, but requires integration between AGFA PACS and the NIMIS platform.

The absence of a hospital protocol for out-of-hours Interventional Radiology procedures is a risk to patients requiring emergency intervention. The resources necessary for an on-call IR service at GUH are still not in place. In the absence of this service, it has been highlighted to hospital management that a formal clinical pathway is needed to guide clinicians, e.g. for patients with sepsis needing intervention.

1.12 Pathology

Dr Helen Ingoldsby
Consultant Pathologist
Lead Clinician

The Pathology Departments of the Saolta University Health Care Group strive at all times to assure the enhancement of patient care with timely and accurate pathology diagnoses

Pathology departments are active in GUH, LUH, SUH, PUH and MUH. The departments provide a high quality diagnostic service to meet the national and European objectives of reducing the morbidity and mortality caused by cancer through early detection and appropriate service delivery, and also provides a high quality non-cancer-related diagnostic service. This is achieved by providing a wide range of diagnostic and consultative services to clinicians and other service users. Advisory services are provided through numerous Multidisciplinary Meetings (MDMs), as well as by direct referral.

GUH is the largest histopathology department in the Saolta Group. Since 2009, the Division of Anatomic Pathology (DAP) at GUH has actively participated in the ongoing development of the Faculty of Pathology's National Quality Improvement Programme. In 2016 there was a substantial increase in activity in the department. Surgical specimens have increased by about 5% in absolute numbers each year for the past 10 years and GUH has the largest number of cancer resections of the 8 cancer centres nationwide.

In addition to an increase in numbers, cases have become more complex. There is greater need for the use of advanced diagnostic tests, and the current requirement of more detailed template-style reporting demands more tissue blocks be taken, and more complex reporting detail be provided. GUH provides advanced diagnostics with extensive

- immunohistochemistry,
- direct immunofluorescence
- molecular testing

The molecular laboratory was established in 2009 with development of in situ hybridisation (ISH) analysis and the service expanded in 2012 to include mutation analysis. Current diagnostics performed include HER2 FISH for breast and gastric cancers, a colorectal cancer panel (KRAS, NRAS, BRAF), melanoma panel (BRAF, NRAS) and non-small cell lung cancer panel (EGFR, ALK, ROS-1). Workload has increased over the last 4 years; 250 molecular biomarker tests and almost 400 FISH tests were carried out in 2016. With the advent of personalised medicine and greater availability of targeted therapies for cancer, it is increasingly important to integrate pathology reports which combine a histology-based diagnosis together with molecular pathology mutational analysis of the patient's tumour. *The following data relates to pathology activity at GUH*.

Key Procedural Codes Associated with Workload Detail (*Data Source: Pathology GUH*)

P01	Core, needle, punch, shave, and curetting biopsies including liver, bronchial, lung core, endometrial pipelle, skin punch, prostate core, renal core, lymph node core, and targeted bone core for tumour.
P02	Endoscopic gastrointestinal biopsies
P03	Cancer resections
P04	Non-cancer resections
P06	Non-gynae cytology, FNA
P07	Non-gynae cytology, Exfoliative
P10	Autopsy (non-State)

Division of Anatomic Pathology Workload at GUH 2016 (*Data Source: Pathology GUH LIS*)

Procedure Code		Cases	Specimens	Tissue blocks
P01	Small biopsy	6686	13378	14385
P02	GI biopsy	9775	19478	20593
P03	Non-biopsy cancer resection	3175	6618	43745
P04	Non-biopsy non-cancer resection	15522	20351	38889
P06	Non-gynae cytology, FNA	493	746	434
P07	Non-gynae cytology, exfoliative	2047	2507	790
P10	Autopsy	349	349	3218
Totals	**All procedures**	**38047**	**63427**	**122054**

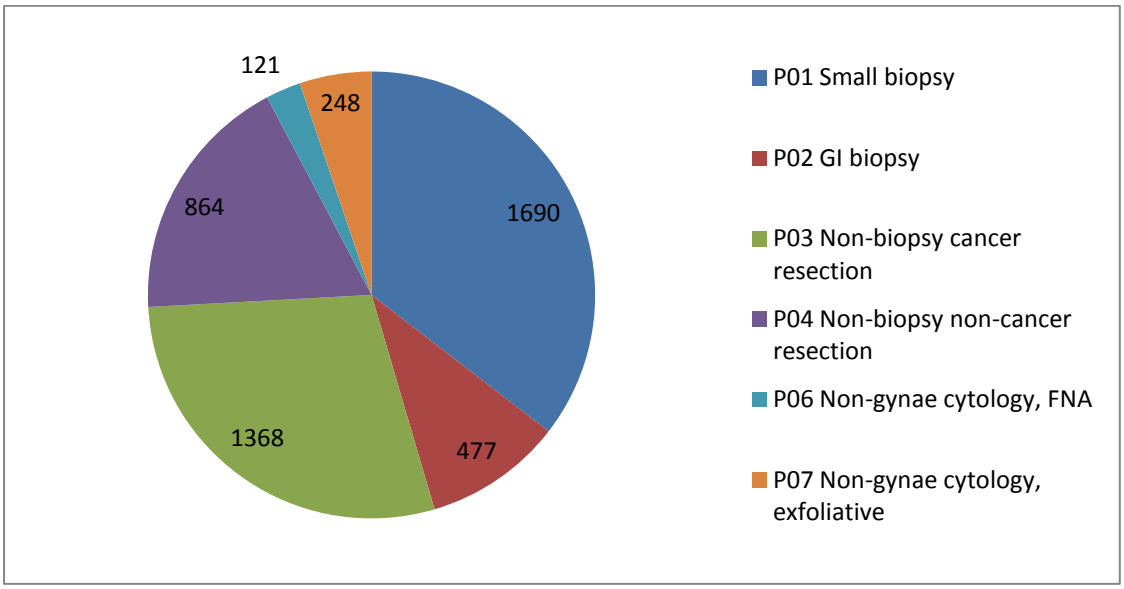
Malignancy Case Detail *(Data Source: Pathology GUH LIS)*

Total malignant cases	**6471**
Surgical	6217
Cytology	254

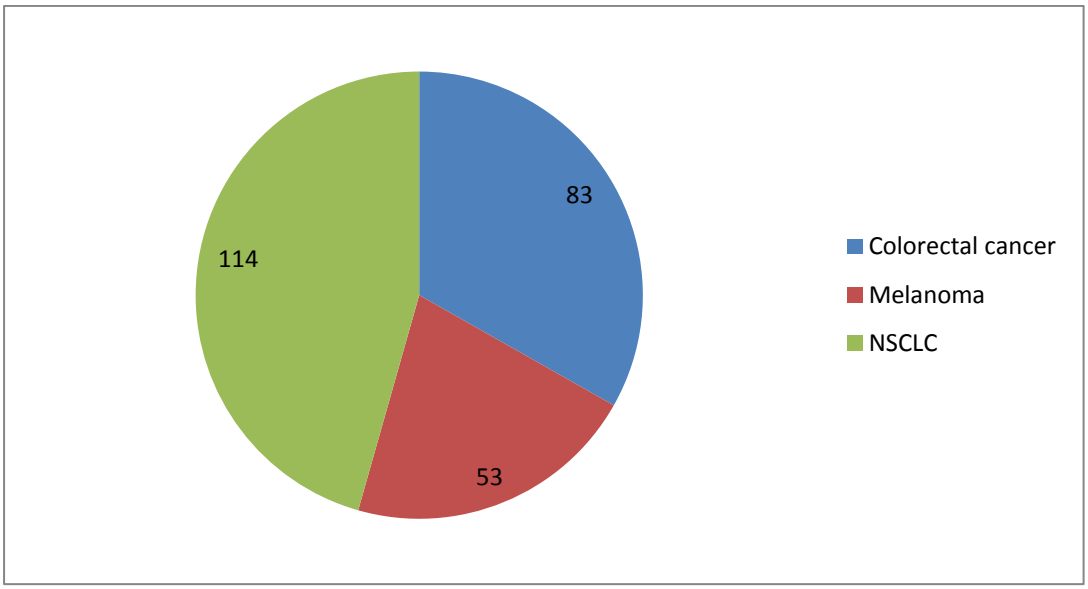
Breakdown of Cases Discussed at MDM *(Data Source: Pathology GUH LIS)*

Non-gynae cytology cases	369
Surgical cases	4182
Referred cases	217

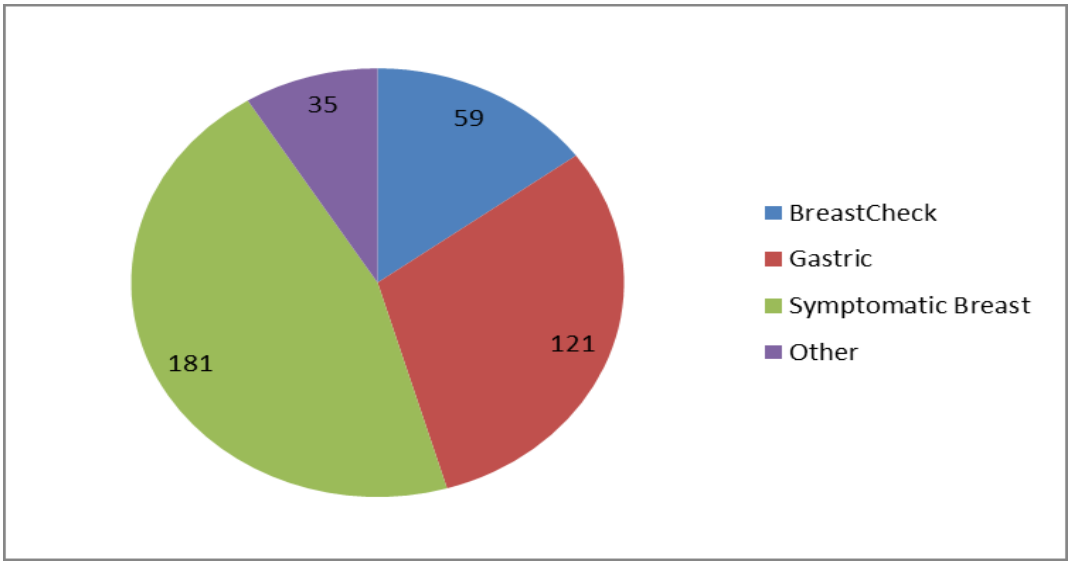
MDM Cases by Procedural Code 2016



Molecular Biomarker Tests Performed 2016



HER2 FISH Tests Performed 2016



1.13 Medical Oncology

Professor Paul Donnellan
Consultant Medical Oncologist GUH &MUH
Lead Clinician in Medical Oncology, Saolta Healthcare Group

The Medical Oncology Service within the Saolta University Health Care Group is delivered across 3 sites:-

Galway University Hospital with satellite day ward and clinics at Portiuncula University Hospital and Mayo University Hospital; Sligo University Hospital and Letterkenny University Hospital.

There are 8 Medical Oncology Consultants involved in the Medical Oncology Programme across the Saolta University Health Care Group with each specialising in specific disease sites and attending relevant Multidisciplinary Meetings, providing inpatient consults and outpatient clinics in their area of interest and expertise. The consultants are supported by medical teams, consisting of specialist registrars, registrars, senior house officers and interns at each site. In addition, there are 3.5 Advanced Nurse Practitioners and 10.5 Clinical Nurse Specialists/ Liaison Nurse providing expert nursing care to patients in the Saolta Medical Oncology programme.

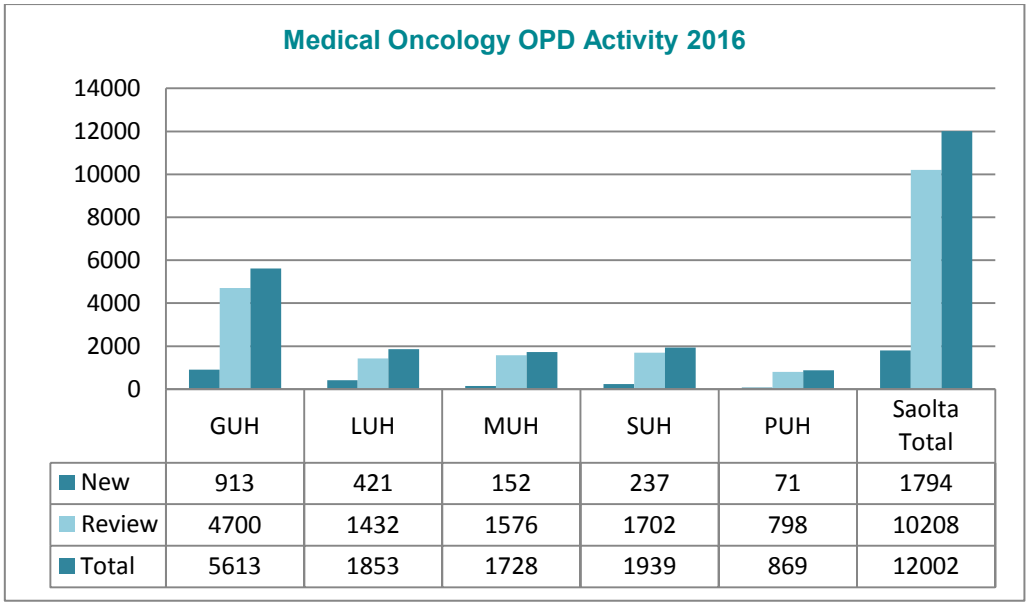
The Medical Oncology Service works very closely with the Psycho Oncology and Palliative Care teams across the Group, who provide essential supportive care to patients including counselling, symptom control and complimentary therapies. In 2016, we welcomed the opening of a new Cancer Support Centre in Donegal to serve the northwest of Ireland by Cancer Care West as well as the appointment of a Senior Psychologist to deliver a psychological support service to inpatients at Letterkenny University Hospital.

