Saolta

Grúpa Ollscoile Cúram Sláinte
University Health Care Group

Letterkenny General Hospital

Sligo Regional Hospital

Mayo General Hospital

University Hospital Galway

Roscommon Hospital

Merlin Park University Hospital

Portiuncula Hospital Ballinasloe

Cancer Centre Annual Report 2014

Contents

Foreword

Professor Michael J Kerin
Chair, Cancer Strategy Group
Saolta University Heath Care Group

The last decade has witnessed a great change in cancer management in Ireland with the development of the NCCP Regional Cancer Centres and appropriate cancer site specific diagnostics and therapeutic advances. The recent publication of the Warde Report (2014) documents the success of the of the NCCP in implementing the cancer strategy 'A Strategy for Cancer Control in Ireland 2006' and sets out the roadmap and direction for the years ahead. We look forward to the development and implementation of the new National Cancer Strategy which is due to be published in 2016.

The Saolta University Health Care Group provides a comprehensive programme of cancer care across the region via our Cancer Centre. This report tries to capture the complexity, variety and nature of this extensive programme, which in itself can be challenging.

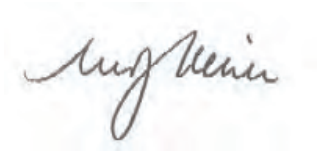
Our ambition remains to create a UHG Cancer Centre which will provide integrated site specific multidisciplinary care in a dedicated new building at GUH. It is our intention to progress with regional integration and key appointments to further deliver on our commitment towards a first class cancer programme for the people of the West and North West of Ireland.

Cancer remains a major research pursuit for our academic partner, NUIG. The recent opening of the Lambe Institute for Translational Research creates the environment in which we can continue to deliver a world class research programme in a modern functional facility and enhance our collaborative work.

Our research outputs are substantial as highlighted by achievements by the cancer research groups - Breast Cancer Research in the School of Medicine, the Prostate Cancer Institute led by Professor Frank Sullivan and blood cancer research led by Professor Michael O'Dwyer.

I would like to congratulate and thank the team involved in putting this report together, especially to Christine Prendergast, Ciara Howley and Geraldine Cooley, to all the members of the Cancer Information Team, and a special thanks to Seamus Leonard (HIPE Project Manager GUH) and Sue Hennessy (Waiting List Manager) for respectively providing all the HIPE and PAS data.

Finally, I wish to acknowledge the outstanding contribution of our Cancer Leads and multidisciplinary teams across the Saolta University Health Care Group who works tirelessly to deliver an extensive programme of cancer care, even in challenging times.



Professor Michael J. Kerin

Mr Maurice Power
Chief Executive Officer
Saolta University Heath Care Group

I am delighted to present the Saolta Cancer Centre Annual Report for 2014. This is the third such report. The Saolta University Health Care Group prides itself as a major cancer network and continues in our ambitions to develop world class services for all patients across the region.

This report summarises our activity and progress in 2014 across the various cancer specialties in the Saolta University Health Care Group and I would like to thank all our cancer leads and multidisciplinary teams for their dedication and commitment to manage large volumes of work daily in the delivery of a high quality service to our cancer patients, despite the resource challenges faced across the Group.

With the expansion of the Saolta University Health Care Group to Letterkenny General Hospital, Sligo Regional Hospital and Mayo General Hospital in 2013, work continued throughout 2014 to improve the integration of cancer services across the Group.

The NCCP National KPIs for cancer sites continues to drive service improvement in the Saolta University Health Care Group. The KPIs are regularly presented and monitored at a number of senior management team meetings across the Group. This process of review has helped to make the connection between data collection, reporting and service improvement.

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. A number of our Cancer Service highlights in 2014 are marked by:

- The success of the 2nd Western Cancer Centre Conference in collaboration with our academic partner NUIG
- BowelScreen, the National Bowel Screening Programme is already in place in Galway University Hospitals and Sligo Regional Hospital and was enhanced with the addition of Roscommon Hospital. Letterkenny General Hospital started screening in December 2014. Portiuncula Hospital is now working towards Joint Advisory Group (JAG) accreditation.
- Construction on the Health Research Board/ Clinical Translational Research Facility progressed during the year and is due for completion in 2015.
- Commencement of the Radiation Oncology Project enabling works at University Hospital Galway which is due to be completed in 2020.
- The awarding of the Radiotherapy/Oncology Information System contract.
- The opening of the new family room at Mayo General Hospital funded under the Design & Dignity Grants Scheme, operated by the Irish Hospice Foundation and the HSE.
- The opening of the Oncology/Haematology ward at Sligo Regional Hospital.

On behalf to the Group, I would like to thank Professor Michael Kerin 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 and the development of a regional cancer centre.

Finally, as CEO of the Saolta University Health Care Group, I would like to thank all the staff across the group for their professionalism and commitment in delivering a quality service to the thousands of cancer patients who use our hospitals every year. I would encourage all of you to read this most comprehensive report.

Mr Maurice Power, CEO

Dr John Killeen
Interim Chair
Saolta University Heath Care Group

On behalf of the Board of the Saolta University Health Care Group, I am delighted to be associated with this publication. This, the third Cancer Centre Annual Report is a measure of the comprehensive and excellent cancer services delivered across the Saolta University Health Care Group. We acknowledge the enormous contribution that cancer services make as it strives to develop a world class service. We look forward to the continuation of this comprehensive cancer programme into the future and I wish to thank all the staff involved across the Group.

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 and a member of the Board of the Saolta University Health Care Group. 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. As an educator and researcher, I am delighted to see the spectrum of opportunity that cancer care offers being harnessed in the academic manner detailed here.

The next few years offer exciting opportunities for the University and the region and I feel that the cancer centre will form a major component of that development. The development of the Lambe Institute for Translational Research, CÚRAM - the SFI funded Centre for Research in Medical Devices, and the extensive clinical patient flow and research opportunities will allow coherent progress in education, training and research.

Dr. Mary Hynes
Deputy Director
National Cancer Control Programme

I am delighted to welcome this, the third annual report, of the Saolta University Heath Care Group Cancer Centre. This report builds on the previous two reports and those of you who read them will be familiar with the wealth of information contained in this report. The report again underlines the high level of activity in outpatient, day and inpatient services across a wide spectrum of cancer specialty areas with many examples of quality care and innovation. This can only be achieved by staff individually and in teams dedicating themselves to the care of those suspected of having and diagnosed with cancer.

A new cancer strategy for Ireland will be published in 2016 and the Saolta University Heath Care Group Cancer Centre has every reason to look forward with confidence to implementing its recommendations. On behalf of the NCCP, I thank the team for their commitment, sometimes in the face of intense pressure, to the care of patients and look forward to the ongoing development of cancer services in the Saolta University Health Care Group.

1.0 Saolta University Health Care Group

The Saolta University Health Care Group officially came into being on the 29th July 2014 when Letterkenny General Hospital (LGH), Sligo Regional Hospital (SRH) and Mayo General Hospital (MGH) joined the former West/North West Hospital Group, with a new academic partner, National University of Ireland, Galway. This structure functions as one entity under a Chief Executive Officer.

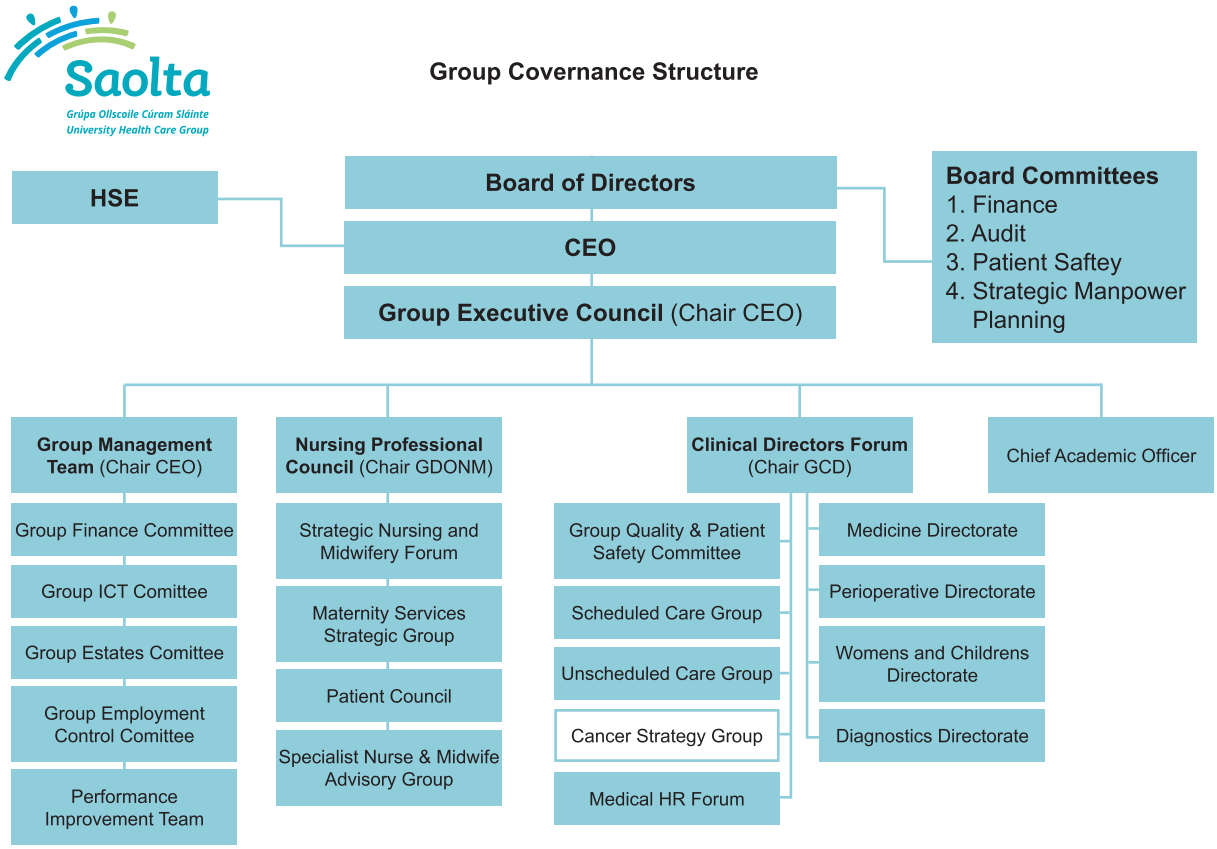
Launch of the 2013 Cancer Centre Annual Report

From left: Mr Tony Canavan, COO, Emer Hennessy, NUIG, Professor Michael Kerin, GUH Cancer Strategy Group Chair, Mr Tom Kenny , Kenny's Bindery, Ms Marie Cox, Group Cancer Services Manager, Mr John Killeen, Interim Board Chair Saolta University Health Care Group

From left: *Emer Hennessy NUIG, Christine Prendergast Cancer Services, Brid Gavin-O'Connell Database Manager, Sue Hennessy Waiting List Manager*

Tony Canavan COO & Grainne Mc Cann, GM, SRH

1.1 Saolta University Health Care Group Governance Structure



Clinical Directorate Development

The Clinical Director structure was streamlined from six directorates to four with the Clinical Directors and an interim Chief Academic Officer appointed in November 2014. Cancer services are assigned to the Medicine Directorate.

A Project Lead has been identified (appointment is pending release from current role) and a steering group is being formed to oversee the further development of the Clinical Directorate Structure. This project is centred about creating a fully integrated group wide governance model centred on the group clinical directorate structure whilst maintaining and protecting the individual sites. This reconfiguration is essential to ensure sustainable and safe configuration and development of clinical services. Hospital general managers have been assigned to support roles for each directorate. Group Directorate supports (business managers) have been appointed. Finance, nursing, HR and Allied Health Professional (AHP) leads for each directorate are being identified.

There are 6 proposed governance units across the organisation:

1. Group Management Team
2. Medical Directorate
3. Perioperative Directorate
4. Womens & Children's Directorate
5. Diagnostics Directorate
6. Support Services Directorate (not yet established)

Specialty leads are continuing with evaluation of services and will produce reports and recommendations over the coming months.

2.0 National Cancer Control Programme (NCCP)

Since its inception in 2007, The National Cancer Control Programme (NCCP) has been implementing cancer policy as outlined in 'A Strategy for Cancer Control in Ireland, 2006'. The Saolta University Health Care Group is accountable for service delivery and expenditure in our region. There is an extensive modern programme of cancer care delivered across the Saolta Group to the population of the West and North West, monitored locally by senior executive management and nationally by the NCCP. Multidisciplinary care for cancer patients is now the norm across the Saolta Group with all hospital sites teleconferencing in to multidisciplinary team patient discussions at the cancer centre. Going forward we plan to, develop further our multidisciplinary team work, strengthen our database integration, expand our cancer research programmes, all with a view to improved patient outcomes. We need to be mindful too, that the current National Strategy expires at the end of 2015 and the implementation of the new National Cancer Strategy will commence in 2016. Through the Saolta Cancer Strategy Group, we are currently involved in developing a group wide submission to be considered for inclusion in the new National Cancer Strategy.

2.1 NCCP Key Performance Indicators (KPIs) for 2014

The NCCP National KPIs for cancer sites are continuing to drive service improvement in the Saolta Group. The KPIs help to focus resources and attention on areas of highest priority. The KPIs are regularly presented and monitored at a number of senior management meetings across the group. This process of review has helped to make the connection between data collection, reporting and service improvement. The KPIs are a standing agenda item on our cancer review meetings with Dr Mary Hynes, NCCP, Deputy Director and the national performance team in the Department of Health and Children (DOHC).

Work has continued throughout 2014 to improve the integration of cancer services across the Group. The NCCP access KPIs for Lung, Prostate, Breast, Radiotherapy and Medical Oncology are reported monthly from each hospital site. The suites of quarterly KPIs for breast, radiotherapy and bi-annual KPIs for upper gastrointestinal and rectal cancer were expanded in 2014 to include prostate and lung. These KPIs are complex and clinically based in regard to surgical margins, tumour staging and waiting times from diagnosis to therapeutic interventions (oncology/radiotherapy). KPIs are presented nationally at the NCCP Quality and Audit Forum speciality days for each cancer site, which enables our teams to peer review our performance alongside other cancer centres.

See appendix 2: Saolta Group NCCP KPI Access Performance 2014

3.0 Overview of Cancer Services

3.1 Cancer Information Team

The publication of a Cancer Centre Annual Report would not be possible without our Cancer Information Team. While the composition of this team expands on a yearly basis, a key objective is to improve its functionality across the group. Whilst, the cancer information team oversees our data capture and validation processes we have to recognise the dedication of those of you who capture, collate and record data as part of their daily workload. This includes Clinicians, CNMs, CNSs, RANPs and clerical staff who collect data and make returns to the NCCP on an ongoing basis. This programme of data collection takes place across the Saolta University Health Care Group and going forward we need to invest in and strengthen our IT systems to maximise efficiencies. The HIPE and PAS data included in this report are provided by the HIPE Data Manager and the Waiting list Manager in consultation with other hospitals.

***Members of the Cancer Information Team are featured in this photo at a recent team meeting**: Andrew Harte, Ciara Howley, Margaret Cawley, Hilary Kelly, Brid Gavin- O'Connell, Paula Casey, Geraldine Cooley, Aisleen Higgins and Seamus Leonard*

Achievements

Congratulations to Aisleen Higgins, Database Manager Radiotherapy, Oncology & Haematology and Liam Cannon, Staff Nurse, ICU on the completion of an MSc in Health Informatics in University of Limerick in 2014.

Cancer Information Team members at the launch of the 2013 Cancer Centre Annual Report
From left: Back row. Dr Donal Reddan, Seamus Leonard, Stephen Coyne, Dr Sue Hennessy, Tony Canavan, Tina Howard, Prof Michael Kerin, John Killeen, Saolta Board Chair: Front Row from left: Christine Prendergast, Emer Hennessy NUIG, Marie Cox, Tom Kenny, Ann Cosgrove, and Brid Gavin-O'Connell.

See appendix 3: Cancer Information Team 2014

3.2 Multidisciplinary Team Meetings (MDM)

Tina Howard
MDM Co-ordinator

Most cancers require input from a diagnostic team consisting of radiologists, pathologists, physicians and surgeons and a therapeutic team of medical, radiation and surgical oncologists. Support is provided to a number of the MDM teams by the MDM coordinator. However, this is an area which required focus and resources to enhance and standardise practices across all of the MDM teams into 2014. Teams are also supported by Registered Advanced Nurse Practitioners, Clinical Nurse Managers, Clinical Nurse Specialists, Radiographers, Technicians and others clinicians such as Plastic Surgeons and Palliative Care Specialists. A key to MDM performance is the logging of the action/treatment plans, numbers of patients discussed and outcomes. Currently we have a very active multidisciplinary programme which meets in a dedicated teleconferencing facility with input from team members at all Saolta University Health Care Group hospitals.

Saolta Group MDM activity 2014 (Data Source: MDM Co-ordinator)

No	Cancer site MDM team	Time of meetings	Frequency of meetings	Outside link ups at MDM	2014 Activity	No. of meeting per annum
1	Breast	Thursday 8am	Weekly	LGH, SRH, MGH	1851 GUH 357 LGH	50 GUH 41 LGH
2	Combined Oncology	Tuesday 8am	3 per month	No Link Up	288 patients	36
3	Head and Neck	Friday 12pm	Weekly	No Link Up	420 patients	41
4	Urology	Wednesda y 8am	Fortnightly	No Link Up	Approx. 650 patients	n/a
5	Skin	Monday 1pm	3 per month	No Link Up	Approx. 650 patients	n/a
6	Endocrine	Monday 8am	Fortnightly	No Link Up	450 patients	18
7	Lymphoma	Friday 8am	Fortnightly	LGH, SRH,	159 patients	22
8	Gastroenterology	Friday 9am	Weekly	LGH, SRH, MGH, PHB, RH	1,458 patients	50
9	Gynae/ Oncology	Friday 9am	3 per month	No Link Up	247 patients	n/a
10	Haematology	Monday 12pm	2 per month	No Link Up	n/a	n/a
11	Colorectal Screening (Polyp)	Thursday 12.45pm	Weekly	SRH, RH	269 GUH 172 RH	44
12	Lung	Monday 4.30 pm	Weekly	MGH, SRH, RH	772 patients	44

3.2 Outpatient Activity

Sue Hennessy
Waiting List Manager

There were over 262,000 outpatient attendances in GUH in 2014 and of those, 40,410 were related to the cohort of patients who were newly diagnosed with cancer in 2014 (the remaining 221,000 attendances were by patients not in the 2014 cancer cohort identified in this report). These patients were seen in most specialties across the hospital and account for 15% of overall outpatient activity. Ideally these patients should be seen in a designated cancer clinic, from the point of diagnosis, as is the case in breast and prostate cancer. However, patients may attend a number of different specialties on numerous occasions and it is not possible to differentiate the attendances linked directly to the cancer diagnosis. The development of a defined cancer centre will help to cohort this activity in the future. This data is derived by linking the patient cohort diagnosed with cancer in 2014 (from HIPE) to the outpatient attendance data from PAS.

Outpatient department (OPD) attendances by directorate 2014 (Data Source: PAS)

Directorate	OPD attendances – patients diagnosed with cancer in 2014	OPD attendances – other patients	Total OPD attendances	Proportion with cancer diagnosis in 2014
Medicine	24474	88183	112657	21.72%
Surgery	13264	98684	111948	11.85%
Women and Children	2672	35050	37722	7.08%
Total	40410	221917	262327	15.40%

See appendix 5: detailed Outpatient Data

It is important to recognise the volume of outpatient workload that exists in patients diagnosed with cancer. The cohort diagnosed in 2014 attended for new, review and unscheduled appointments – that is unplanned attendance at clinic as directed by the clinical team. The data presented for each cancer specialty further identifies the total number of outpatient attendances for that cohort of patients. This is then broken down to represent the proportion attending the relevant specialty clinics, those attending designated cancer services (e.g. specialty clinics, radiation therapy, palliative care and oncology). It is also important to identify attendance at other general clinics which may not be as a direct result of the cancer diagnosis.