In 2016, the Medical Oncology Team supported the following tumour site Multidisciplinary Meetings.

Head & Neck	Upper GI	Gynaecology
Combined Oncology	Urology	Lymphoma
Breast	Skin/melanoma	Prostate
Lung	Colorectal	-

Outpatient Activity at GUH in 2016

Consultant led Outpatient clinics are held on all sites across the Saolta University Health Care Group with 6 weekly in Galway University Hospital, 2 weekly each in Portiuncula and Mayo University Hospitals. Sligo University Hospital hold 5 oncology OPD clinics weekly with 1 held at Letterkenny University Hospital on a weekly basis. New patients are generally seen within 2 weeks of referral and the objective is for chemotherapy, where indicated, to commence within 15 days of decision to treat in line with the National Cancer Control Programme Key Performance Indicators.

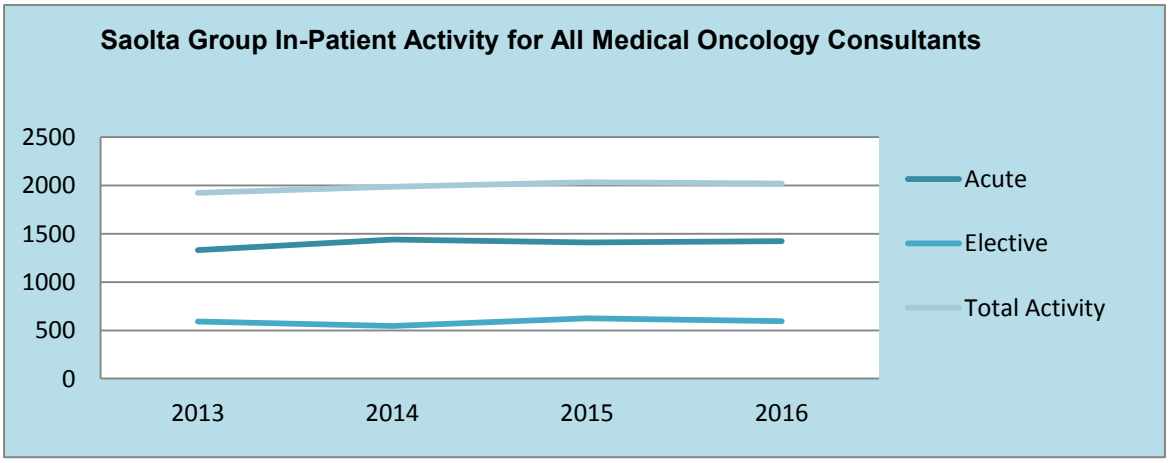


	GUH	LUH	MUH	SUH	PUH	Saolta Total
New	913	421	152	237	71	1794
Review	4700	1432	1576	1702	798	10208
Total	5613	1853	1728	1939	869	12002

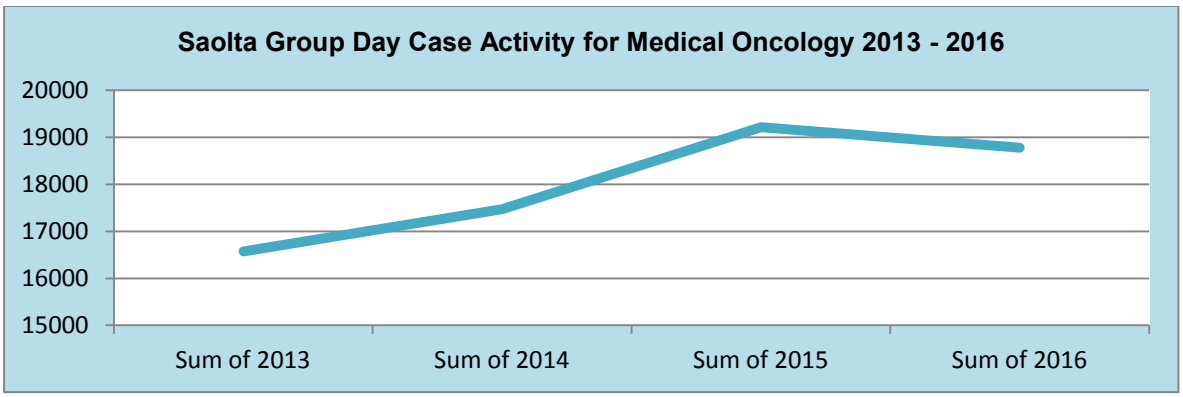
Inpatient Activity 2016 *(Data Source: NQAIS)*

Inpatient care and chemotherapy are provided at University Hospital Galway, Sligo University Hospital and Letterkenny University Hospital in 55 inpatient beds across the region. Patients requiring emergency admission at UHG must go through ED as the demand for beds is above the bed compliment and increasingly emergency admissions are facilitated in another medical ward, under the care of a medical oncologist, when there are no beds available on the oncology inpatient wards. There is a real need for an Oncology Ambulatory Care Centre at UHG where these patients can be assessed and treated and then either admitted or discharged. This would reduce our length of stay and improve our inpatient bed utilisation.

Saolta Group Medical Oncology In-Patient Activity (2013 – 2016)



Saolta Group Medical Oncology Day Case Activity (2013 – 2016)



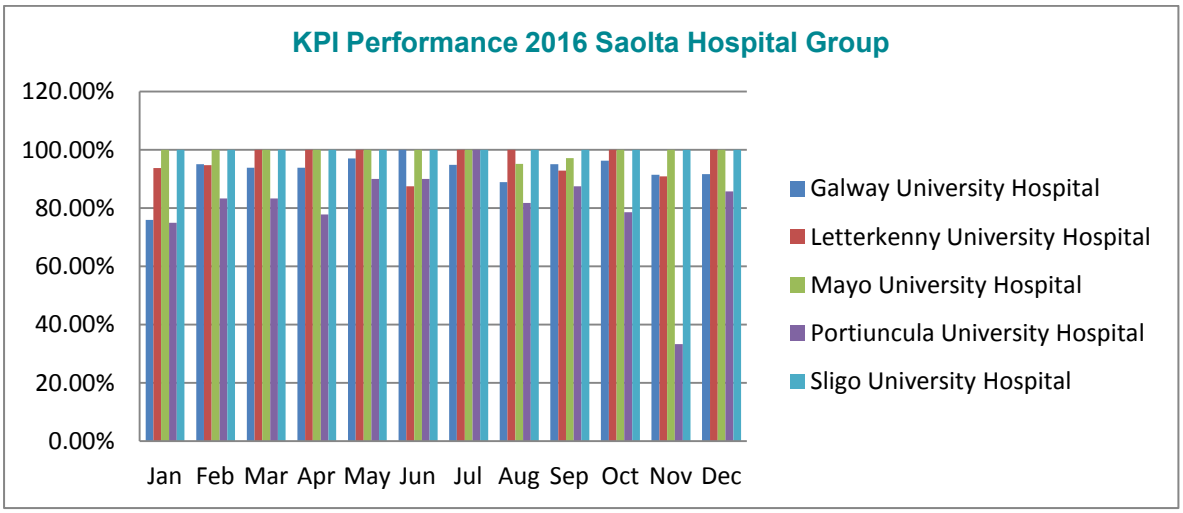
*This includes all patients admitted to the Oncology Day Ward for treatment or review.

National Cancer Control Programme KPIs for Medical Oncology

One of the KPIs for systemic therapy is the time-to-treatment for patients commencing new treatment regimens in the day ward setting. This KPI is reported monthly by each site across the Saolta University Health Care Group. The target is that 95% of patients would receive the first cycle of their new treatment regimen within 15 days of the finalised treatment plan. The table below sets out the KPI returns for the Saolta hospitals for the period January - December 2016. UHG and other sites highlight problems with capacity in the day wards across the Saolta Group.

Saolta Group Hospitals KPI Data 2016: Percentage Patients within 15 Day Target

Hospital 2016	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Galway University Hospital	76%	95%	94%	94%	97%	100%	95%	89%	95%	96%	91%	92%
Letterkenny University Hospital	94%	95%	100%	100%	100%	88%	100%	100%	93%	100%	91%	100%
Mayo University Hospital	100%	100%	100%	100%	100%	100%	100%	95%	97%	100%	100%	100%
Portiuncula University Hospital	75%	83%	83%	78%	90%	90%	100%	82%	88%	79%	33%	86%
Sligo University Hospital	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%



Provision of funding by NCCP

Originally medical oncology drugs were almost exclusively cytotoxic chemotherapy agents. However, modern medical oncology increasingly utilizes rationally-designed biological therapies; oral targeted agents; and, more recently, immunotherapy. While relatively less toxic, and clearly effective, the increased use of these agents will place major demands on the healthcare system and medical oncology units across the Saolta region.

In 2016, a total of €4.49m was provided by NCCP to hospitals in the Saolta Hospitals Group for oncology drugs relating to Oncology Drugs Management System (ODMS), growth in existing drugs, dose banding and drug capacity challenges. The table below sets out the funding provided by NCCP to the hospitals in the Saolta Group in 2013-2016:

Summary of Funding Provided by NCCP to Saolta Hospitals Group in Support of Oncology Drugs 2013-2016

Hospital Group	2013	2014	2015	2016
	€	€	€	€
Galway University Hospital	1,036,691	1,924,984	2,226,573	2,414,156
Letterkenny University Hospital	317,737	236,604	432,384	124,879
Mayo University Hospital	156,486	212,154	444,298	1,362,322
Portiuncula University Hospital	137,918	19,497	488,421	230,333
Sligo University Hospital	195,423	206,494	179,874	389,936
Saolta Group Total	**1,844,255**	**2,599,733**	**3,771,549**	**4,494,626**

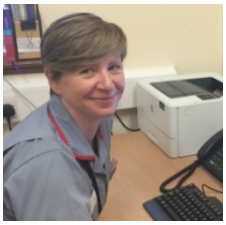
Saolta Individual Hospital Reports

Letterkenny University Hospital

The Advanced Nurse Practitioner in Oncology in LUH continues to be a predominately clinically focused role. In line with service needs the aspects of the job develops appropriately. The clinical role is mostly focused on follow-up care of the patient following treatment for a solid tumour in four clinics. ANP review involves a comprehensive patient assessment and examination, radiological prescribing, medicinal prescribing, referrals to other health care professionals, health promotion, education and psychological support. One aspect of the ANP Oncology clinical care is audited annually.

In the last couple of years this follow up role has evolved to include review of the individual enrolled on a clinical trial. Now with the ANP performing this role, there is more flexibility to ensure patients are reviewed appropriately according to the trial protocol.

Over the last few years the ANP Oncology, working alongside other staff in LUH, has helped to facilitate the development of two new services



Pictured: Dr. Janice Richmond, ANP, LUH oncology

to bring benefit to those residing in Co. Donegal.

Cancer Care West opened a Cancer Support Centre in Letterkenny in 2017. In addition, Altnagelvin Area Hospital in Derry has also commenced its radiotherapy service for Co. Donegal patients. This service continues to evolve and more disease sites/treatments are being added presently.

There is also a significant component of teaching/education as part of the ANP role. This takes the form of clinical teaching for nurses in Letterkenny Institute of Technology, the CNME and clinical teaching of junior medical staff in the onsite Medical Academy. In 2016 the NCCP 3-day course for hospital nurses was held for the second time in the CNME and the ANP is the clinical facilitator for this. There were over 20

participants and due to demand and its continued success the plan is to schedule this course again for 2018.

The ANP Oncology along with the Clinical Research Nurse Mary Grace Kelly received a HRB grant to perform research in 2014/2015. As a result of this research a web-based App was developed (www.stopcancer.support). To date there has been many thousands of hits worldwide and this can App can be used as an educational tool. A poster has been developed to inform clients about this app and is on display in a number of health-care facilities throughout Co. Donegal.

Presently this research is awaiting publication and has been presented at numerous national/international conferences and a detailed poster (as displayed below) outlining the research results has been developed and is on display in the Oncology/Haematology Day Unit in LUH.