Outpatient department attendances by cancer patients diagnosed in 2014 (Data Source: PAS)

	New	Review	Unscheduled	Total
Attendance at designated cancer clinics	6874	12922	333	20129
Attendance at general clinics	54248	155266	17155	226669
Total attendances in outpatients	61122	168188	17488	246798

3.4 HIPE – Hospital Inpatient Enquiry System

Seamus Leonard
HIPE Project Manager

HIPE Data Structure and Use

As each year progresses, health information metrics are proving themselves to be vital in the funding and provision of services. Activity Based Funding (ABF) is the current model for hospital funding in the acute sector in the Republic of Ireland. The clinical information for ABF comes from the Hospital Inpatient Enquiry (HIPE) Portal. All inpatient and day case episodes of care in each hospital are entered on this system and Clinical Coders trained to Irish and International Standards in Clinical Coding extract the clinical information for each episode of care and record this on the HIPE Portal. Within Cancer Services, along with the inpatient encounters being recorded in the normal manner, we also record Radiotherapy and Chemotherapy episodes of care. All of this information indicates the level of activity, complexity and costs of Cancer Services locally, regionally and nationally. Furthermore, this information is provided to the National Cancer Registry (NCR) who also record their own data through their NCR staff network. This adds further detailed clinical information. All said, we are progressing towards a rich dataset on Cancer Services in the State which assists in providing the best care, at the right time, in the right place.

The production and stewardship of the data is the work of many people both within the HIPE system and outside it. In terms of the inpatient and day case data used in the HIPE reports I am very grateful to my counterpart HIPE Managers in the hospitals in Saolta Group who gave of their time to help produce the Group Reports.

These are:

- Sinead McLoughlin, Letterkenny General Hospital
- Marguerite Mullen, Sligo Regional Hospital
- Bernadette Garvey, Mayo General Hospital
- Doris Feely, Roscommon Hospital
- Ita Hynes, Portiuncula Hospital Ballinasloe

As always with data, it's important that the context of the data is understood when it is being read. In the context of HIPE reports, cancers are reported on as described using the International Classification of Diseases, version 10, Australian Modification (ICD10-AM), 6th edition (the current, 8th edition will come into effect for 2015 data). In this context, all tissue samples are grouped as being malignant, in-situ, secondary, benign or uncertain/unknown behaviour. In some of the following reports a further classification has been added to bring greater understanding to the data (e.g. pre-cancerous in certain Gynaecological Cancers). In addition, some non-cancerous diagnoses are included as the clinical work / activity is in the same category (e.g. Benign Prostatic Hypertrophy). Furthermore, some reports are based on patient level data (i.e. a patient can have one or more episodes but we just enumerate the patients) whereas in other reports each episode of care (admission and discharge) is counted separately.

See appendice 4: detailed HIPE Data

4.0 Cancer Specialities

4.1 Breast Cancer

Mr Ray Mc Laughlin
Consultant Breast Surgeon
Lead Clinician

I am pleased to report that 2014, proved to be another successful year in the Symptomatic Breast Service across the Saolta University Health Care Group with 13,000 outpatient attendances, 362 new breast cancer diagnoses and a cancer detection rate of 5.32 per 100 new patients seen across the Group. The breast service continues to be a high volume multidisciplinary cancer service with the number of GP referrals remaining at a consistently high level with little change in referral patterns.

This success in only made possible by the unwavering contribution of the multidisciplinary teams across the Group and I wish to thank all those who consistently ensure that the breast programme continues as a world class service for the people of the West and North West. Disciplines,including Radiology, Pathology, Surgery, Medical and Radiation Oncology ensure that the multidisciplinary approach works effectively and that patients are diagnosed, staged and treated in a timely manner leading to better patient outcomes. I also wish to acknowledge the hard work and dedication of the excellent staff of the breast unit and theatre including mammography, nursing and clerical support whose valuable contributions do not go unnoticed.

Our performance against the NCCP KPIs remains at a very high level as women with urgent symptoms get seen within two weeks and have their radiology and biopsies performed on the same day. Access for routine referrals continues as a to be challenging, despite being proactively managed. Triple assessment clinics continue to be held at the Symptomatic Breast Centre in University Hospital Galway each morning Monday to Friday and Letterkenny triple assessment clinics are all day clinics held every Monday and Thursday.

We are privileged to be linked to the Breast Cancer Research Facility, a world class research programme, based in the new 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 some major research publications on an ongoing basis.

The following tables depict breast activity across the Saolta University Health Care Group for 2014:

Symptomatic Breast Outpatient Clinic Attendance data 2014 (Data Source: SBU)

Outpatient Clinic Statistics	GUH	LGH	Total
No. of OPD Clinics per week	11	6	17
Designated Cancer OPD Clinics	5	3	8
New patients	4887	1527	6414
Review patients	5407	1139	6546
Total No. of patients seen	10294	2666	12960

Symptomatic Breast Service Cancer diagnoses 2014 (Data Source: SBU)

Performance Parameter	GUH	LGH	Total
No. of new patients diagnosed with cancer	275	66	341
Disease progression diagnosis – (review)	20	1	21
Total breast cancer diagnoses	295	67	362

Symptomatic Breast Cancer Surgical Interventions (Data Source: SBU)

Surgical Intervention	GUH	LGH
Wide Local Excision	135	30
Excision of Margins	27	1
Mastectomy	71	26
Sentinel Node Biopsy	140	36
Axillary Clearance	43	14
Breast Reconstruction (excluding implants & prophylactic procedures)	21	11

Outpatients Attendances by Breast Cancer patients diagnosed in 2014 (Data Source: PAS)

	New	Review	Unscheduled	Total
Total attendances in outpatients	1303	5194	379	6876
Attendance at breast clinics	542	1061	61	1664
Attendance at designated cancer clinics	729	2032	71	2832
Attendance at general clinics	761	4133	318	5212

Breast Episodes 2014 (Data Source: HIPE)

Diagnosis	Number of Episodes
Benign neoplasm of breast	334
Carcinoma in situ of breast	103
Malignant neoplasm of breast	1091
Neoplasm of uncertain or unknown behaviour of other and unspecified sites	5
Grand Total	**1533**

Breast Cancer Procedures 2014 (Data Source: HIPE)

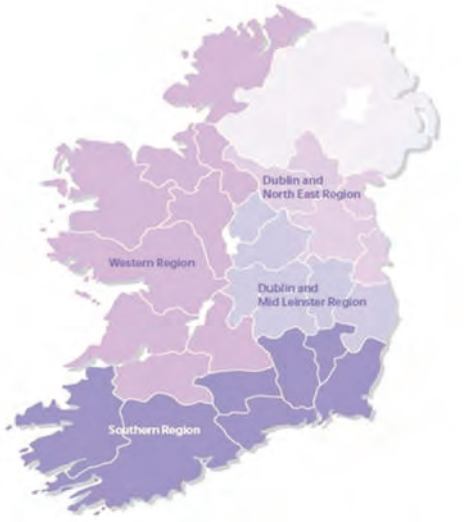
Description	Inpatient	Day Case	Total	Inpatient Bed Days
Excision procedures on lymph node of axilla	174	142	316	901
Excision of lesion of breast	106	182	288	292
Biopsy of breast	10	199	209	137
Examination procedures on breast	26	114	140	56
Simple mastectomy	96	0	96	664
Reconstruction procedures on breast	30	1	31	224
Megavoltage radiation treatment	20	0	20	455
Vascular access device	5	8	13	58
Removal of or adjustment to breast prosthesis / tissue expander	7	2	9	21
Augmentation mammoplasty	7	0	7	51

4.2 BreastCheck

Dr Aideen Larke
Clinical Director & Lead Consultant Radiologist
Breast Check 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 50-64 every two years. BreastCheck, a national population based screening programme, lies within the Health and Wellbeing Directorate of the HSE.

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.

Mobile BreastCheck Screening Unit

Unit Management Team: Joan Raftery, RSM, Karl Sweeney, Lead Consultant Surgeon, Jennifer Kelly, Unit Manager & Dr Aideen Larke, Clinical Director
(Dr Margaret Sheehan, Consultant Pathologist not pictured)

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

In 2014, the BreastCheck Western Unit diagnosed a total of 162 women with breast cancer. This cancer detection rate (6.86 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.

The Minister for Health announced that funding is to be allocated to enable the upper age limit of the BreastCheck Screening service from 65 to 69 years.

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 RetinaScreen - The National Diabetic Retinal Screening Programme.

In 2014, 30,265 women were invited for a screening mammogram and 23,950, representing an uptake rate of 78% which compares favourably with other screening services.

1,119 (4.73%) women had an abnormal mammogram and were recalled to triple assessment clinic.

Performance Parameter	Western 2014
Number of women screened	23,950
Number of women re-called for assessment	1,119
Re-call rate	4.73%
Number of women diagnosed with cancer	162

4.3 Urological Cancer

Mr Garrett Durkan
Consultant Urological Surgeon
Lead Clinician

The urology department at GUH provides regional cancer care to the Saolta University Health Care Group and its extended hinterland. The department consists of five Consultant Urological Surgeons, (Mr Rogers, Mr Jaffry, Mr Walsh, Mr Durkan and Mr Bin Nusrat), with Mr Paddy O'Malley attending on a sessional basis. There are seven SpRs, one SHO, one Registered Advanced Nurse Practitioner (RANP), two Clinical Nurse Managers (CNM) and experienced urology nurses. In spring 2014 interviews were held for 2 new Urology Consultant posts. It is envisaged the appointees will take up post in 2015 following completion of advanced fellowship training abroad.

Satellite out-patient and day treatment services are provided at PHB (Mr Rogers), RCH (Mr Jaffry) and MGH (Mr Walsh). Inpatients at GUH are facilitated on St Pius' Ward (22 dedicated urology beds). Outpatient services are provided in Rapid Access Prostate Clinic (RAPC) which has been developed as the regional urology hub.

Many of the subspecialty programmes are led and supported by RANP, Moya Power, and several experienced urology nurses. The regional shock wave lithotripsy service (ESWL), lead by Mr Jaffrey, and the invasive urodynamic service commenced in 2014, provided by Staff Nurse Therese Kelly. GUH was one of 2 successful Cancer Centres that bid for funding provided by the Irish Cancer Society/Movember to establish a Cancer Survivorship programme for patients treated for urological cancer. It is envisaged that a Clinical Nurse Specialist in this area will join the department in 2015. Significant infrastructural work undertaken in RAPC has facilitated the transfer of all ambulatory clinics and services for urology to RAPC in early 2014.