Portiuncula University Hospital

Portiuncula University Hospital has a well established nurse - led Oncology Unit. It is a satellite service of Galway University Hospital and is part of the Saolta University Health Care Group. The service has been in existence since 2001. Treatment and assessment in the oncology day ward is provided by a nursing team. Each member of the nursing team is highly educated/trained in the area of oncology, all having a Higher Diploma in Oncology Nursing and exercise expert clinical competence in all areas related to cancer care. Two medical oncologists (Dr Silvie Blazkova and Prof Maccon Keane) and a radiation oncologist liaise closely with the oncology nursing staff. The department is supported by a full time medical secretary.

Medical oncology clinics are held on a weekly basis and a radiation oncology clinic is held bi-annually. The oncology day ward consists of six treatment bays with recliner couches for the patients. Patients attending for chemotherapy receive a comprehensive education programme prior to starting their treatment regimen. This ensures that everyone is fully informed about their disease and their drug treatment schedule prior to starting.

The total number of patients treated in 2016 in the Oncology Day Unit was 2,370 patients.

PUH staff: from left to right: Anne Madden Finnegan, Sally O Connor, Vicky Costello, Deirdre Hanley, Eilis O Leary and Caitriona Duggan

The approx number of patients who attended medical oncology clinics in 2016 was 720 patients. Radiotherapy clinic, 60 patients attended.

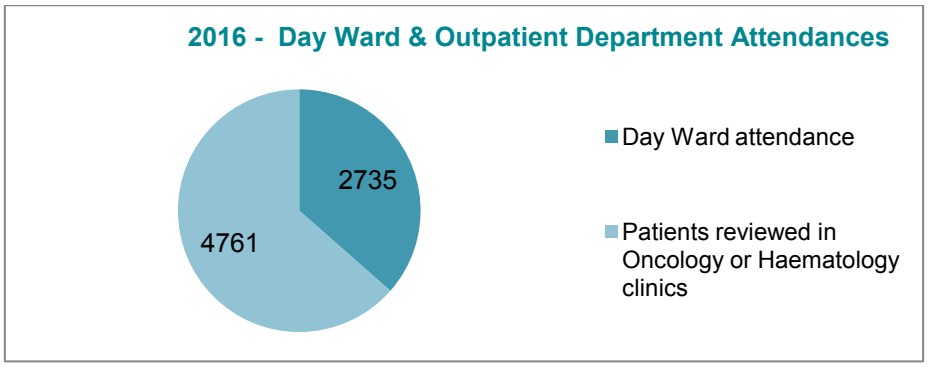
As an exclusively nurse led unit we are highly motivated to maintain cognizant of the most up to date research. We undertake monthly journal clubs, attend regular conferences and are regularly involved in audits and Research. Currently in conjunction with Dr Silvie Blazkova we are carrying out research into the survival statistics for Metastatic Colorectal patients over a five year period in the Oncology Department, Portiuncula University Hospital. Eilís O Leary is currently undertaking a post graduate certificate in nurse prescribing which will greatly enhance our service.

Mayo University Hospital

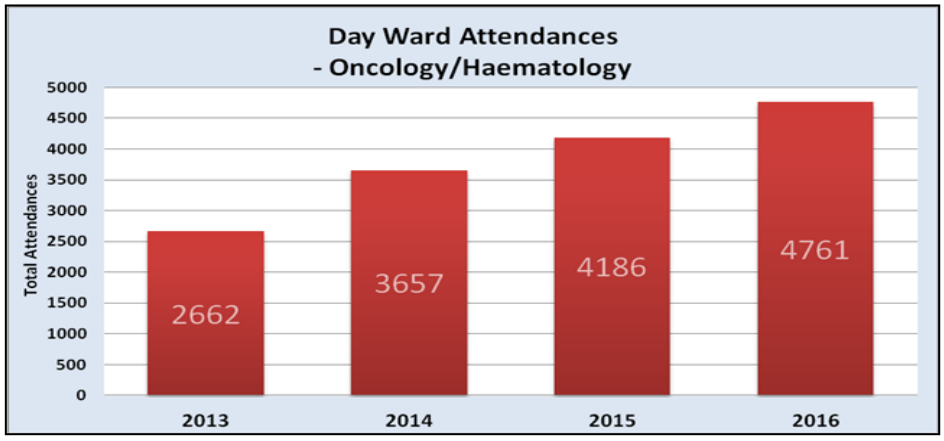
The Oncology/ Haematology service in MUH had another busy year in 2016. With this continued growth the staff has endeavored to maintain our philosophy of care which promotes self care whenever possible while providing support where necessary to assist with the patients/family needs. The contribution of the wider hospital team that work closely with oncology to support and assist the patient on their cancer journey is commendable here in MUH and have very much appreciated. A multidisciplinary team approach is central to the successful running of the service Included in this team approach is an excellent pharmacy department that works closely on a daily basis with the nursing and medical staff.

MUH Oncology/ Haematology Service Statistics for 2016

Highlighted below is the total number of attendances to the day unit and the oncology and haematology outpatient department in 2016.



MUH Attendance Figures Continue to Rise as can be Seen on the Graph Below.



304 patients started on new treatment (figures as forwarded to the NCCP for KPIs). 307 is the total number of new oncology and haematology patients attending outpatient clinics.

Inpatient data is not captured on our hospital PAS system as there are no oncology or haematology beds therefore patients are under general consultants based in MUH.

MUH Practice Development/ Improvements 2016

As a nurse led, Consultant supervised service, practice development is key to continually improving the care provided to the patients and families. Staff motivation and patient/ family satisfaction continues to be a priority. Listed below are some of the achievements for 2016.

- A CNS commenced the X ray prescribing course and is now the second nurse in the department requesting X-rays.
- There is now a second nurse drug prescriber in the department and the CNMII was accepted onto the course beginning early 2017.
- The ANP can now request CAT scans as part of her role.
- A closed (needle free) system was introduced to reduce risk of cytotoxic exposure to Aseptic Suite staff whilst in addition maximising efficiencies by eliminating several time consuming steps in the compounding process.
- Camera installation for volume checking was also incorporated into the work processes.
- Pharmacy staff developed and assisted with the educational roll out of a new Anti – Emetic policy for MUH.
- An information sheet providing information about the patients' treatment e.g. possible side effects etc was put in all charts. This was to assist non oncology staff in cases where patients were admitted to MUH as they would be under the care of general consultants. This was as a result of ongoing practice review in line with the NCCP medication safety review. This will be evaluated in 2017.
- CNS Sinead Fallon organised the Look Good Feel Better programme for MUH. Now established as a registered charity Look Good Feel Better is a non medical, brand neutral, free service that supports women with the visible side effects associated with cancer diagnosis and its treatment's. The aim is to run four sessions a year accommodating 12 ladies each time. The first programme took place October and was a huge success. Feedback from patients included comments such as *"I was really looking forward to it and it was lovely, no suggestions to improve it was excellent", "Thanks".*
- Mags Nimmo SN produced a Service information leaflet for new service users including patients, relatives and carers. The aim of this leaflet is to outline concisely practical information such as staff names, contact numbers, opening times etc. This has received very good feedback from users.
- And finally as promised last year members of the Mayo football team revisited our department which brought much joy to all, unfortunately will have to live in hope for another year.

Pictured at the Look Good Feel Better event at MUH (from left) Sinead Fallon, CNS oncology, Craig Allen, ADON medicine, Andrea McGrail, ADON, Catherine Donohoe, General Manager, and Emily Dunne from Look Good Feel Better.

See below: Oncology/Haematology Service Information leaflet for new Service users, produced by Mags Nimmo,SN

MUH Plans for 2017

- CNM to complete the medication prescribing course (Commenced in January 17) and will incorporate haematology drugs into her prescribing remit. This will widen broadly the number of drugs that can be prescribed by the nursing team. There will be three nurse drug prescribers within the service.
- CNS to complete the x-ray prescribing course.
- Public awareness stands to be organised by the CNS throughout the year in the foyer as part of our ongoing health promotion targets. Topics covered will include breast, bowel and lung cancer.
- Business cases to be put forward for ward staff nurses and ANP in haematology.
- Involvement in the national planning for the medical oncology clinical information system (MOCIS).
- With the services continued growth it is intended that Clinical Governance will look at future department planning as the current area is too small for present service need hence there is no scope for expansion.

Pictured are some members of the nursing team at MUH. Left to right, Deidre Allen SN, Madeline Gallagher CNS, Mags Nimmo SN, Christina Farrell CNMII, Bernie Kelly SN, Mary Hannigan ANP.

Sligo University Hospital

The Sligo University Hospital Medical Oncology Service can report a very busy year in 2016. We provided specialist treatment and care to 3692 patients via our Day Services and 215 ward attendees. Our 16 bedded Inpatient Oncology/Haematology unit can also report a busy year with 556 discharges for 2016 and an average length of stay of 4.98 days.

During 2016 the number of parenteral chemotherapy products supplied to Oncology SUH was 5011 and over 500 oral anti cancer therapies.

The Oncology/Haematology Service at SUH is led by two Consultant Medical Oncologists, and two Consultant Haematologists. Dr Michael Martin and Dr Rizwan Sheikh lead our oncology service. We are delighted that we welcomed a second Consultant Haematologist Dr Aine Burke to our team, who has joined Dr Andrew Hodgson and the Haematology team. Dr Burke joined us from Queen Elizabeth Hospital Birmingham, and has allowed us to run extra clinics seeing up to 15 extra patients a week. This has greatly reduced our waiting times while increasing our capacity for our OPD service. We have had our site accredited for ANP Haematology with Geraldine Walpole as our Haematology cANP. We look forward to Geraldine becoming registered in 2017. We anticipate having our Oncology cANP Ann Mullen registered also in late 2017.

Sharon Ormsby joined our team as Breast Care CNS taking over from Jean Gallagher who retired. Sharon previously worked in and has vast experience in this field. The Oncology Programme at SUH is supported by a well

established multidisciplinary team including Clinical Nurse Specialists, Pharmacists, Clinical Nurse Managers, dedicated Nurses, and a Social Worker. These are also supported by our two research Nurses in the clinical research trials department. We are lucky that we have 8 nurse prescribers, and 1 X-Ray prescriber on our team. We support continuous professional development for our nursing staff, with two nurses completing the Post Graduate Diploma in Oncology and two staff completing their Masters successfully.

The Haematology/Oncology MDM continuous to link in with various multidisciplinary meetings at University Hospital Galway, in particular into the Breast, Respiratory, Gastrointestinal, Genitor/urinary and Haematology cancers. These MDM's continue to grow in number and we are proud to say that we deliver on our KPI's with no waiting lists in Sligo.

We continue to build on our links with the community, through our connection with the volunteers groups. A positive new development for patients receiving their treatment in SUH is on the last Tuesday of every month, patients have access to hair and make-up specialist on site helping them through their treatment by providing "look good feel better sessions". We feel this is a very person centred approach and has been successful with very positive feedback.

I was recently at a Look Good Feel Better workshop in Sligo General Hospital. I just want to say a big Thank You for this. Jill is the nurse who invited me to the workshop and I cannot remember the names of the Beauticians who were there but they were so nice, kind and understanding to all of us who at this moment are going through the journey of cancer. It is a difficult time and this was a lovely lift to us. Again Thank You and keep up the good work - it does make a difference. Thanks.

We have close links with Sligo Cancer Support Group having onsite visits regularly, in particular weekly Bio Energy and Counselling treatments for our inpatients. In conjunction with the Sligo Support Group, we have set up a support group for Myeloma patients. This was initiated by the cANP Geraldine and two myeloma patients. This group is affiliated nationally to myeloma Ireland. The group meets once a month and patients at all stages of their illness participate. Sligo has plans to host the 2018 National Myeloma Patient & Family day which is an annual conference.

We designed our waiting area in OPD in conjunction with our local charity SHOUT (Sligo Hospital Oncology Unit Trust), & Neville Knott, interior designer, broadcaster, and lecturer. This now provides an area of tranquil comfort for patients and their families while waiting to see their Consultant. As a team we look forward to a productive and successful 2017.

Pictured: SUH Research Nurses, Moira Maxwell & Margaret Burke

1.14 Radiation Oncology

Dr Joe Martin
Consultant Radiation Oncologist
Lead Clinician

The Radiotherapy Department at University Hospital Galway provides radiotherapy services for patients of the Saolta Group and BreastCheck. It is fully integrated into the Multidisciplinary Group Network, as well as the Cancer Strategy Group and Group Executive. It forms part of the National Plan for Radiation Oncology, and links with the NCCP via monthly KPI reporting, and through the Clinical Lead Dr Joe Martin who currently serves as National Advisor for Radiation Oncology to the NCCP.

Activity levels are currently around maximum capacity, and as outlined in our activity table. In addition to clinical services, the department is a centre for national training for oncology nursing, radiation therapists, clinical dietetics, speech-language therapy, medical physics and radiation oncology specialist trainees. The department is active in screening and recruitment to national and international clinical trials of radiotherapy.

In 2017 a new CT-Simulator was installed and commissioned, bringing improved image quality and 4D capabilities to the department. In addition Dr C Small was approved for training in Prostate-HDR-Brachytherapy, meaning that UHG will be the first public hospital to offer this treatment in Ireland. This is being supported by the Saolta Group and the NCCP. Commissioning is planned for Deep-Inspiration-Breath-Holding in breast radiotherapy and oesophageal brachytherapy. In 2017, approval was given for the creation and advertisement of 2 additional basic-grade physicists and 1 deputy RTSM, as part of the national workforce plan to support the National Radiation Oncology plan. Further additional appointments are planned to support the new build centre during 2018 and 2019.

In 2018, construction will start on the Phase 2 build, as part of the National Programme for Radiation Oncology. Enabling works are approaching completion, after which construction will commence on the new centre. This will provide fit-for-purpose and state-of-the-art facilities for the patients of the West and North West, and an appropriate environment for staff to deliver optimal care. This is in line, with centres being built in Cork, and already completed in Dublin.

Radiation Therapy Team

2016 was very much a year of change for the Radiation Therapy Department in Galway University Hospital.

The department progressed implementation of the added functionality within Mosaiq, (Oncology Information System (OIS) that replaced Lantis in November 2015). An ongoing programme of process improvements and automation was commenced. The overall aim of this process is to improve the workflow in the department and also to reduce the risk of tasks being overlooked or forgotten.

As mentioned above the department went through a major change at the end of 2016. The original CT Simulator in the department, which was a single slice Philips machine was replaced with a 32 slice 4D capable Toshiba Aquilion Large Bore CT Simulator. This has substantially improved the image quality of the planning scans as well as dramatically reducing the scan times. In addition it has allowed us to acquire fast and slow scans so we have excellent image quality and can also see full organ motion. Further functionalities with regard to the new CT Simulator will be progressed in 2017.

Also in 2016 a Clinical Specialist Radiation Therapist commenced the role of brachytherapy specialist in the department following department facilitated post grad. education and on site mentored training.

The department also facilitated therapist to visit the mould room in St Luke's radiotherapy department and also to study the process of IV contrast administration. The mould room visit is part of an ongoing process of patient

immobilisation improvement where we have changed the type of immobilisation shells we use, changed the mouthbite material used and introduced customised headrests.

The IV contrast visit was carried out to prepare for the introduction of IV contrast as part of the planning process in 2017.

Therapists continued to partake in many research and study days. For example attendance at the "2nd National Pregnancy Policy Workshop", "Advanced Skills in Modern Radiotherapy", "International Stereotactic Symposium", and "Prostate SBRT Study Day"

Numerous therapists continued their post grad. education with one therapist completing a Masters in Clinical Research this year.

Our Advanced Nurse Practitioner, Ms Ger O Boyle was appointed National Lead for Nursing in radiation oncology in July 2016.

The ANP was extremely busy with over 1,000 prostate patients reviewed including 483 patients seen by telephone follow-up, significantly omitting the need for these patients to attend outpatient follow up clinics.

The erectile dysfunction clinic has also developed with 108 men seen for a combination of vacuum pump devices and caverject injection therapy.

In addition the Nursing department has maintained its philosophy and commitment to providing a quality nurse led patient centred service within the multidisciplinary team.

Staff retention was constant throughout 2016 with many staff exploring options for further personal professional development. All nursing staff attended both local and national study days regularly.

Radiotherapy Physics

Two important items of equipment reached their end-of-life status in 2016 and required replacement or major upgrade. The HDR brachytherapy unit used mainly for highly localised treatment of gynaecological cancers and in the future prostate cancers required a significant upgrade of its control unit. This upgrade and re-commissioning was carried out in November by the radiotherapy physics team followed by intensive training for physicists and radiation therapists with no disruption to patient treatment schedules. The CT simulator required complete replacement. The physics team provided the equipment specifications for the tender process to procure a modern wide-bore CT scanner capable of high level image processing and 4D capabilities. To reduce disruption to the clinical service, the old CT scanner was operational during the installation of the new CT scanner in a different room. The installation and provisional commissioning work for this CT scanner was completed during December 2016 with support from the Diagnostic-imaging physicists. The new CT is a Toshiba wide bore radiotherapy scanner with 4D capabilities provided by an SDX respiratory management system.
The Radiotherapy Physics team were part of the team involved with the MERU inspection of University Hospital Galway in relation to National Audit for Incident Reporting and Learning carried out during the summer of 2016. The subsequent report was positive and useful and important feedback was received.

Members of the Radiotherapy Physics team participated in the drafting of the National Pregnancy Policy completed by the Radiation Protection Sub group of the IAPM in 2016. The physicists and radiation safety officer brought the perspectives of patients of child-bearing age within the radiotherapy environment to the group which was mainly focused on the diagnostic imaging environment. This resulted in a more inclusive final document.

The Radiotherapy Physics team is part of the National Radiation Oncology Physics Residency Scheme and in March 2016 one of our Physics Trainees graduated from the Residency scheme. Late February 2016 brought the very sad news of the death of our Chief Physicist, Prof. Wil Van Der Putten. Wil was deeply involved in the creation, design, planning and implementation of the Radiotherapy Centre in Galway since the late 1990s. He designed the bunkers, took a significant role in the specification and procurement of all of the equipment needed to start a radiotherapy centre. He was heavily involved with recruitment of staff for the centre and in motivating this team to provide a strong and quality service in Galway. He brought a vision for what the centre should provide for the population of patients in the West of Ireland including an emphasis on professional training,

research and development. His contribution to the Radiotherapy Centre in Galway was enormous and his enthusiasm, support and encouragement as well as his motivation to constantly strive for excellence will be very sorely missed by everyone who knew him. May his soul rest in peace.

Radiation Oncology Activity 2016

Description	**2016**	
New referrals to Radiation Oncology	1646	
Review Clinics (GUH, SGH, MGH & Portiuncula)	4480	
Patients treated with EBRT (External Beam Radiation Therapy)	1054	
Patients treated - Orthovoltage	34	
Patients treated - Brachytherapy Prostate Seeds	34	
Patients treated - Brachytherapy Gynae	28	
Total number of patients treated	**1150**	
Ultrasound Biopsy (Requries Anaesthetics)	80	
Number of Fractions Treated on LINACS - EBRT	24320	
Patients treated - Brachytherapy Gynae	**Patients**	**Activities**
HDR Intravaginal (15312-00 No Anaesthetic Requirement)	15	46
HDR Intrauterine (15304-00 Anaesthetic Required)	6	18
HDR Intravag & Auterin (15320-00 Anaesthetic Required)	7	22
	28	**86**
NCCP KPIs		
Average KPI for 2016 - 86% of patients commenced RT within 15 working days of their RTT date		

**RANP phone follow up clinics not counted in Review Clinics*
***2016 Patients treated with EBRT – patients commencing treatment on multiple areas on the same date are counted as one patient start as per NCCP guidance.*

1.15 Palliative Medicine

Dr Dympna Waldron
Consultant Palliative Medicine
Lead Clinician

Dr Eileen Mannion
Dr Camilla Murtagh
Dr Sharon Beatty

The Department of Palliative Medicine has grown exponentially since its inception in 2000. The most significant and noticeable changes over the years has been earlier referrals of patients with incurable malignancies, referral of patients with potential cure for short term management and a marked increase in referral of patients with advanced incurable non malignant conditions.

2016 was another busy year for Palliative Care Services across the Saolta University Healthcare Group with the pattern of increased referrals continuing in the Hospitals, Hospices and Home Care Teams. The service delivers a comprehensive palliative care service across the Saolta Group and we are looking forward to holding our 5th International Palliative Medicine Conference in 2017.

This will be a 2 day multidisciplinary conference in November and from an oncology perspective will look at Pain Pathways in Cancer Pain versus Chronic Pain. An array of international and local experts is lined up to discuss the most up to date advances and complexities involved.

Sligo University Hospital

SUH Palliative Medicine Consultants
Dr Cathryn Bogan, Dr Anna Cleminson.

2016 continued to be a busy year for the Palliative care services. Our vision is to be at the centre of palliative care services in the North West, working to ensure that everyone who needs palliative care can access services Palliative care extends not only across the Hospital, but into the community and the inpatient unit of our onsite North West Hospice. The Nursing team continues to build on existing strong working relationships with all members of our multidisplinary team. The cornerstone of palliative care is good symptom control but by attending to psychological social and spiritual needs of patients and those that matter to them. We aim to do this by providing a more person centred approach to care.

A significant development for the inpatient unit this year has been the approval of a new hospice build. This will significantly improve the provision, of privacy, dignity and respect for all patients and their families at end of life. Along with our Consultants in Palliative Medicine we have two Clinical Nurse Specialists in Palliative care designated to SUH.

1.16 Cancer Nursing

Jean Kelly
Chief Director of Nursing & Midwifery
Julie Nohilly
A/Director of Nursing

Ellen Wiseman
ADON for Cancer Services

As chief Director of Nursing and Midwifery I am very pleased once again to contribute to what is now the 5th Cancer Centre Annual Report. I would like to take this opportunity to acknowledge the huge contribution that Nurses in all our cancer services make to the patients journey and the role they play in the multidisciplinary team.

2016 was another busy year for the staff working in Cancer Care delivery. Education was once again to the fore, nurses, from across the group undertook the post-graduate Diploma in Oncology and all were successful in attaining there higher diploma with many going on to Masters Level. All of the staff were awarded financial support from the Centre of Nurse/Midwife Education and granted study leave from their respective managers to undertake these studies. A number of staff completed the Palliative Care course. Achieving these credentials means an enormous amount both personally and professionally to the nursing staff. It also means that our patients benefit from the enhanced expertise that the nurses have gained.

Ms Ger O'Boyle, Registered Advanced Nurse Practitioner for Radiation Oncology, was elected as the Nursing Lead for the NCCP National Radiation Oncology Group in 2016. Ger attends monthly meetings at the NCCP headquarters in Dublin and is involved in setting national policies for Radiation Oncology nurses. This is a great opportunity to showcase the work and research that has been undertaken by staff in Saolta. Ger is also involved in a research study for patients who suffer Erectile Dysfunction following treatment for Prostate Cancer. This is of great benefit to patients who can suffer significant side-effects after surgery, Chemotherapy and Radiotherapy.

A new initiative in 2016 was the "GUH Oncology Shared Care Programme" for delivery of anti-cancer treatment in the community."

Professor Paul Donnellan Consultant Oncologist and Sheila Talbot Oncology Clinical Nurse Specialist started this programme in collaboration with Novartis, Janssen Oncology and Amgen. These are the companies that make the oral chemotherapy and the sub-cutaneous bone strengthening drugs that are administered either in, or near, patient's home. It was recognised that some anti-cancer treatments are relatively simple to administer once a treatment-specific protocol is followed, and is deliverable in the community, with adequate nursing support and Consultant oversight.

Community based treatment has proven much more convenient for patients while also significantly reducing the pressure on the Haematology/Oncology Day Ward and the Hospital based cancer services.

The companies involved already employed oncology-trained nurses to support patients who are on their specific drugs in the community. The main aim of the Saolta Oncology Shared- Care Programme (OSCP) initiative was to utilize the valuable third-party nursing support and integrate them into the hospital-based oncology service, in the interest of the patient. This initiative has been a great success to date and provides a template for future endeavours of this type.

During 2016 Mary McLoughlin Clinical Facilitator has been working closely with the NCCP on

developing a National Education Package for Nurses in Haematology/Oncology. This will be an on-line education tool with Multiple Choice Questions. It will be nationally available and will ensure that all nurses involved in cancer care delivery across the country will be completing the same education programme.

Also in 2016, in conjunction with the NCCP and the CNME, Mary McLoughlin and her colleagues in Practice Development taught a three day course about all aspects of Cancer Nursing for non-Cancer nurses. This was very well attended by Medical and Surgical nurses from every area of the hospital. This programme was very well received among staff as Haematology/Oncology patients are very frequently on Medical or Surgical wards in the hospital until it is possible to move them on to an Oncology Ward. This additional education will benefit our Haematology/Oncology patients.

Nurses working in Cancer Care have a unique opportunity to build a relationship with their patients. Most of the patients will be attending the various day wards and inpatient units for a considerable length of time. This allows nurse to get to know their patients well and this can take its toll on the staff especially when the patient dies. In 2016 members of staff from oncology/haematology areas participated in the Schwartz Rounds. Schwartz rounds give staff a platform to share their stories of caring and what it means to them in a confidential forum. Schwartz Rounds are a support for all of the multidisciplinary team we look forward to meeting more of the team at rounds in the future.