Rapid Access Prostate Clinic (RAPC)

The Rapid Access Prostate Clinic at GUH remains the busiest in Ireland reflecting the extremely high incidence of prostate cancer in the West. Achieving NCCP KPIs remains challenging with current resources but it is hoped the situation will improve in 2015 with the appointment of new consultants.

There are two 'one-stop' prostate assessment clinics each run in RAPC each week by Mr Durkan (Mr Paddy O'Malley, Consultant Urologist at Galway Clinic performs biopsies on the Tuesday clinic on a sessional basis). Two further biopsy clinics are provided with the support of Professor Peter McCarthy and Dr Claire Roche in Radiology. Mr Durkan and Mr Walsh run review clinics to inform patients of biopsy results and to arrange further investigation and treatment. Mr Durkan also runs the Rapid Access Prostate Clinic at University Hospital Limerick. Patients from Limerick, who require radical prostatectomy travel to GUH for their surgery. Referrals with suspected cancer falling outside NCCP referral guidelines are seen in general Urology clinics by all urologists in the Department.

Following a unique service level agreement; (the first of its kind in Ireland) between GUH/Saolta and the Galway Clinic, a robotic assisted radical prostatectomy programme for public patients attending RAPC was launched in January 2014. Forty five patients underwent robotic prostatectomy in 2014 under this programme delivered by Mr Durkan, Mr O'Malley and Mr Bouchier-Hayes. Funding has been secured for a further 50 cases to continue the service into 2015. Following surgery, patients return to the RAPC for ongoing follow-up.

Multidisciplinary Team Meetings

The Uro-Oncology MDM meets fortnightly at present. There is excellent support from colleagues in Radiology and Pathology. Videoconferencing facilities permit the urology teams from SRH and LGH to participate. The meeting is also attended by teams from Radiation and Medical Oncology. There is close collaboration between the teams from Oncology and Urology to facilitate rapid treatment of patients.

Collaboration with Radiation Oncology

The departments of Urology and Radiation Oncology enjoy a close working relationship with regular cross referral of patients for surgery, radiotherapy and brachytherapy. A new advanced diagnostic technique for patients with suspected prostate cancer known as transperineal template biopsies of the prostate was developed in 2014 and is delivered in the brachytherapy theatre (and occasionally Theatre 5 the urology theatre) kindly facilitated by the Radiation Oncology team. In 2014 GUH was the only public/HSE hospital in Ireland providing this service.

Ger O'Boyle has been appointed as RANP in Radiation Oncology. With mentored training she is now providing a specialised erectile dysfunction clinic for men following radiotherapy and radical prostatectomy. Specialised techniques such as intracavernosal injection with caverject and instruction in the use of the vacuum erection device are offered.

Challenges

2014 was a difficult year with severe pressure on the service. Our bed allocation (22 beds) is inadequate to meet the urological needs of a population in excess of 800,000. There is inadequate access to day surgery. Emergency admissions continue to displace elective surgical admissions due to the ongoing trolley crisis and overcrowding of emergency departments. Difficulty recruiting and retaining vital theatre nursing staff have lead to rolling closures in operating theatres on a 1 in 3 basis limiting workload and worsening waiting lists.

Significant investment in infrastructure and staff is required if we are to meet the needs of our patients. As our population grows and ages the incidence of cancer is expected to double in the next 20 years. Careful and strategic forward planning is required to meet this need.

Urological Cancer Outpatient Attendances 2014 (Data Source: PAS/RAPC)

	New	Review	Unscheduled	Total
Total attendances in outpatients	1068	6278	339	7685
Attendance at urology clinics	221	1630	7	1858
Attendance at designated cancer clinics (RAPC)	688	1746	3	2437
Attendance at general clinics	847	4648	332	5827

Urological Cancer Episodes 2014 (Data Source: HIPE)

Cancer	Benign	In-Situ	Primary	Secondary	Unknown	Grand Total
Penis	8	1	12			21
Prostate	912	10	742			1664
Testicle	5		56		1	62
Urinary	163	19		47	7	236
Urinary - Renal			156			156
Urinary - Urothelial			596			596
Grand Total	1088	30	1562	47	8	2735

Urological Cancer Procedures 2014 (Data Source: HIPE)

Description	Inpatient	Day Case	Total	Inpatient Bed Days
Closed Bx prostate or seminal vesicle	17	347	364	110
Examination procedures on bladder	43	123	166	433
Endoscopic resection bladder lesion/tissue	79	0	79	568
Transurethral prostatectomy	46	5	51	362
Radical Nephrectomy	47	0	47	558
Endosc destruction bladder lesion/tissue	31	10	41	227
Other genitourinary test/measure/investigation	4	34	38	19
Other closed prostatectomy	36	0	36	273
Open prostatectomy	30	0	30	227
Endosc ins; replace; R/O ureteric stent	29	0	29	519
Nephrostomy or pyelostomy	22	0	22	608
Other applicn/ins/removal proc on kidney	16	0	16	357
Orchidectomy	15	0	15	205
Nephroureterectomy	14	0	14	211
Other applicn/ins/removal proc on bladder	14	0	14	162
Partial Nephrectomy	13	0	13	114
Venous catheterisation	12	0	12	459
Haemodialysis	11	0	11	310
Biopsy of bladder	7	3	10	66
Fibreoptic colonoscopy	5	3	8	102

4.4 Upper Gastrointestinal Cancer

Mr Chris Collins
Consultant Surgeon
Lead Clinician

Professor Oliver McAnena, *Consultant Surgeon*
Anna O Mara, *CNS*

Almost a thousand patients are diagnosed with oesophageal and gastric cancer in Ireland each year. Taken together they constitute the tenth most common cancer accounting for nine percent of all newly diagnosed cancers. Due to the poor prognosis of patients with these cancers they account for almost seven hundred deaths yearly equating to eight percent of all cancer deaths.

In Galway University Hospital our aim as one of the four Upper GI Cancer Centres is to deliver high quality holistic evidence based care for patients with oesophageal and gastric cancer in order to improve survival for these with disease suitable for radical treatment and improve quality of life for these with locally advanced and metastatic disease.

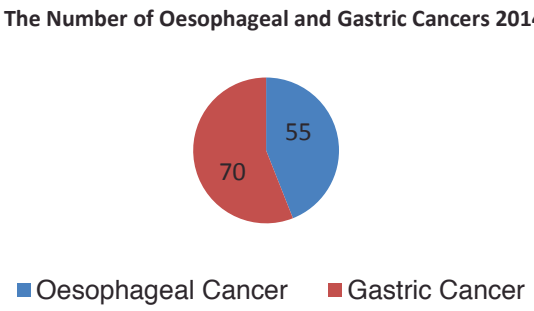
Our patient numbers for 2014 in GUH reflected on the projected increasing trends in Upper GI Cancers with our surgery figures increasing by 100% on the previous year and our referral numbers also demonstrating rising numbers. According to much of the research reported the patient pathway for oesophageal and gastric cancers is one of the most complicated of most cancer pathways reflecting the role of local diagnostic units and specialist treatment centres, the complexity of patient assessment and treatment and the difficulties associated with advanced disease at presentation.

We are fortunate to have close working relationships with our medical colleagues in our Group hospital setting and referrals are received post diagnosis and initial radiological staging. Our weekly multidisciplinary team meeting aids continuity of care. Here we teleconference with Sligo, Letterkenny and Mayo hospitals and review the care of all patients. This combined meeting standardises practice within the service ensuring high quality treatment options and optimum patient care.

Ongoing monitoring and auditing of the service ensure we comply with the KPIs outlined by the NCCP. Returned on a six monthly basis the twenty-three standards measure the service against evidence based research and ensure we constantly strive to meet the KPIs.

Upper Gastrointestinal Referrals 2014 (Data Source: Upper G.I. CNS)

Per Hospital Activity 2014	
GUH	55
RH	4
PHB	10
MGH	17
SRH	18
LGH	21
Total	**125**



Upper GI Cancer Outpatients Attendances 2014 (Data Source: PAS)

	New	Review	Unscheduled	Total
Total attendances in outpatients	208	1063	84	1355
Attendance at upper GI clinics	24	87	6	117
Attendance at designated cancer clinics	37	200	9	246
Attendance at general clinics	184	976	78	1238

GUH Upper Gastrointestinal Activity 2014 (Data Source: Upper G.I. CNS)

Oesophageal Surgery 2014	
Total no. of Oesophageal Surgeries	17
Directed to Surgery T_1/T_2	3
Neo Adjuvant	14
Nodal Yield	
>15 or greater nodes	70%
< 15 nodes	30%
Margins	
Clear Margins	100%
Gastric Surgery 2014	
Total no. of Gastric Surgeries	28
Neo-adjuvant	10
Direct to surgery	14
GIST	4
Nodal Yield	
Curative intent > 15 nodes	88%
Resection Margins	
Clear Margins	93%
Adjuvant Chemo	61%

Developments in GI Services

In 2014 the National database in Gastro Intestinal Stromal Tumours (GIST) was set up. This was established to record relevant clinical details of the presentation of disease and the treatments received by patients and their response to same. Through an increased knowledge of GIST it is hoped that standards of treatment continue to improve

Through funding from the Oesophageal Cancer Fund (OCF) a national registry database for Barretts Oesopahgus has been established with information and biopsy samples from five to seven major hospitals including GUH being used in research to better understand this condition. Consenting patients provide thousand of blood and tissue samples that are used for research studies into factors that may be driving cells to change and transform from Barrett's into oesophageal cancer. This will hopefully better the chances of developing new treatments.

Challenges remain within the Upper GI Cancer Service not least in ensuring that the service moves forward on the basis of evidence of best practice and clinical and cost effectiveness at a time of significant financial constraints. Perhaps amidst the financial constraints and ongoing audits the best reflection of our service is the patient presenting to us in OPD five years post total oesophagectomy living a full and healthy life!

Upper GI Cancer Episode Reports 2014 (Data Source: HIPE)

Description	In-Situ	Primary	Secondary	Unknown	Grand Total
Lower third of oesophagus		89			89
Cardia		38			38
Stomach, unspecified		30			30
Oesophagus, unspecified		29			29
Secondary malignant neoplasm of other and unspecified digestive organs			28		28
Fundus of stomach		25			25
Pyloric antrum		18			18
Middle third of oesophagus		17			17
Intestinal tract, part unspecified		16			16
Upper third of oesophagus		14			14
Pylorus		13			13
Secondary malignant neoplasm of small intestine			10		10
Duodenum		8			8
Lip, oral cavity and pharynx	5			3	8
Ill-defined sites within the digestive system		3			3
Overlapping lesion of digestive system		6			6
Stomach	1			2	3
Cervical part of oesophagus		5			5
Body of stomach		4			4
Oesophagus	1				1
Overlapping lesion of stomach		3			3
Jejunum		3			3
Ileum		2			2
Digestive organ, unspecified				2	2
Small intestine, unspecified		2			2
Overlapping lesion of oesophagus		2			2
Greater curvature of stomach, unspecified		1			1
Thoracic part of oesophagus		1			1
Lesser curvature of stomach, unspecified		1			1
Small intestine				1	1
Grand Total	7	330	38	8	383

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

4.5 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*

The Colorectal unit at GUH and its affiliated services across the Saolta University Health Care Group aim to provide a regional cancer service to the population of the West and North West. The Colorectal Unit offers open colorectal surgery; segmental colonic resection, anterior resection, low anterior resection, colo-anal restorative surgery, colo-anal and ileo-anal pouch surgery along with trans-anal open and endoscopic surgery.

In 2014, fifty multidisciplinary team meetings were held. This joint multidisciplinary meeting discusses both colorectal and upper GI cases weekly on Friday mornings and 1458 cases were discussed and treatment plans outlined. This multidisciplinary approach ensures that each case is discussed openly by our consultants in surgery, radiation and medical oncology, radiology, pathology and clinical nurse specialists to facilitate rapid and quality treatment for patients.

This service is supported by a Clinical Nurse Specialist, who meets patients at various stages of their cancer journey. Referrals can come from many sources including the following:

- Inpatients
- Endoscopy for the symptomatic patients
- BowelScreen Programme
- General Practitioners
- Emergency Department
- Other hospitals in the Saolta Group

Overall the patient's journey is enhanced as much as possible by the CNS, linking and supporting at the time of diagnosis, surgery and post operatively. The patient's needs are prioritised during this difficult time.

A stoma therapy services also provides a wide range of services to all of the colorectal patients including mentoring and aftercare. These are seen as critical components to patients care.

Stoma Care Activity 2014 (Data Source Stoma Care CNM)

Description	Numbers
Pre-accessment clinic activity	34
Pre-op siting/counselling (no stoma created)	55
New stoma created	170 (64.1% oncology related)
Reversal of stoma	26
Inpatient review (established stoma with problems, e.g: chemo/radiotherapy related)	229
Inpatient referrals (non-cancer related)	38
Outpatient activity	583
PEG consultations	7
Enterocutaneous fistulae	12
Neonates transferred from Temple Street & Crumlin Hospitals	2
Telephone triage/support (outside calls dealt with while on the wards are not recorded)	1780

Colorectal Cancer Episodes 2014 (Data Source: HIPE)

Description	In-Situ	Pre-Cancerous	Primary	Secondary	Unknown	Grand Total
Polyp of Colon Unspecified		612				612
Colon, unspecified			61			61
Secondary malignant neoplasm of retroperitoneum and peritoneum				170		170
Malignant neoplasm of rectum			162			162
Malignant neoplasm of rectosigmoid junction			154			154
Sigmoid colon			105			105
Ascending colon			34			34
Caecum			21			21
Transverse colon			6			6
Descending colon			21			21
Secondary malignant neoplasm of large intestine and rectum				30		30
Rectum						0
Splenic flexure			14			14
Hepatic flexure			12			12
Rectosigmoid junction						0
Appendix			7			7
Anal canal			6			6
Retroperitoneum			6			6
Specified parts of peritoneum			3			3
Anus, unspecified			3			3
Overlapping lesion of colon			2			2
Peritoneum, unspecified			2			2
Colon					1	1
Anus and anal canal	1					1
Haemangioma of structures of digestive system						0
Overlapping lesion of rectum, anus and anal canal			1			1
Grand Total	1	612	620	200	1	1434

Colorectal Cancer Outpatients Attendances 2014 (Data Source: PAS)

	New	Review	Unscheduled	Total
Total attendances in outpatients	208	1063	84	1355
Attendance at upper GI clinics	24	87	6	117
Attendance at designated cancer clinics	37	200	9	246
Attendance at general clinics	184	976	78	1238

4.6 BowelScreen

Dr Ramona McLoughlin
Consultant Gastroenterologist
Lead Clinician

Brid Ni Fhionnagáin, *CNS BowelScreen*

The Saolta Hospital Group has been screening BowelScreen clients since May 2013, with the first colonoscopy done in Galway University Hospital. This programme is currently aimed at 60 to 69 year olds, ultimately to be expanded from 55 to 74. Approximately 5% of participants have a positive screening test requiring colonoscopy. Over 1,000 BowelScreen colonoscopies have been done by the Saolta Hospital Group at the end of 2014.

The CNSs commissioned by BowelScreen in GUH, SRH, RH and LGH are continuing their Masters and Endoscopist training. In Sligo and Galway, the CNSs are expected to be signed off by UCD by the end of 2015, with a view to submitting site preparation to Nursing and Midwifery Board of Ireland (NMBI) for Advanced Nurse Practitioner roles.

In 2014, the Saolta Hospital Group carried out an average of 25 screening colonoscopies weekly. Pathology for all BowelScreen cases for the group is carried out at GUH, as per the BowelScreen programme. In the midst of this increased workload (68% of cases resulting in specimens to Pathology), these cases are consistently reported within the stipulated KPI, and the Pathologists are nationally acclaimed by the National Screening Service for this work. The surgical referrals generated are also referred to GUH for their procedure. The Steering Committee continues to convene quarterly, either in person or by teleconference, facilitating review and evaluation of the multiple disciplines involved in maintaining the standards of this programme throughout the Saolta Hospital Group.

The first round of BowelScreen screening is expected to conclude at the end of 2015.

Roscommon Hospital launches BowelScreen in February 2014

The National Bowel Screening Programme began in late 2012. Since then it has been expanding to cover all geographical locations and all those within the ages of 60-69. To reach this goal, Roscommon Hospital was selected as a site to undertake Bowel Screening colonoscopies. Preparation for this exciting new development began in 2013 and screening began in February 2014. In May 2014 the National Bowel Screening Programme appointed a Clinical Nurse Specialist to Roscommon Hospital to support this new service and work towards registration as an Advanced Nurse Practitioner. During 2014 Roscommon Hospital undertook 240 colonoscopies under the BowelScreen programme, removed precancerous lesions from 139 patients and detected 13 colorectal cancers. The development of this new service at Roscommon Hospital, and the successful JAG accreditation, has been due to a huge team effort from administration staff, medical staff, nursing staff and management.

NCSS Bowel Screen Activity Report 2014 (Data Source: Bowel Screen Programme)

Jan - Dec 2014	GUH	SRH	RH	LGH *	Saolta Group Total	%
Screening Colonoscopies performed	360	194	235 *(plus 5 repeat L colons)*	7	801	GUH = 45% SRH = 24% RH = 30%
DNA's	6	3	1	0	10	1%
Polyps	236	164	139	7	546	68%
Cancers detected	15	8	13	0	36	5%
Surgical Referrals	21	15	22	0	58	7%
CTC referrals	2	3 *(1 declined)*	7	0	11	2%
Pre Assessed declined colonoscopy	60	23	18	0	101	11%

** Letterkenny BowelScreen opened in late 2014; therefore the above figures reflect December 2014 activity*

From left: Bríd Ní Fhionnagáin CNS BowelScreen, Tom Kenny at the 2013 launch.

4.7 Skin Cancer

Ms Deirdre Jones
Consultant Plastic Surgeon
Lead Clinician

"Skin Cancer is the most common form of cancer in Ireland "
- National Cancer Registry of Ireland 2014 (NCRI)

This is substantiated by the Skin Cancer Service across the Saolta University Health Care Group, which continued to be extremely busy in 2014 with consistently high volumes of referrals received. The incidence of skin cancer and particularly melanoma is known to be rising year on year, and skin cancer is particularly common in the West of Ireland. There are skin triage clinics and outpatient clinics in GUH, MGH, PHB, RH and Ennis General Hospital.

The Skin Cancer Multidisciplinary Meeting takes place three times per month in GUH at which specialists from Dermatology, Plastic Surgery, General Surgery, Medical and Radiation Oncologists, Histology and Radiology meet to discuss all potential melanomas and challenging lesions. Skin cancer patients are also discussed at the Dermatology/Pathology MDM and the Head and Neck MDM as required. In the Ambulatory Care and Diagnostic Centre (ACAD) located in Roscommon Hospital, there were 393 skin cancers diagnosed in 2014. The "See and Treat" model at RH has proven very successful, whereby patients attending are assessed and treated in one visit, rather than a initial outpatient visit followed by return appointment for treatment.

Skin Cancer Outpatients Attendances 2014 (Data Source: PAS)

	New	Review	Unscheduled	Total
Total attendances in outpatients	1407	4207	277	5891
Attendance at skin cancer clinics	528	1280	34	1842
Attendance at designated cancer clinics	119	200	9	328
Attendance at general clinics	879	2927	243	4049

Skin Cancer Inpatients Data 2014 (Data Source: Pathology)

Skin Cancer	UHG	RH
Basal cell carcinoma,	948	255
Squamous cell carcinoma	645	196
Melanoma	308	51
Premalignant	-	145
Rare skin tumours	15	5
Total	1916	652

Skin Cancer Episodes 2014 (Data Source: HIPE)

Diagnosis	In-Situ	Primary	Secondary	Unknown	Grand Total
Other malignant neoplasms of skin		1028			1028
Melanocytic naevi					
Other benign neoplasms of skin					
Malignant melanoma of skin		204			204
Carcinoma in situ of skin	123				123
Benign lipomatous neoplasm					
Secondary and unspecified malignant neoplasm of lymph nodes			88		88
Haemangioma and lymphangioma					
Melanoma in situ	58				58
Secondary malignant neoplasm of other sites			16		16
Neoplasm of uncertain or unknown behaviour of other and unspecified sites				9	9
Kaposi sarcoma		8			8
Benign neoplasm of mouth and pharynx					
Malignant neoplasm of lip		1			1
Grand Total	181	1241	104	9	1535

4.8 Lung Cancer

Dr David P. Breen
Consultant Respiratory Physician
Lead Clinician

Rapid Access Lung Clinic (RALC)

The Rapid Access Lung Clinic (RALC) at GUH, since its inception in 2011 provides patients with rapid access to lung cancer clinics across the Saolta Group in collaboration with respiratory physicians MGH, RCH and SRH. The RALC runs weekly on a Monday afternoon in GUH. The service is fully supported by a nurse manager, and a staff nurse, who provide invaluable support and offers significant assistance in the complex diagnostic treatment plans of patients.