1.17 Oncology Pharmacy

John Given
Head of Pharmacy

Report authors: Manufacturing (Harold Lewis), Clinical: (Peter Kidd)

Achievements and plans

2015	2016	Q1 & Q2 2017	Plans 2017 Q3 & Q4-2018 Q1 & Q2
Outpatient flow study report completed	Protocols portal on http://medinfo released for clinical use	Major revision of nausea & vomiting guidelines	Publication of tumour lysis guidelines
MOCIS national project underway	Day ward business case accepted by Saolta management	Newer/safer template for paper prescribing of chemotherapy	Formal participation in national rollout of MOCIS (Phase 1)
Qpulse procedures underway with CNM3		Formal induction of NCHDS completed (Q3 2017)	Placement of day ward pharmacist (NEW) - ?September 2017
-	-	Appointment of day ward technician (NEW)	Appointment of leads for cancer medicines strategy within pharmacy for major roles: 1. ePrescribing 2. Guideline development 3. Protocol maintenance
-	-	-	Bring closure to Intrathecal project
-	-	Implementation of QMS – SOP review and update	Continued work on QMS – SOP review and update
-	-	Implementation of CSTDs – improve H&S + save money	
-	-	Dose-banding implementation – 5FU infusors only initially	Further dose banding for other high volume low cost long expiry drugs to **enable manufacture of expensive MABS inclusing Herceptin**

Infographic 2016 figures

# Manufactured SACT in 2016 Rx Data incomplete Awaiting BI/**MOCIS** 	>> €10,600,000 p.a spent ~ €3,000,0000 p.a **saved** through clinical trials Based on analysis of top 80% of cost-centre report *A lack of business intelligence makes this difficult to be precise*	Chemotherapy delivered with ePrescribing **ZERO**

MUH Pharmacy Department Plans for 2017

- The Pharmacy Department plan to install a new isolator in their Aseptic Suite.
- Involvement in the national planning for the Medical Oncology Clinical Information System (MOCIS).
- Capacity planning, Incident Analysis / trending data planned for 2017.
- Review of Extravasation Management to be undertaken
- Improved communication with GP practices / retail pharmacies in regard to Compassionate use oral therapies.
- A Business case for additional pharmacist staffing to be submitted to support the increasing production demands of the unit.

2.0 Health and Social Care Professionals (HSCP)

2.1 Physiotherapy

Catherine O'Sullivan
Temporary Physiotherapy Manager

Miriam Flatley Senior physiotherapist, Fionnuala Ginty Physiotherapist

Staffing consists of 2.5 WTE Physiotherapists (2 Senior, 0.5 Staff Grade), providing a service to oncology, radiotherapy and haematology patients. We appointed a new permanent Senior Physiotherapist, Miriam Flatley to the team in May 2016. Miriam is keen to develop the service in the coming months and years.

Physiotherapy plays a key role in the holistic management of patients throughout the cancer journey. The primary goal of rehabilitation is to assist the patient in achieving maximum physical and psychological functioning within the limits imposed by disease or treatment. There is widespread evidence to show the benefits of taking part in moderate levels of exercise through a cancer diagnosis and treatment.

In UHG, we provide a cancer rehabilitation service to patients at both a ward based level and gym rehabilitation as appropriate. Cancer rehab is medical care that should be integrated throughout the oncology care continuum and delivered by trained rehabilitation professionals who have it within their scope of practice to diagnose and treat patients' physical, psychological and cognitive impairments in an effort to maintain or restore function, reduce symptom burden maximise independence and improve quality of life in this medically complex population. Cancer Rehabilitation addresses the musculoskeletal, cardiopulmonary and functional impairments expected with cancer, cancer treatment, survivorship, advanced disease and end of life.

Physiotherapists in UHG attend weekly oncology/haematology MDT meetings in order foster a holistic approach in the management of this patient group.

In 2016, a total of 774 patients received physiotherapy during their inpatient stay. 150 patients received outpatient physiotherapy treatment for lymphoedema and other musculoskeletal issues such as shoulder stiffness and pain.

Specific Service Areas

- Lung Cancer-Physiotherapy continues to support the rapid access lung clinic by providing exercise tolerance testing of patients diagnosed with lung cancer in Unit 8 Merlin Park University Hospital.
- Breast Cancer- service includes patients post breast surgery. As an inpatient, the focus is on post operatively shoulder exercises and lymphoedema risk reduction. Outpatient treatment is directed towards musculoskeletal dysfunction, scar tightness and shoulder rehabilitation.
- Lymphoedema- Service to patients (in/outpatients) with oncology background who have secondary lymphoedema. Consists of exercise, skincare advice, complete decongestive therapy and garment prescription
- Prostate- Service provided encompassing pre-operative Physiotherapy education on Pelvic floor exercises, post –op physio review and ongoing management of prolonged incontinence.

Continued Professional Development and Education 2016

The physiotherapy team participated in lymphoedema awareness day UHG March 2016 to raise awareness and provide advice on primary and secondary lymphoedema.

Physiotherapist, Thomas Samuel, provided a physiotherapy education session entitled 'Life after Prostate Cancer' hosted by Cancer Care West in Oct 2016.

Senior Physiotherapist, Miriam Flatley, presented at a patient education day organised by Multiple Myeloma Ireland, in Limerick in Nov 2016. She provided information on falls prevention advice, exercise and managing fatigue.

2.2 Dietetics

Grainne O'Byrne
Dietetics Manager

June Barrett, Senior Dietitian Radiotherapy
Ruth Kilcawley, Senior Dietitian Haematology/Oncology

Oncology Nutrition & Dietetics

Preservation and optimization of nutritional status is an integral part of patient care during and beyond medical oncology & radiotherapy treatment. The Oncology Nutrition Service in GUH is composed of one senior radiotherapy oncology dietitian for both inpatient and day services and 0.5 senior medical oncology dietitian with inpatient only remit.

Current contribution to service:

- Nutritional assessment of patients with cancer including nutritional intake, body composition, performance, metabolic derangements and nutrition impact symptoms of oncology treatment.
- Nutritional support during and beyond treatment with the goal of meeting nutritional requirements, stabilising weight and preserving lean mass incorporating individualised dietary counselling, oral nutritional supplementation and enteral or parenteral nutrition support.
- Nutrition expertise on medical oncology team and contribution to multidisciplinary care of cancer patients throughout their treatment.
- Dietitian led group sessions for newly diagnosed patients on role of nutrition in cancer treatment.

2.3 Oncology Social Work

Maire Lardiner
Medical Social Worker, Oncology

Rachel Macken, Medical Social Worker for Radiation & Medical Oncology
Patricia Luby, Medical Social Worker

Patients and their families / carers are offered a wide range of interventions including counselling by the Oncology Social Worker when attending for chemotherapy and / or radiotherapy. The casework involves consideration of the significant physical, emotional, social and psychological impact of a cancer diagnosis. The reactions and coping strategies following diagnosis vary from patient to patient. Social work uses a systemic approach therapeutically working with all age groups at various stages of the life cycle.

The Social Work Department offers guidance in talking to children about cancer, lifestyle, body image and self-esteem issues. This can focus on lifestyle adjustment and managing change psychologically. The Oncology Social Worker is skilled in working with complex family dynamics and mental health using a multi-disciplinary and inter-agency approach. The Oncology Social Work team attends weekly ward MDMs. Social Work specialises in child protection, domestic violence, elder abuse and working with vulnerable adults having relevant knowledge of legislation, policy and guidelines pertaining in this area. The Oncology Social Work service actively liaises with voluntary and statutory support agencies in the community and also provides duty / emergency support to the Emergency Department. The role also encompasses a priority social work service to Haematology, ongoing contact with the palliative care team as well as a valuable partnership with hospice social work in the community.

The Oncology Social Work team also follow up links with educational institutions via student placements and social work representative bodies e.g. IASW and Oncology / Haematology National Social Workers Group.

The Oncology Social Work team enjoy good working relationships with the Irish Cancer Society, Daffodil Centre and with Cancer Care West as well as with other cancer care support services in the Western Region.

Challenges remain in the provision of an optimal social work service and there is a critical need for social work posts in Palliative Care and Haematology.

Medical Social Work was involved in the roll-out and delivery of the Stress Control Programme at GUH / Saolta in the past year and it is hoped that this will be offered as an option to oncology and other patients in the next twelve months. The stress control classes aims to help the large numbers of people who experience stress through learning new coping strategies.

Medical Social Work was also involved in the presentation of a talk to ICU / Critical Care staff regarding the emotional needs of children who are bereaved as a parent approaches their death in ICU.

During 2016, 934 new patients were referred to and assessed by the Oncology Social Work team.

2.4 Occupational Therapy

Ciara Breen
Interim Occupational Therapy Manager in charge III

Elaine Feely,
Senior Occupational Therapist

The Occupational Therapy Service in GUH provides Occupational Therapy on a priority basis to patients referred from the Medical Oncology, Radiotherapy, Haematology, Surgical Oncology and Palliative Care teams. A service is also provided on a priority basis to medical and surgical teams whose patients have a primary diagnosis of cancer.

Occupational Therapy interventions focus on maximising the person's independence, maintaining their quality of life and assisting in discharge planning using a person centred approach.

Interventions may include:

- Assessment of activities of daily living, evaluating the impact of cognitive, motor and or sensory limitations experienced by the person with cancer.
- Assessment of seating needs to promote and maintain independence in posture/mobility.
- Assessment of splinting needs to prevent deformity and control pain.
- Assessment of a person's equipment needs to promote independence, maximise quality of life and facilitate home discharge and liaison with community (PCCC) services regarding provision and follow up.
- Interventions and rehabilitation to maximise functional performance in everyday activities/occupations.
- Provision of specialist advice in adapting occupations/activities of daily living to assist patients to cope with their illness e.g. relaxation technique, anxiety management, fatigue management, breathlessness management maximising patient and family coping skills to facilitate a home discharge.

Service & Professional Development in 2016

- Our Senior Occupational Therapist is an active member of the National Occupational Therapy Advisory group in Oncology and Palliative care and is a regular attendee and participant at their study days
- Links have been further developed with the Occupational Therapy services in Galway Hospice and in Primary, Community and Continuing Care in order to provide a streamlined pathway, and to optimise referral processes among services
- As cancer patients may present to a number of different specialities within the hospital, the Senior Occupational Therapist also provided in-service training to the Occupational Therapy Department, including practitioners from surgery, respiratory and general medical services.

2.5 Speech and Language Therapy Services

Gerardine Keenan
Speech & Language Therapy Manager

Karen Malherbe, Senior Speech and Language Therapist

At GUH, Speech and Language Therapy has involvement in delivery of assessment and management of swallowing, voice and speech difficulties that may occur during or after radiotherapy to the areas of head and neck oncology. We also supply swallow and communication assessment and management services to the growing cohort of patients receiving chemotherapy through our Medical Oncology Service – including diagnoses not specifically related to head and neck.

At GUH, the SLT dedicated to the Head and Neck Oncology pathway is fortunate to be involved in streamlining its own service to follow the patient from initial diagnosis and surgery through the radiotherapy treatment programme and review and follow-up as necessary afterwards.

We are involved in weekly meetings and ward rounds with Ear, Nose and Throat (Otorhinolaryngology) department and the Oral Maxillo Facial department for a more direct review of patients after operations and consultants' plans and prognoses.

We attend weekly MDT meetings with the treating Radiation Oncology teams, dieticians, nurses and radiation therapists to ensure there is a holistic treatment picture of the in-patients and out-patients with Head and Neck Cancer.

Speech and Language Therapy is also present at the Head and Neck Oncology MDM where treatment plans for patients from most corners of the west of Ireland are presented and discussed for evidence based treatment decisions, with ENT, OralMaxilloFacial Surgery, Radiation and Medical Oncology as well as Radiology and Pathology consultants.

Approx 300 patients are seen by SLT during the year based in the Radiotherapy department, where staffing allows. 2016 has been a busy year, with new referrals and face to face contacts set to exceed numbers from previous years.

Within the Radiotherapy department, SLT also holds weekly clinics for specific swallowing assessment, pre-hab exercises and stretching advice, using the research evidence base to promote patient quality of life and function try to maintain 'normal' oral intake of fluids and foods, while maintaining patient safety and comfort. Standards are measured through audit, rolling out use of templates for notes and outcomes from the Clinical Specialist SLT in St James' providing more comprehensive therapy records, and quality audit options.

It's a challenge to deliver Speech and Language Therapy services to Radiation Oncology, specifically and Oncology overall with 0.5 WTE SALT, and we would look to motivate for increased staffing. However, despite the increasing numbers year on year, we will look to increase our clinics for face to face contact, improve in-patient cover, try and improve post-therapy follow-up, as well as provide some education sessions to community SLTs and PHNs with regards to safe and appropriate care in the community on treatment completion.

3.0 Health Promotion Services

Laura McHugh
Health Promotions Offices, HSE West
Pamela Normoyle
Health Ireland Lead, Galway & Roscommon University Hospitals

Summary of 2016 HI Activity & Outcomes

HI Actions	Outcomes
3.0 Health Literacy	• Health literacy committee established. • All written communications/ Health promotion leaflets are NALA approved. • Health Literacy Policy completed. • Guiding tool established using the European Clear Communication Index. • Research proposal on effect of low health literacy on preparation for colonoscopies.
3.3 Patient Advocate liaison Service	• Provision of general information to patients and families. • Inaugural launch of butterfly scheme, with the aim to improve patient experience of clients with Dementia in acute hospital settings.
3.2 Implement self care programmes	• Referrals to cardiac rehabilitation programmes in Merlin Park • COPD clinics in line with national framework. • Type1 and Type2 Diabetes Adult Education sessions. • Prostate Cancer Information evenings.
4.2 Tobacco	• .5 WTE post in place. • 6 Smoke Free Campus Committee meetings
4.3.4.	• Calorie posting complete in GUH, with improvements in menu choice and healthier cooking methods. • Calorie posting initiative ongoing in MPUH.
4.3.4 Vending	• HSE Vending policy is implemented.
4.3.3	• Patient menus reviewed in line with policy on food and nutritional care in hospitals. • New patients menus established and awaiting approval for implementation.
4.3.5	• Nutrition Screen tool implemented on identified wards, with view to expand to all wards in 2017. • Protected mealtimes implemented. • Red Tray initiative continues.
4.7 Breastfeeding	• .5WTE post in place. Annual Report for 2016 submitted to national BFHI office.
4.8 Health Protection	• The Promotion of the Flu vaccine remains a priority. • 5 Peer Vaccinators trained • Uptake Rates improved overall in 2016 however significant progress needs to be made to reach 40%.
4.4 Active travel	• www.hospitalwalks.com launched on both sites. • Interactive website and printed walking maps within and around both hospital sites. • 120 staff participated in smatertravel pedometer challenge. • Pamela Normoyle awarded smartertravel co-ordinator prize. • 3 bike workshops held. • Negotiations with NTA and hospital management to improve cycle facilities on site for all bike users.
4.9 Positive Mental Health	• 7 Stress Control Programme delivers trained in GUH. • Lunchtime mindfulness sessions every Monday, Wednesday and Friday. 300 staff members have availed of this initiative. • Training courses in Coping Skills for Stress delivered. • Worked with groups of staff at ward/depart level. • Training course delivered to managers on the Prevention and Management of Stress in the Workplace Policy.

2016 Highlights

Launch of hospitalwalks.com	Pamela Normoyle awarded smartertravel coordinator, in association with workplace step challenge
Launch of butterfly scheme	Partnership with Connacht Rugby Club in supporting flu vaccine campaign
Winner of Tidy Towns Garden at MPUH	4 committee meetings
Culture night in MPUH	

2016 Challenges

Variety of staff engagement in Healthy Ireland activities which is both a highlight and a challenge, as it is difficult to coordinate agreed actions as set out by the committees.

2016 Hospital Walks Launch GUH

The workplace has been highlighted as a key environment for Health Promotion, hence the launch of www.HospitalWalks.com. This initiative was set up to support staff, patients and visitors to incorporate "exercise breaks" into their daily routine. The website, which was designed and developed by Health Promotion & Improvement and Saolta University Health Care Group aims to highlight both internal and external accessible walking routes on both hospital sites in Galway City. The website clearly highlights interactive maps, slide shows and photos of all the routes, to ensure clarity and accessibility for all. The website also contains links to Get Ireland Active, Get Ireland Walking and other relevant websites to support staff, patients and visitors to become more active, more often.

Paul Gillen, Pamela Normoyle

Eileen Holland, Christine Prendergast, Aideen Moore, Caroline Delargy, Pamela Normoyle

4.0 Clinical Trials

Mary Byrne
Clinical Trials

The Cancer Clinical Trials Unit (CCTU) has been in operation since 1999. During this time the unit has been involved in multiple key international research studies with over 1,200 patients recruited onto Clinical Trials during this time. The Unit has worked in collaboration with large international research groups such as the National Surgical Adjuvant Breast and Bowel Project (NSABP), Eastern Cooperative Oncology Group (ECOG), European Oncology Research Treatment Group (EORTC), Population Health and Research Institute Canada (PHRI), and Medical Research Council UK (MRC) amongst others. Since July 2015 the CCTU has been based in the HRB-CRFG facility. This facility is a HRB funded joint collaboration between the Galway University Hospital, the National University of Ireland, Galway. The purpose of this facility is to 1) harmonise research practice and standards across the institution and (2) bring together research groups under one umbrella to share resources and standardise practice. Along with the HRB-CRFG the Lambe institute officially opened in September 2015 and this houses significant research programmes in cancer undertaken by Professor Kerin's and his research team.

One of the key components of the cancer research portfolio in GUH are early phase clinical trials which have been run successfully here in conjunction with the Blood Cancer Network Ireland (BCNI). The BCNI under the directorship of Professor Michael O' Dwyer is a national clinical research network that will benefit blood cancer patients in Ireland. BCNI offers early stage clinical trials (both investigator initiated and industry sponsored) to blood cancer patients providing them with the opportunity to avail of new potentially life-saving treatments. BCNI is also establishing a biobank and blood cancer registry which will further our knowledge and expertise in the field of blood cancer research and ultimately improve patients' outcomes. This is a 5 year project funded by Science Foundation Ireland and the Irish Cancer Society with additional support from industry sponsors. The lead site of the BCNI is located at GUH and during 2016 was involved in clinical trials in multiple myeloma and acute myeloid leukaemia.

In an active research centre the clinical research nurse plays an increasingly important role in assuring participant safety, integrity of protocol data and ongoing maintenance of informed consent, all within the context of effective and appropriate clinical care. In 2016, there were eight research nurses dedicated specifically to the management of cancer clinical trials and research along with three data managers and two research pharmacists.

In 2016 the CCTU were involved in a number of critical chemo-immunotherapy studies, enrolling patients onto trials in Melanoma, NSCLC and Colorectal Cancer utilising PDL1 inhibitors. Along with these studies there were a total of 18 therapeutic cancer trials initiated in 2016. These studies were in addition to the existing studies previously opened amounting to a total of 26 clinical trials recruiting for the treatment of cancer open by year end 2016.

The total number of patients actively participating in cancer clinical trials at GUH in 2016 was 1,216. Clinical trials were available to patients with cancers in the following disease areas Gastrointestinal, Breast, Lung, Prostate, Renal Cancer, Melanoma, Gynaecological, as well as Haematological malignancies of Multiple Myeloma, DLBCL, CLL, MDS and NHL.

New Patients Accrued to Studies in 2016: 61 (159 patients referred for trials)

Patients accrued in 2016 by tumour site			
Breast	27	Prostate	6
GI	3	Lung	8
Haematology	14	Gynae	1
Melanoma	2	**Total**	**61**

5.0 Cancer Research

Cancer biology and therapeutics is one of the research priorities at NUI Galway and it engages a wide variety of basic, translational and clinical cancer researchers across the campus in partnership with Saolta.
Improved healthcare outcomes for patients are best achieved in a research-led environment. Co-located with University Hospital Galway and the Health Research Board-Clinical Research Facility the **Lambe Institute for Translational Research** at NUI Galway was officially opened in September 2015. The Lambe Institute is enabled for near-patient research, access to clinical trials and is the research arm of the School of Medicine strengthening the link between hospital clinical activity and the education and research mission of NUI Galway.

The Lambe Institute is owned and operated by NUI Galway and was developed with support from the Galway University Foundation, Corrib Medical Network, Breast Cancer Research and chief donors, Dr Ronan and Mrs Ann Lambe. Occupying two floors of a purpose built facility it is home to over 100 researchers specialising in cancer research, cardiovascular/regenerative medicine and medical devices - key strategic research priorities of the College of Medicine, Nursing and Health Sciences. Along with the “dry lab” desk spaces and “wet lab” experimental areas there are specialised lab rooms for Cell Culture, Radiochemistry, Biobank Freezer Storage, Microscopy (housing the Slide Scanning Microscope core facility), Genomics (DNA) and Histology. The Lambe Institute provides the experimental space for translational research PhD and MD students, MSc programmes and for the laboratory skills modules of taught postgraduate programmes.

The Lambe Institute currently houses the following research groups:

- Translational Medical Device Lab
- Breast Cancer Research Laboratory
- Cardiovascular Research Centre
- Cancer and Inflammatory disease research groups from the Disciplines of Surgery, Pathology and Clinical Pharmacology

The Cancer Centre at University Hospital Galway is the busiest centre in the country, delivering a high-volume clinical programme in common cancers. Research groups located in the Lambe Institute have a special interest in the improvement of diagnosis of cancer and the individualisation of therapy for patients. A **Cancer Biobank**, developed over many years and housed in the research facility, is a vital resource for researchers enabling long term research projects with comprehensive disease follow up. Research groups from Surgery, Pathology, Clinical Pharmacology and Medical Engineering are engaged, in collaboration with frontline clinical colleagues, in the following areas of **breast, prostate, colorectal, and endocrine cancer** research**:**

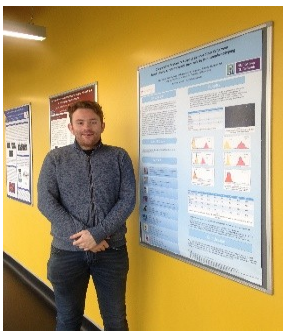
- Personalised Medicine – Cancer Genetics/Risk Assessment
- Biomarker dection and prediction of response to treatments
- Inflammatory Disease and Cancer
- Cellular interaction in the tumour microenvironment and response to stress
- Novel Technologies for Cancer Management – imaging techniques and therapeutic methods
- Clinical and Translational Trials

Cancer research is supported by numerous national and international funding agencies and charities, including the Irish Cancer Society, Breast Cancer Research, Breast Cancer Now, Wellcome Trust, Irish Research Council, Movember, Health Research Board, European Research Council and Science Foundation Ireland

With Europe’s aging population and the corresponding increase in healthcare costs, the **Translational Medical Device Laboratory** in the Lambe Institute is focused on the development of new low-cost and non-invasive medical devices. This research is driven by on-going clinical engagement, and close collaboration with industry. Through this partnership, the resulting medical devices are finely tuned to address unmet clinical needs, and also ideally placed for subsequent commercialization. Current research is focused on breast cancer detection, neuro-imaging, and novel therapies using microwave and radio-frequency ablation.

5.1 Research Developments and Achievements

Katie Gilligan was awarded a four year Government of Ireland PhD scholarship from the Irish Research Council. Under the supervision of Dr Róisín Dwyer, Katie is studying *Mesenchymal Stem Cell-mediated delivery of exosome-encapsulated microRNAs for the treatment of breast cancer.*



Dr Donald Courtney, a MD Student, supervised by Professor Michael Kerin, won the poster prize at the 24th Sylvester O'Halloran Perioperative Scientific Symposium in Limerick in March 2016 for his research entitled *Comparative Analysis of Adipose Derived Stem Cells from breast tissue and mesenchymal stem cells by immunophenotyping*.

Úna McVeigh, a PhD student at NUI Galway supervised by Dr Nicola Miller and Professor Michael Kerin, won third prize in the Ilumina Go Mini Grant challenge for her research investigating the utility of *next generation sequencing in breast cancer predisposition testing*. Úna was one of 1,100 international entries for the award and she was invited to collect her award at the American Association of Cancer Research Meeting in New Orleans in April 2016.

Katie St John, a medical student funded by Wellcome Trust, won the student prize at the Society of Academic and Research Surgery in January 2016. Katie is pictured with her supervisor Dr Róisín Dwyer and Killian O'Brien, PhD researcher.

6.0 Cancer Charities: Patient and Research Support

6.1 Cancer Care West

Inis Aoibhinn Residence
Galway University Hospital

Cancer Care West Support Centre
72 Seamus Quirke Road
www.cancercarewest.ie

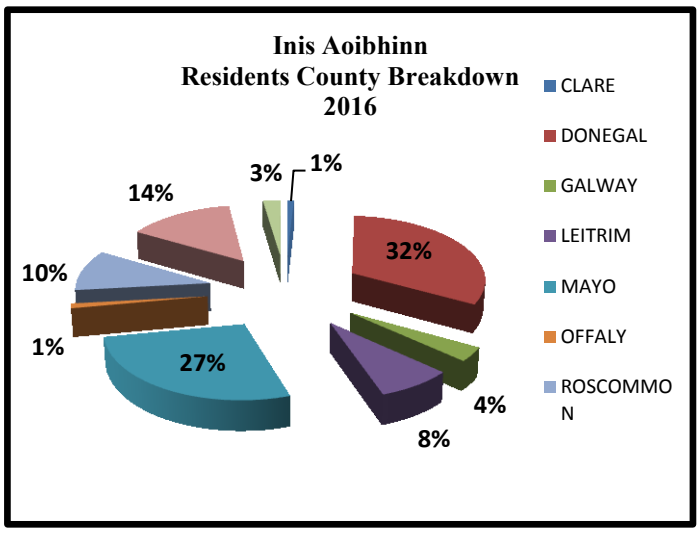
Cancer Care West is a registered charity, dedicated to supporting cancer patients and their families in the west and northwest of Ireland.