In addition, same day assessment and investigations of malignancy, also occurs at unit 8, Merlin Park University Hospital every Wednesday for patients who have already had a CT with high suspicion of malignancy. We also see patients from the Saolta Group who have to travel long distances. This is a consultant lead clinic with a RAL nurse assisting to meet, access and registered patients.

Joint Thoracic Clinic

The "Joint Thoracic Clinic "opened in 2014, and is held each Thursday in the main outpatient department at GUH. Patients attending the "Joint Thoracic Clinic" already have investigations, a cancer diagnosis, and already discussed at the Lung MDM. Once the patient has received their diagnosis from the Respiratory Consultant, a personalized treatment plan is put in place involving the relevant specialty – Medical Oncology, Radiation Oncology or Cardiothoracic Surgery.

We wish to acknowledge the contribution and dedication of Ellen Wiseman (CNMII) in the care she provided to lung cancer patients as CNMII in the RAL service. In 2014 Ellen took up a new role as Patient Advisory Liaison Services (PALS) at GUH, and we wish her all the best in her new role.

Imelda Fleming (CNMII) and Jacinta Murphy staff nurse have joined the RAL service and we welcome them and wish them all the best in their new roles.

Lung Cancer Outpatients Attendances 2014 (Data Source: NCCP Returns)

Cases	Total
New Patients	547
Review Patients	625
Total Number of Patients	1172

Lung Surgical Activity for Patients with Primary Lung Cancer 2014 (Data Source: NCCP Data)

Diagnosis	Number of Patients	% of Resections
Number of patients with primary lung cancer who had a lung resection; of those	56	
The number who had a lobectomy/bronchoplastic resection	44	78.6%
The number who had pneumonectomy	8	14.3%
The number who had a local or wedge resection	6	10.7%
The number who had another type of resection	0	0%

**Please note bronchoplastic resection is reported as a subset of those who had a lobectomy for Galway*

Lung Cancer Procedures 2014 (Data Source: HIPE)

Description	Inpatient	Day Case	Total	Inpatient Bed Days
Bronchoscopy w Bx or removal of FB	28	92	120	405
Examination procedures on larynx	7	38	45	252
Lobectomy of lung	43	0	43	497
Examination procedures on bronchus	11	12	23	189
Computerised tomography of spine	14	0	14	413
CT of abdomen & pelvis	11	0	11	205
Applicn ins R/O; ch wall/mediast/diaph	11	0	11	213
Excision proc on lymph node; other sites	9	0	9	128
Panendoscopy with excision	7	2	9	156
Excision procedures on liver	8	0	8	117
Pneumonectomy	8	0	8	128
Reconstruction procedures on trachea	6	1	7	120
Applicn/ins/removal proc on stomach	6	1	7	166
Biopsy of lymphatic structure	3	3	6	42
Partial resection of lung	6	0	6	65
Examination procedures on pharynx	0	6	6	0
Laryngoscopy with excision	3	2	5	5
Dilation of oesophagus	3	2	5	17

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4.9 Gynaecological Cancer

Mr Michael O'Leary
Consultant Obstetrician and Gynaecologist
Lead Clinician

Dr Katharine Astbury, *Consultant*
Geraldine Dooley, Ann Keane and Caitriona O'Toole-Curley, *Administration*
Patricia Rogers (RAMP), Maura Molloy (RAMP), Rachael Comer (CNS), *Nursing Midwifery*
Kelly Geraghty & Karen McGinley, *Healthcare Assistants*

First visit numbers at Colposcopy, GUH in 2014 were very similar to 2013 (988 v 984). Overall attendance was 3843 in 2014, this reflects a reduction in review visits from 3347 (2013) to 2859 (2014). The reduction in review visits is due to the introduction in early 2014 of the high risk HPV test for the management of uncertainty (MUCH) in women with low grade abnormality. Prior to the introduction of the MUCH test women with low grade lesions could have several appointments at Colposcopy before a decision was made to treat or discharge. Most of these women if they receive hrHPV negative result can now be returned to routine screening in the community. The hrHPV test was also used in the management of women post treatment, allowing women to return to routine screening in primary care if they tested negative on 2 occasions. Non attendance was 3 % amongst first visits and 10% for follow up appointments, these fall within the target set by CervicalCheck at <15%. Reminders were issued by text message one week in advance of appointments.

Two members of the team achieved promotions in 2014. Caitriona O'Toole-Curley was upgraded to Grade IV Assistant Staff Officer and Ms Patricia Rogers was appointed on 01/05/2014 as Registered Advanced Midwife Practitioner.

Cytology and high risk HPV testing were provided by Medlab Pathology. Histology services were provided by GUH laboratory. Multidisciplinary team meetings between Colposcopy clinical staff, the cytology laboratory and GUH histology laboratory were held at 1-2 months intervals using go to meeting software.

There were 415 excisional LLETZ treatments and 1030 diagnostic biopsies performed. As in previous years CervicalCheck standards were met (>80% of excisions should have CIN on histology). Complete LLETZ results are included in table

LLETZ Histology Results 2014 (Data Source: Gynecology)

Histology Results 2014	Number	Percentage %
Cancer (including microinvasive)	6	1.4
AdenoCa in situ / CGIN	9	2
CIN3	184	44
CIN2	99	24
CIN1	93	22
VAIN1	1	
HPV / cervicitis	13	3
No CIN / No HPV / normal	10	2.5
Inadequate / unsatisfactory	0	
Result not known by clinic	0	

There was a reduction in the numbers of cervical cancer diagnosed in 2014 (11) compared with 2013 (15). Four women had early microinvasion diagnosed in 2014 and their ages ranged from 32 to 51 yrs. Three of these early invasions were squamous cell carcinoma and one was adenocarcinoma (age 40 yrs). A total of 7 women ranging in age from 31 to 66 years had more advanced cancer diagnosed on cervical biopsy. Of these 3 were squamous cell carcinoma (age 41, 49, 55), 2 were adenocarcinoma of cervix (age 31, 56), 1 was reoccurrence following chemo radiation of adenosquamous carcinoma (36) and 1 was endometrial adenocarcinoma (66). Vulval cancer was diagnosed in 4 women ranging from 39 to 68 years.

Service: Nursing/Midwifery staff from Galway Colposcopy clinic delivered an outreach smear clinic at PHB on two Friday afternoons per month. The clinic was very popular with women from the midland counties and 304 women attended in 2014. Reports are submitted monthly, quarterly and annual report of activity (colp1) are generated and submitted to CervicalCheck.

Poster Presentations

Combined cytology and high risk HPV test for follow up of women post treatment for Cervical Intraepithelial Neoplasia at a Colposcopy clinic. Molloy M, Rogers P, Comer R. Presented at IFCPC 15th World Congress for Cervical Pathology and Colposcopy. 26-30th May 2014, London.

CervicalCheck Outreach Service. Rogers P, Molloy M, Comer R. Presented at conference, The Fundamentals of Bi-directional Flow. 22nd Oct 2014, Galway

The Colposcopy team continued to work with CervicalCheck with the aim to reduce the incidence of cervical cancer in Irish women. Local and National guidelines were adhered to and there was a strong focus on patient satisfaction. The quality of service provided in 2014 by the Colposcopy team both clinical and clerical has improved the standard of care for women in the West of Ireland and Midlands.

Gynaecological Cancer Outpatients Attendances 2014 (Data Source: PAS)

	New	Review	Unscheduled	Total
Total attendances in outpatients	901	2225	85	3211
Attendance at gynaecology clinics	679	1412	28	2119
Attendance at designated cancer clinics	57	143	4	204
Attendance at general clinics	222	813	57	1092

Gynaecological Cancer Episodes 2014 (Data Source: HIPE)

Cancer	In-Situ	Pre-Cancerous	Primary	Secondary	Unknown	Viral	Grand Total
Cervix		542	192			487	1221
Gynaecological	19		23				42
Ovary			143	20	7		170
Uterus	1		64		1		66
Grand Total	20	542	422	20	8	487	1499

Gynaecological Procedures 2014 (Data Source: HIPE)

Description	Inpatient	Day Cases	Total	Inpatient Bed Days
Examination procedures on vagina	1	1016	1017	32
Excision procedures on cervix	2	639	641	33
Destruction procedures on cervix	2	389	391	2
Abdominal hysterectomy	109	0	109	898
Oth genitourinary test/measure/investgtn	0	46	46	0
Other proc on female genital organs	43	0	43	483
Oth exc proc on abdo/peritnm/omentum	42	0	42	340
Curettage and evacuation of uterus	12	18	30	38
Examination procedures on uterus	10	18	28	35
Appendicectomy	28	0	28	314
Salpingo-oophorectomy	25	2	27	116

Mayo General Hospital Colposcopy Service 2014

There were 1210 attendances at the Colposcopy Clinic in 2014, of which 345 were first time attendances. The DNA (Did Not Attend) rate was 12% amongst those due to make first visits and was 26% for those due for follow up appointments. Our overall DNA rate was 22%, which is above the target rate set by CervicalCheck. A report was furnished to hospital management addressing the need to have reminders issued by text message one week in advance of the appointment. This was a recommendation of CervicalCheck. We are awaiting implementation of this service here in MGH.

The waiting times for a Colposcopy appointment at the clinic is 1 week in respect of urgent referrals, 2 weeks for high grade cell changes on smear results and 3 weeks for low grade changes on smear results. This is within the target standard set by CervicalCheck.