Cancer Care West Vision: is that no one will go through cancer alone.

INIS AOIBHINN

In 2007 Cancer Care West opened its residential facility, Inis Aoibhinn to provide accommodation to cancer patients travelling to Galway for Radiotherapy treatment at UHG. Inis Aoibhinn has 33, twin bedded rooms where each patient can stay with a family member or friend, for the duration of their Radiotherapy treatment, usually 5-7 weeks. Radiotherapy treatment is given each day from Monday to Friday, and patients stay at Inis Aoibhinn during the week and return home each weekend. Patients come predominantly from counties Donegal, Sligo, Leitrim, Roscommon, Mayo, Galway and Clare, and sometimes from counties further afield. Since Inis Aoibhinn opened its doors in 2007 it has accommodated over 4,000 patients and family members who would otherwise have had to travel long distances every day to their treatment. In 2016 Inis Aoibhinn accommodated 345 cancer patients and provided over 9,500 bed nights to patients and family members.

Residents by County of Origin		
	2016	**%**
Clare	3	1
Donegal	111	32
Galway	12	3
Leitrim	28	8
Mayo	94	27
Offaly	4	1
Roscommon	35	10
Sligo	49	14
Westmeath	8	2
Total	**344**	**100**



Cancer Care West Support Centre

The Cancer Care West support centre is based in the community, close to UHG, where there are a wide range of services available at no cost to the patient or their family.

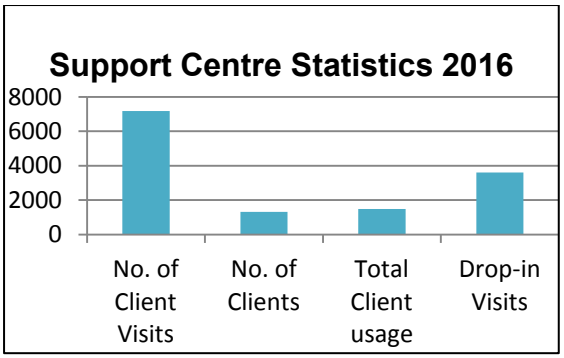
During 2016, the Cancer Care West Cancer Support Centre has continued to provide a unique community based model of psychological and oncology support for cancer patients and their families.

As cancer affects more people, it is imperative that the model of community Psycho-Oncology support offered by Cancer Care West is available to anyone who needs it. During the year, the centre have taken several important steps to fulfil this goal, including the development of a new Cancer Support Centre in Donegal to serve the northwest of Ireland, as well as the appointment of a senior psychologist to deliver a psychological support service to inpatients at Letterkenny University Hospital.

The centre has also developed a dedicated Psycho- Oncology service for University Hospital Galway. This means that cancer patients and the staff working at the hospital have access to a clinical psychologist experienced in supporting people with cancer on a daily basis. During 2016 Cancer Care West provided counselling to over 240 individuals and families in UHG.

Our other big development this year has been the expansion of the children's service with children aged 3 to 18 years being seen for individual therapy. An additional aspect of this service is psycho-education for parents who sometimes struggle to either tell their children what is happening in the family or know how to manage issues around the terminal phase of their illness.

During 2016, the centre was visited 7,182 times by over 1,300 people affected by cancer. Most of the people who used the centre availed of individual services, including psychology, oncology Information, benefits advice and complementary therapy.



No. of Client Visits	7182
No. of Clients	1315
Total Client usage	1486
Drop-in Visits	3611

Patient and Family Support Programme

We also provide practical support for families who are undergoing long term cancer treatment through our Patient and Family Support Programme. Families can apply to avail of long term accommodation close to University Hospital Galway when a family member is receiving cancer treatment in hospital. Eligible families who do not live in Galway but want to stay close to their loved one will be found local accommodation at no cost to them.

In 2016, thirty two families were supported with a total of 500 nights' accommodation in apartment or bed & breakfast accommodation.

6.2 Irish Cancer Society

Daffodil Centres in Galway University Hospital and Letterkenny University Hospital

The Irish Cancer Society's Daffodil Centres provides a service on-site in hospitals, where people affected by or concerned about cancer can receive information and support from cancer nurses and specially trained volunteers.

There are Daffodil Centres in Letterkenny and Galway as result of a successful partnership between the Irish Cancer Society and the Saolta Group.

Enquirer Activity 2016

In 2016, 38547 people have had contact with the various 13 centres around the country. The total number of contacts to the Daffodil Centres in Galway and Letterkenny is 5604.

Daffodil Centre GUH & LUH	Number of Enquires	Browsers to the Daffodil Centre	Cancer Awareness/Early Detection Stands	Total
Daffodil Centre GUH & LUH Total number of contacts	1808	1197	1442	**5604**

Face to face contact was the most popular with 81% of enquires made by people dropping into the Daffodil Centre for information and advice. Enquiries relating to Breast, Prostate, Bowel and Lung cancers made up the majority of the interactions in 2016.

Most people were seeking emotional support and information on side effects of treatments following a cancer diagnosis. Practical support and advice in relation to childcare, travel and local cancer support services were key concerns for patients and their relatives when engaging with the Daffodil Centres across both Galway University Hospital and Letterkenny University Hospital.

A Chemotherapy Education Programme

Daffodil Centres also facilitate group education sessions for patients starting chemotherapy and for their families and friends. These sessions focus on providing the right tools and knowledge to cope with chemotherapy, manage side effects at home and alleviate concerns often associated with starting treatment. The cancer nurse from the Daffodil Centre facilitates the group education session using supportive educational tools such as audiovisual support (DVD), short oral presentations and practical demonstrations. The information is delivered using various methods to ensure content is clear and easy to understand. A tour of the area where the person will be treated is given as well as introductions to key staff who will be involved in their care, concludes the education session. Those who attend the session now have the benefit of a Senior Dietitian from GUH Dietetics Department addressing the group in relation to diet and nutrition while on chemotherapy. The education programme has proven to be very beneficial with evaluation forms completed by each participant. In Galway University Hospital, 33 sessions where delivered in 2016 with 154 attendees.

6.3 Breast Cancer Research (BCR)

Breast Cancer Research (BCR) is a national charity that funds the Breast Cancer Research programme at the Lambe Institute. This programme focuses on several aspects of breast cancer including genetics, molecular profiling and novel breast regeneration/reconstruction. Many of the research outputs are listen in the Cancer Research section of this report.

The charity's mission is to raise funds in support of world-class breast cancer research at the National University of Ireland, Galway.

The charity raises funds from general activities including "Play in Pink" golf competitions hosted by golf clubs all around Ireland which culminates in a national final, cycles, international walks, and other events such as lunches are often volunteers or third party led. They also receive great support from the Mayo Pink Ribbon group and other volunteer led local groups and individuals around the country.

Breast Cancer Research has many partnerships in place including Zurich, Aer Lingus, Irish Ladies Golf Union, The Darren Clarke Foundation and The Association of Fine Jewellers.

Mayo Pink Ribbon Charity Cycle 2016. Pictured Alison Lared, Ger Deere, Jack O'Donnell, Enda Kenny and Lorraine Tower at the Mayo Pink Ribbon Cycle.

Moynalty Pink Ribbon Cycle

Leinster Loop Pink Ribbon Cycle

6.4 Breast Cancer Research at the Lambe Institute for Translational Research

Research affiliated with the Symptomatic Breast Clinic is based at the Lambe Institute for Translational Research at NUI Galway. The lab team are fortunate to work closely with the clinical breast cancer team at University Hospital Galway and academic research colleagues at NUI Galway as well as national and international collaborators.

Research is crucial to understanding and treating cancer appropriately. The breast cancer research programme focuses on circulating microRNAs, exosomes as therapeutic vehicles in tumour targeting, inheritance of breast cancer risk and tissue regeneration for breast reconstruction. Research is funded by Breast Cancer Research, the Irish Cancer Society, Breast Cancer Now, Wellcome Trust, the Health Research Board, the Irish Research Council. Translational research trials are supported nationally by Cancer Trials Ireland (formerly ICORG).

In 2016 twelve undergraduate students took part in the School of Medicine Summer Research Programme with the breast cancer research team. Seven students were funded by Breast Cancer Research, two by the Health Research Board and two by Wellcome Trust.

Pictured: Undergraduate students who took part in the School of Medicine Summer Research Programme with the breast cancer research team.

6.5 Cancer Research Publications

Casey MC, Sweeney KJ, Brown JA, Kerin MJ. Exploring circulating micro-RNA in the neoadjuvant treatment of breast cancer. Int J Cancer. 2016 Jan 12. doi: 10.1002/ijc.29985. [Epub ahead of print] Review. PMID: 26756433

Petridis C,…., Miller N, Kerin MJ, Lambrechts D, Floris G, Wesseling J, Flyger H, Bojesen SE, Yao S, Ambrosone CB, Chenevix-Trench G, Truong T, Guénel P, Rudolph A, Chang-Claude J, Nevanlinna H, Blomqvist C, Czene K, Brand JS, Olson JE, Couch FJ, Dunning AM, Hall P, Easton DF, Pharoah PD, Pinder SE, Schmidt MK, Tomlinson I, Roylance R, García-Closas M, Sawyer EJ. Genetic predisposition to ductal carcinoma in situ of the breast. Breast Cancer Res. 2016 Feb 17;18(1):22. doi: 10.1186/s13058-016-0675-7. PMID: 26884359

Beecher SM, O'Leary DP, McLaughlin R, Sweeney KJ, Kerin MJ. Influence of complications following immediate breast reconstruction on breast cancer recurrence rates. Br J Surg. 2016 Mar;103(4):391-8. doi: 10.1002/bjs.10068. PMID: 26891211

Gupta A, Hossain MM, Miller N, Kerin M, Callagy G, Gupta S. NCOA3 coactivator is a transcriptional target of XBP1 and regulates PERK-eIF2α-ATF4 signalling in breast cancer. Oncogene. 2016 Apr 25. doi: 10.1038/onc.2016.121. [Epub ahead of print] PMID: 27109102

Joyce DP, Kerin MJ, Dwyer RM. Exosome-encapsulated microRNAs as circulating biomarkers for breast cancer. Int J Cancer. 2016 May 11. doi: 10.1002/ijc.30179. [Epub ahead of print] Review. PMID: 27170104

Shologu N, Szegezdi E, Lowery A, Kerin M, Pandit A, Zeugolis DI. Recreating complex pathophysiologies in vitro with extracellular matrix surrogates for anticancer therapeutics screening. Drug Discov Today. 2016 Jun 7. pii: S1359-6446(16)30196-9. doi: 10.1016/j.drudis.2016.06.001. [Epub ahead of print] Review. PMID: 27288249

Zeng C,…,Kerin MJ *et al*. Identification of independent association signals and putative functional variants for breast cancer risk through fine-scale mapping of the 12p11 locus.
Breast Cancer Res. 2016 Jun 21;18(1):64. doi: 10.1186/s13058-016-0718-0. PMID: 27459855

Groarke AM, Curtis R, Groarke JM, Hogan MJ, Gibbons A, Kerin M. Post-traumatic growth in breast cancer: How and when do distress and stress contribute? Psychooncology. 2016 Aug 8. doi: 10.1002/pon.4243. [Epub ahead of print] PMID: 27502890

Brown JA, Bourke E, Eriksson LA, Kerin MJ. Targeting cancer using KAT inhibitors to mimic lethal knockouts. Biochem Soc Trans. 2016 Aug 15;44(4):979-86. doi: 10.1042/BST20160081. Review. PMID: 27528742

Southey MC,…,Sawyer EJ, Tomlinson I, Kerin MJ, Miller N et al. PALB2, CHEK2 and ATM rare variants and cancer risk: data from COGS J Med Genet. 2016 Sep 5. pii: jmedgenet-2016-103839. doi: 10.1136/jmedgenet-2016-103839. [Epub ahead of print] PMID: 27595995

Clancy C, Khan S, Glynn CL, Holian E, Dockery P, Lalor P, Brown JA, Joyce MR, Kerin MJ, Dwyer RM. Screening of exosomal microRNAs from colorectal cancer cells. Cancer Biomark. 2016 Sep 30. [Epub ahead of print] PMID: 27802194

Piggott RP, Waters PS, Kerin MJ. The influence of breast cancer subtype on bone metastases development and survival in women with metastatic breast cancer. Ir J Med Sci. 2016 Oct 12. [Epub ahead of print] PMID: 27734241

Gibbons A, Groarke A, Sweeney K. Predicting general and cancer-related distress in women with newly diagnosed breast cancer. BMC Cancer. 2016 Dec 3;16(1):935. PubMed PMID: 27914469; PubMed Central PMCID: PMC5135827