Combined Cytology and high risk HPV test were provided by Medlab pathology to post treatment women at 6months and 18 months post their treatment at Colposcopy. If negative, the patient is discharged for routine screening as part of CervicalCheck recommendation. In February, of 2014, combined Cytology and High Risk testing was introduced by CervicalCheck, for management of persistent low grade and as a result those who were negative were discharged for routine screening .This has helped greatly in the management of follow up and has led to a reduction in the number of review appointments at the Colposcopy Service. Women attending the Colposcopy service are now more aware of HPV as a major cause of cervical cancer. All staff provided both verbal and written information to assist in educating and reassuring women to encourage them to continue to attend Colposcopy appointments when required and to have their cervical smear test preformed when due. Ongoing education on cessation of smoking was continued. Two members of staff completed the HSE cessation of smoking course.

Histology continues to be provided by MGH Histopathology with excellent turnaround times. There were 138 excisional Large Loop Excision of the Transformation Zone (LLETZ) treatment and 273 diagnostic punch biopsies. A total of 429 biopsies were performed. 80.44% of the excisional LLETZ treatment had CIN on the histology which meets CervicalCheck standard (>80%). Approximately half of these negative excisional biopsies had CIN on pre-excision diagnostic biopsy.

Multidisciplinary team meetings between the clinical staff from the Colposcopy service, Histology Laboratory and MedLab Laboratory were held regularly using the Gotomeeting software. Monthly, quarterly and annual Colposcopy activity reports were generated and submitted to CervicalCheck.

Training and ongoing professional development of both medical and nursing staff continues within the Colposcopy Service. One doctor commenced his training in Colposcopy while with MGH and then continued his training in his new placement. A staff nurse commenced the CervicalCheck smear takers course this year. The other staff nurses who work in the Colposcopy clinic have already completed this training course. Ongoing clinical education continues both to the medical and nursing students who attend the Colposcopy clinic as part of their professional training from GUH. Two members of our staff attended the British Society for Colposcopy and Cervical Pathology (BSCCP) World Conference in London in May, 2014.

Mayo General Hospital - Colposcopy Service 2014 (Data Source: MGH Colposcopy)

Result of referral smear	No treatment	Diag. Biopsy	Excision	Abiation + No Biopsy	Abiation + Biopsy	Other	No. of First attendances
Inadequate	1	1	0	0	0	0	2
ABCUS/BNA	5	26	1	0	0	1	33
AGH / Borderline Glandular	0	0	3	0	0	0	3
ASC-H	4	4	10	0	0	0	18
LSIL / Mild Dyskaryosis	12	36	2	0	0	0	50
HSIL / Moderate Dyskaryosis	2	4	14	0	0	0	20
HSIL / Severe Dyskaryosis	1	5	32	0	0	0	38
Query Squamous Cell Carcinoma	0	0	0	0	0	0	0
Query Glandular Neoplasia / AIS	0	0	0	0	0	0	0
CIN grade not specified	0	0	0	0	0	0	0
Other smear	0	0	0	0	0	0	0
Clinical indication - urgent	9	5	3	0	0	0	17
Clinical indication - non urgent	73	44	2	0	0	6	125
Other referral	27	17	0	0	0	4	48
Total	**134**	**142**	**67**	**0**	**0**	**11**	**354**

Sligo Regional Hospital Colposcopy Service 2014

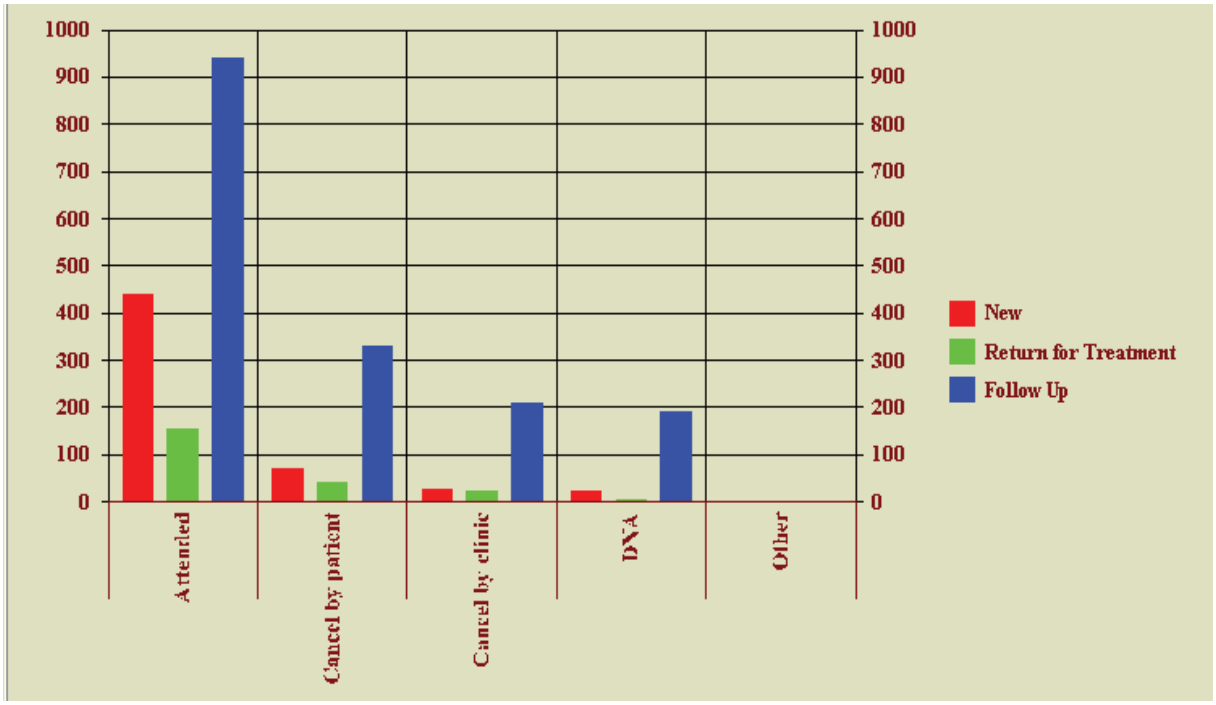
The Colposcopy Service at SRH is one of 15 accredited colposcopy clinics nationally. It is a Consultant Gynaecologist led service based within the Day Services Department on Level 6. On average four colposcopy clinics are held per week and four nurse-led smear clinics are held per month.

SRH continues to meet the following criteria as set out in the Organisational and Clinical Guidance for Quality Assured Colposcopy Services published by CervicalCheck (CS-PCUB-CLP-7):

- Ensure timely and equitable access to colposcopy and treatment for women with abnormal cervical smear test results
- Communicate effectively with women to inform them about colposcopy and treatment including appointments, results of tests and planned intervention
- Ensure high quality diagnosis by certified colposcopists which includes satisfactory biopsy in the majority of cases
- Ensure adequate treatment in a timely fashion for women with a diagnosis of high grade CIN; treatment which should be delivered in the outpatient clinic in the majority of cases
- Establish a system for tracking tests and effectively managing the results, to ensure efficient communication of the diagnosis and treatment plan to the woman in a timely fashion
- Ensure that data management is such that clinical results can be easily accessed and checked using a designated computer programme
- Interact effectively with smeartakers, laboratories and management of CervicalCheck to deliver a reduction in incidence and mortality of cervical cancer
- Ensure the collection of mandatory data to facilitate the direct linkage of relevant information to the CervicalCheck cervical screening register.

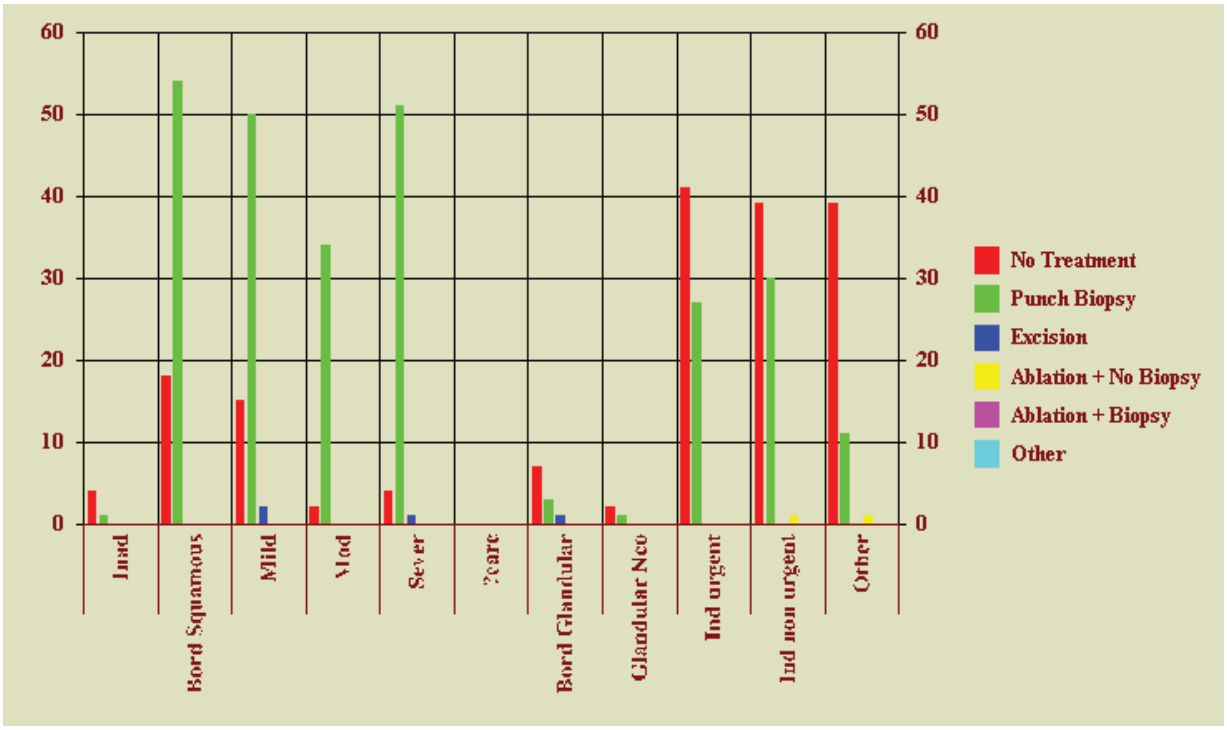
Nationally, SRH had the lowest default rate for first visit and 6th lowest DNA rate for follow-up visit between 2008 and 2013. The introduction of a text reminder system during 2014 for women attending the nurse-led smear clinic further reduced the numbers of patients who defaulted.