Corbett T, Groarke A, Walsh JC, McGuire BE. Cancer-related fatigue in post-treatment cancer survivors: application of the common sense model of illness representations. BMC Cancer. 2016 Nov 25;16(1):919. PubMed PMID: 27884127; PubMed Central PMCID: PMC5123423

O' Reilly E, Tirincsi A, Logue SE, Szegezdi E. The Janus Face of Death Receptor Signaling during Tumor Immunoediting. Front Immunol. 2016 Oct 31;7:446. eCollection 2016. Review. PubMed PMID: 27843441; PubMed Central PMCID:PMC5086583

Woulfe P, Sullivan FJ, O'Keeffe S. Optical fibre sensors: their role in in vivo dosimetry for prostate cancer radiotherapy. Cancer Nanotechnol. 2016;7(1):7.Epub 2016 Oct 18. Review. PubMed PMID: 27818715; PubMed Central PMCID: PMC5069313

Brown JA, Ni Chonghaile T, Matchett KB, Lynam-Lennon N, Kiely PA. Big Data-Led Cancer Research, Application, and Insights. Cancer Res. 2016 Nov 1;76(21):6167-6170. Epub 2016 Oct 20. PubMed PMID: 27803103

Pearce A, Bradley C, Hanly P, O'Neill C, Thomas AA, Molcho M, Sharp L. Projecting productivity losses for cancer-related mortality 2011 - 2030. BMC Cancer. 2016 Oct 18;16(1):804. PubMed PMID: 27756270; PubMed Central PMCID:PMC5069877

Foley RW, Maweni RM, Gorman L, Murphy K, Lundon DJ, Durkan G, Power R, O'Brien F, O'Malley KJ, Galvin DJ, Brendan Murphy T, William Watson R. European Randomised Study of Screening for Prostate Cancer (ERSPC) risk calculators significantly outperform the Prostate Cancer Prevention Trial (PCPT) 2.0 in the prediction of prostate cancer: a multi-institutional study. BJU Int. 2016 Nov;118(5):706-713. doi: 10.1111/bju.13437. Epub 2016 Feb 29. PubMed PMID:26833820

Coughlan D, Doherty E, Frick K, Ward P, O'Neill C. Healthcare utilisation among cancer survivors over 50 years of age. Ir Med J. 2016 Feb 19;109(2):359.PubMed PMID: 27685692

Moureau S, Luessing J, Harte EC, Voisin M, Lowndes NF. A role for the p53 tumour suppressor in regulating the balance between homologous recombination and non-homologous end joining. Open Biol. 2016 Sep;6(9). pii: 160225. PubMed PMID:27655732; PubMed Central PMCID: PMC5043586

Pakos-Zebrucka K, Koryga I, Mnich K, Ljujic M, Samali A, Gorman AM. The integrated stress response. EMBO Rep. 2016 Oct;17(10):1374-1395. Epub 2016 Sep 14. Review. PubMed PMID: 27629041; PubMed Central PMCID: PMC5048378

Dowling M, Kelly M, Meenaghan T. Multiple myeloma: managing a complex blood cancer. Br J Nurs. 2016 Sep 8;25(16):S18-28. doi: 0.12968/bjon.2016.25.S18. Review. PubMed PMID: 27615537

Okiro JO, Khan AZ, Keane F, Murad F. Aspirin unmasking acquired haemophilia A in a patient with prostate cancer. BMJ Case Rep. 2016 Sep 8; 2016. pii: bcr2016216890. doi: 10.1136/bcr-2016-216890. PubMed PMID: 27609590

Goud A, Dahagam C, Breen DP, Sarkar S. Role of electromagnetic navigational bronchoscopy in pulmonary nodule management. J Thorac Dis. 2016 Jul;8(Suppl 6):S501-8. doi: 10.21037/jtd.2016.02.73. Review. PubMed PMID: 27606080; PubMed Central PMCID: PMC4990667

Chakravarthy R, Mnich K, Gorman AM. Nerve growth factor (NGF)-mediated regulation of p75(NTR) expression contributes to chemotherapeutic resistance in triple negative breast cancer cells. Biochem Biophys Res Commun. 2016 Sep 30;478(4):1541-7. doi: 10.1016/j.bbrc.2016.08.149. Epub 2016 Aug 27. PubMed PMID:27577679

O'Malley G, Heijltjes M, Houston AM, Rani S, Ritter T, Egan LJ, Ryan AE. Mesenchymal stromal cells (MSCs) and colorectal cancer: a troublesome twosome for the anti-tumour immune response? Oncotarget. 2016 Sep 13;7(37):60752-60774. doi:10.18632/oncotarget.11354. Review. PubMed PMID: 27542276; PubMed Central PMCID: PMC5312417

Cormican O, Dowling M. Managing relapsed myeloma: The views of patients, nurses and doctors. Eur J Oncol Nurs. 2016 Aug;23:51-8. doi: 10.1016/j.ejon.2016.04.003. Epub 2016 May 11. PubMed PMID: 27456375

Devisscher L, Vieri M, Logue SE, Panse J, Geerts A, van Vlierberghe H, Chevet E, Gorman AM, Samali A, Kharabi Masouleh B. Targeting the angio-proteostasis network: Combining the forces against cancer.

Pharmacol Ther. 2016 Nov;167:1-12. doi: 10.1016/j.pharmthera.2016.07.007. Epub 2016 Jul 22.PubMed PMID: 27452337

Corbett T, Walsh JC, Groarke A, Moss-Morris R, McGuire BE. Protocol for a pilot randomised controlled trial of an online intervention for post-treatment cancer survivors with persistent fatigue. BMJ Open. 2016 Jun 10;6(6):e011485. doi: 10.1136/bmjopen-2016-011485. PubMed PMID: 27288384; PubMed Central PMCID:PMC4908920

Nason GJ, McNamara F, Twyford M, O'Kelly F, White S, Dunne E, Durkan GC, Giri SK, Smyth GP, Power RE. Efficacy of vacuum erectile devices (VEDs) after radical prostatectomy: the initial Irish experience of a dedicated VED clinic.Int J Impot Res. 2016 Nov;28(6):205-208. doi:.1038/ijir.2016.23. Epub 2016 May 26. PubMed PMID: 27225711

Nathwani SM, Greene LM, Butini S, Campiani G, Williams DC, Samali A, Szegezdi E, Zisterer DM. The pyrrolo-1,5-benzoxazepine, PBOX-15, enhancesTRAIL-induced apoptosis by upregulation of DR5 and downregulation of core cell survival proteins in acute lymphoblastic leukaemia cells. Int J Oncol. 2016 Jul;49(1):74-88. doi: 10.3892/ijo.2016.3518. Epub 2016 May 12. PubMed PMID:27176505; PubMed Central PMCID: PMC4902072

Natoni A, Macauley MS, O'Dwyer ME. Targeting Selectins and Their Ligands in Cancer. Front Oncol. 2016 Apr 18;6:93. doi: 10.3389/fonc.2016.00093. eCollection 2016. Review. PubMed PMID: 27148485; PubMed Central PMCID: PMC4834419

Dhami SPS, Kappala SS, Thompson A, Szegezdi E. Three-dimensional ex vivo co-culture models of the leukaemic bone marrow niche for functional drug testing. Drug Discov Today. 2016 Sep;21(9):1464-1471. doi: 10.1016/j.drudis.2016.04.019. Epub 2016 Apr 27. Review. PubMed PMID: 27130156

Smyth R, Long S, Wiseman E, Sharpe D, Breen D, O'Regan A. Radon testing in rapid access lung clinics: an opportunity for secondary prevention. Ir J Med Sci. 2017 May;186(2):485-487. doi: 10.1007/s11845-016-1448-0. Epub 2016 Mar 30. PubMed PMID: 27083463.

Connolly JM, Davies K, Kazakeviciute A, Wheatley AM, Dockery P, Keogh I, Olivo M. Non-invasive and label-free detection of oral squamous cell carcinoma using saliva surface-enhanced Raman spectroscopy and multivariate analysis. Nanomedicine. 2016 Aug;12(6):1593-601. doi: 10.1016/j.nano.2016.02.021. Epub 2016 Mar 23. PubMed PMID: 27015768

Coffey JC, Dockery P. Colorectal cancer: Surgery for colorectal cancer - standardization required. Nat Rev Gastroenterol Hepatol. 2016 May; 13(5):256-7.doi: 10.1038/nrgastro.2016.40. Epub 2016 Mar 9. PubMed PMID: 26956063

McGarry E, Gaboriau D, Rainey MD, Restuccia U, Bachi A, Santocanale C. The Deubiquitinase USP9X Maintains DNA Replication Fork Stability and DNA Damage Checkpoint Responses by Regulating CLASPIN during S-Phase. Cancer Res. 2016 Apr 15;76(8):2384-93. doi: 10.1158/0008-5472.CAN-15-2890. Epub 2016 Feb 26. PubMed PMID: 26921344

Vieri M, Geng H, Patterson JB, Panse J, Wilop S, Samali A, Chevet E, Kharabi Masouleh B. Deregulated expression of the HSP40 family members Auxilin-1 and -2 is indicative of proteostasis imbalance and predicts patient outcome in Ph(+) leukemia. Exp Hematol Oncol. 2016 Feb 9;5:5. doi: 10.1186/s40164-016-0034-5. eCollection 2015. PubMed PMID: 26862466; PubMed Central PMCID: PMC4746784

Burke AJ, Ali H, O'Connell E, Sullivan FJ, Glynn SA. Sensitivity Profiles of Human Prostate Cancer Cell Lines to an 80 Kinase Inhibitor Panel. Anticancer Res. 2016 Feb;36(2):633-41. PubMed PMID: 26851018

Barnicle A, Seoighe C, Golden A, Greally JM, Egan LJ. Differential DNA methylation patterns of homeobox genes in proximal and distal colon epithelial cells. Physiol Genomics. 2016 Apr;48(4):257-73. doi: 10.1152/physiolgenomics.00046.2015. Epub 2016 Jan 26. PubMed PMID: 26812987;PubMed Central PMCID: PMC4824152

Thorgeirsson T, Jordahl KM, Flavin R, Epstein MM, Fiorentino M, Andersson SO, Andren O, Rider JR, Mosquera JM, Ingoldsby H, Fall K, Tryggvadottir L, Mucci LA; Transdisciplinary Prostate Cancer Partnership (ToPCaP). Intracellular location of BRCA2 protein expression and prostate cancer progression in the Swedish Watchful Waiting Cohort. Carcinogenesis. 2016 Mar;37(3):262-8. doi: 10.1093/carcin/bgw001. Epub 2016 Jan 16. PubMed PMID: 26775038

Healy S, O'Leary L, Szegezdi E. An added dimension to tumour TRAIL sensitivity. Oncoscience. 2015 Nov 18;2(11):906-7. eCollection 2015. PubMed PMID: 26697519; PubMed Central PMCID: PMC4675782

Molloy M, Comer R, Rogers P, Dowling M, Meskell P, Asbury K, O'Leary M. High risk HPV testing following treatment for cervical intraepithelial neoplasia. Ir J Med Sci. 2016 Nov;185(4):895-900. Epub 2015 Dec 21. PubMed PMID: 26692386

Siddiqui S, Connelly T, Keita L, Blazkova S, Veerasingam D. Thymic carcinoma presenting as atypical chest pain. BMJ Case Rep. 2015 Nov 25;2015. pii: bcr2015211374. doi: 10.1136/bcr-2015-211374. PubMed PMID: 26607199

Lavan NA, Kavanagh DO, Martin J, Small C, Joyce MR, Faul CM, Kelly PJ, O'Riordain M, Gillham CM, Armstrong JG, Salib O, McNamara DA, McVey G, O'Neill BD. The curative management of synchronous rectal and prostate cancer. Br J Radiol. 2016;89(1057):20150292. doi: 10.1259/bjr.20150292. Epub 2015 Nov 5.PubMed PMID: 26539631; PubMed Central PMCID: PMC4985943

Chandran S, Cairns MT, O'Brien M, O'Connell E, Mashayekhi K, Smith TJ. Effects of combined progesterone and 17β-estradiol treatment on the transcriptome of cultured human myometrial smooth muscle cells. Physiol Genomics. 2016 Jan;48(1):50-61. doi: 10.1152/physiolgenomics.00021.2015. Epub 2015 Nov 3. PubMed PMID: 26534934

Lo Re D, Zhou Y, Mucha J, Jones LF, Leahy L, Santocanale C, Krol M, Murphy PV. Synthesis of Migrastatin Analogues as Inhibitors of Tumour Cell Migration: Exploring Structural Change in and on the Macrocyclic Ring. Chemistry. 2015 Dec 7;21(50):18109-21. doi: 10.1002/chem.201502861. Epub 2015 Nov 4. PubMed PMID: 26531227

Saolta

Grúpa Ollscoile Cúram Sláinte
University Health Care Group

Feidhmeannacht na Seirbhíse Sláinte
Health Service Executive