Sligo Regional Hospital - Appointment for Colposcopy 2014 (Data Source: SRH Colposcopy)



In total, 1,533 women attended the service during 2014 and of these, 439 patients were new referrals to the service. 166 treatments (LLETZ/Cold Coagulation) were performed predominantly under local anaesthetic. Multi-disciplinary team meetings were held more frequently in 2014 in order to facilitate more timely assessment and management of difficult cases. In total 8 cervical cancers were diagnosed and referred onward to centres of excellence in cervical cancer care either in Dublin or Galway. Once treatment was completed, most women re-attended Sligo for follow-up care.

First Attendance Procedure Type and Referral 2014 (Data Source: SRH Colposcopy)



Sligo Regional Hospital - Colposcopy Service 2014 (Data Source: SRH Colposcopy)

	No treatment	Diagnostic biopsy (punch)	Excision	Ablation & no biopsy	Ablation & biopsy	Other	Number of attendances
Inadequate (PI)	4	1	0	0	0	0	5
Borderline Squamous (P3)	259	115	38	1	3	0	416
LSIL/Mild dyskaryosis (P4)	197	96	28	2	2	0	325
HSIL/Moderate dyskaryosis (P6)	69	49	26	0	1	0	145
HSIL/Severe dyskaryosis (P6)	120	76	43	0	1	0	240
Query Squamous Cell carcinoma (P7)	0	0	0	0	0	0	0
Borderline Glandular abnormalities (P8)	33	4	1	0	0	0	38
Glandular neoplasia (P9)	21	1	0	0	0	0	22
Clinical Indication Urgent	81	36	3	0	3	1	124
Clinical Indication Non- Urgent	75	43	7	2	1	0	128
Other	70	15	1	1	2	1	90
Total	929	436	147	6	13	2	1533

4.10 Head and Neck Cancer

Ms Orla Young
Consultant Otolaryngologist, Head and Neck Surgeon
Lead Clinician

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, SHO (GP trainee) and interns. Outpatient clinics are held on a daily basis at GUH, once a week in MGH and once fortnightly in RH. The Maxillofacial department consists of one consultant; Mr Patrick McCann, one locum consultant and a team of registrars. Maxillofacial outpatients are held at GUH and PHB.

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. Carol liaised with 101 new patients who were diagnosed with head and neck cancer and commenced treatment in GUH in 2014.

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 had 41 MDM meetings in 2014 at which a total of 420 patients were discussed by the Multidisplinary Team consisting of Consultant Surgeons, Medical Oncologists, Radiation Oncologists, Radiologists, Pathologists, Clinical Nurse Specialists and a Speech and Language Therapist.

There have now been 25 consecutive cases of early glottic carcinoma treated using Trans-oral CO2 laser resection since the advent of our new CO2 laser machine. These include one case of Tis, 22 T1a and 3 T1b tumours. We have one case of recurrence to date that has progressed to require radiotherapy. This means 24 patients have avoided a lengthy seven week course of radiotherapy treatment, freeing up invaluable radiotherapy slots for other oncology patients within GUH.

We look forward to the inaugural International Head and Neck Cancer Day to be held in 2015, by the International Federation of Head and Neck Oncologic Societies (IFHNOS).

Head and Neck Cancer Outpatients Attendances 2014 (Data Source: PAS)

	New	Review	Unscheduled	Total
Total attendances in outpatients at ENT	3714	1248	59	5021
PAS Capture of New Head & Neck Cancer Patients attendances	211	969	25	1205

Otolaryngology Department Head and Neck Oncology Procedures 2014 (Data Source: Head and Neck Department)

Procedures	No. of Procedures
Oesophagoscopy/Dilat	29
Biopsy/Excision Oral Cavity/Tongue	27
Panendo	47
Laser MLB	11
MLB	101
Parotidectomy	32
Neck Dissection	36
Total Laryngectomy	3
Thyroidectomy	43
Hemiglossectomy	3
Neck Node Biopsy	29
Mandibulotomy/Lip Split	1
Excision Parapharyngeal Tumour	3

Head and Neck Cancer Episodes 2014 (Data Source: HIPE)

Diagnosis	In-Situ	Primary	Unknown	Grand Total
Malignant neoplasm of hypopharynx		53		53
Benign neoplasm of mouth and pharynx				0
Malignant neoplasm of tonsil		37		37
Malignant neoplasm of other and unspecified parts of tongue		36		36
Malignant neoplasm of oropharynx		30		30
Malignant neoplasm of parotid gland		28		28
Benign neoplasm of middle ear and respiratory system				0
Benign neoplasm of major salivary glands				0
Malignant neoplasm of nasopharynx		17		17
Malignant neoplasm of base of tongue		15		15
Malignant neoplasm of palate		14		14
Haemangioma and lymphangioma				0
Malignant neoplasm of other and unspecified major salivary glands		11		11
Malignant neoplasm of nasal cavity and middle ear		9		9
Malignant neoplasm of floor of mouth		8		8
Malignant neoplasm of other and unspecified parts of mouth		6		6
Neoplasm of uncertain or unknown behaviour of middle ear and respiratory and intrathoracic organs			6	6
Malignant neoplasm of pyriform sinus		5		5
Carcinoma in situ of middle ear and respiratory system	4			4
Malignant neoplasm of gum		4		4
Malignant neoplasm of accessory sinuses		1		1
Malignant neoplasm of other and ill-defined sites in the lip, oral cavity and pharynx		1		1
Grand Total	4	275	6	285

4.11 Endocrine Cancer

Dr Marcia Bell
Consultant Endocrinologist
Lead Clinician

The endocrine department at GUH aims to provide a regional cancer service to the population of Saolta University Health Care Group. The Endocrine cancer programme comprises a multidisciplinary team involving consultant endocrinologists, endocrine consultant surgeons, consultant pathologists, consultant radiologists and consultant chemical pathologists.

In 2014, eighteen multidisciplinary team meetings were held and 450 cases were discussed. This multidisciplinary approach ensures that all endocrine patients requiring surgical intervention are discussed pre- and post-operatively.

Endocrine Cancer Outpatients Attendances 2014 (Data Source: PAS)

	New	Review	Unscheduled	Total
Total attendances in outpatients	146	503	68	717
Attendance at endocrine clinics	41	87	18	146
Attendance at designated cancer clinics	26	64	12	102
Attendance at general clinics	105	416	50	571

Endocrine Cancer Episodes 2014 (Data Source: HIPE)

Diagnosis	Primary	Secondary	Unknown	Grand Total
Malignant neoplasm of thyroid gland	78			78
Secondary malignant neoplasm of other sites		38		38
Malignant neoplasm of adrenal gland	16			16
Malignant neoplasm of other endocrine glands and related structures	12			12
Neoplasm of uncertain or unknown behaviour of endocrine glands			9	9
Malignant neoplasm of pancreas	2			2
Grand Total	108	38	9	155

4.12 Haematological Cancer

Professor Michael O'Dwyer
Consultant Haematologist
Lead Clinician

Haematological Oncology services within the West Northwest region are provided at GUH, SRH and LGH, each of which has Consultant staffed units. In addition, MGH operates as a satellite unit with a weekly outpatient clinic and day care unit catering for routine out-patient based chemotherapy and infusions. In total there are five whole time equivalent Consultant Haematologists in Galway, and one each in Sligo and Letterkenny. There are plans to increase this complement shortly. There is one RANP in Haematology based at GUH and plans are in progress to develop the RANP roles in Sligo and Letterkenny. GUH operates as a tertiary level 3 unit providing care for more complex cases, such as administration of intensive chemotherapy for acute leukaemia and aggressive lymphoma, as well as performing autologous stem cell transplantation. Galway is one of only two Irish Medicines Board licensed stem cell laboratories in the country supporting adult autologous stem cell transplantation and in addition to catering for the needs of the region we also provide a service for multiple myeloma patients from the Southern region.

In 2014 a total of 40 autologous stem cell transplants were performed to 38 patients. (1 patient (DLBCL) had cells reinfused over 2 days and 1 patient (testicular tumour) had 2 (out of 3) tandem transplants in 2014 (3rd in early Jan 2015). Of these stem cells reinfusion's 26 were for multiple myeloma, 12 for Lymphoma (4 for DLBCL, 3 for Mantle cell lymphoma, 4 for other lymphoma, 1 for ETAL and 2 for Test Carcinoma).

GUH is very actively involved in Clinical Trials in patients with blood cancers (Phase I, II and III). This activity will be greatly enhanced following our move to the new Clinical Research Facility and the launch of a new Science Foundation Ireland/Irish Cancer Society funded Phase I/II Blood Cancer Network, led from Galway.

Haematological Cancer Outpatients Attendances 2014 (Data Source: PAS)

	New	Review	Unscheduled	Total
Total attendances in outpatients	397	2359	180	2936
Attendance at haematology clinics	60	959	41	1060
Attendance at designated cancer clinics	34	140	4	178
Attendance at general clinics	337	1400	139	1876

Haematological Cancer Patients 2014 (Data Source: HIPE)

Cancer Type	Primary	Unknown	Grand Total
Lymphoma	253		253
Myeloma	180		180
Myleodysplastic		117	117
Lymphoid Leukaemia	85		85
Myeloid Leukaemia	75		75
Polycythaemia Vera		25	25
Immunoproliferative	10		10
Other Leukaemia	4		4
Grand Total	**607**	**142**	**749**

Haematological Cancer Episodes 2014 (Data Source: HIPE)

Cancer Type	Primary	Unknown	Grand Total
Immunoproliferative	13		13
Lymphoid Leukaemia	260		260
Lymphoma	443		443
Myeloid Leukaemia	129		129
Myeloma	321		321
Myleodysplastic		778	778
Other Leukaemia	6		6
Polycythaemia Vera		62	62
Grand Total	1172	840	2012

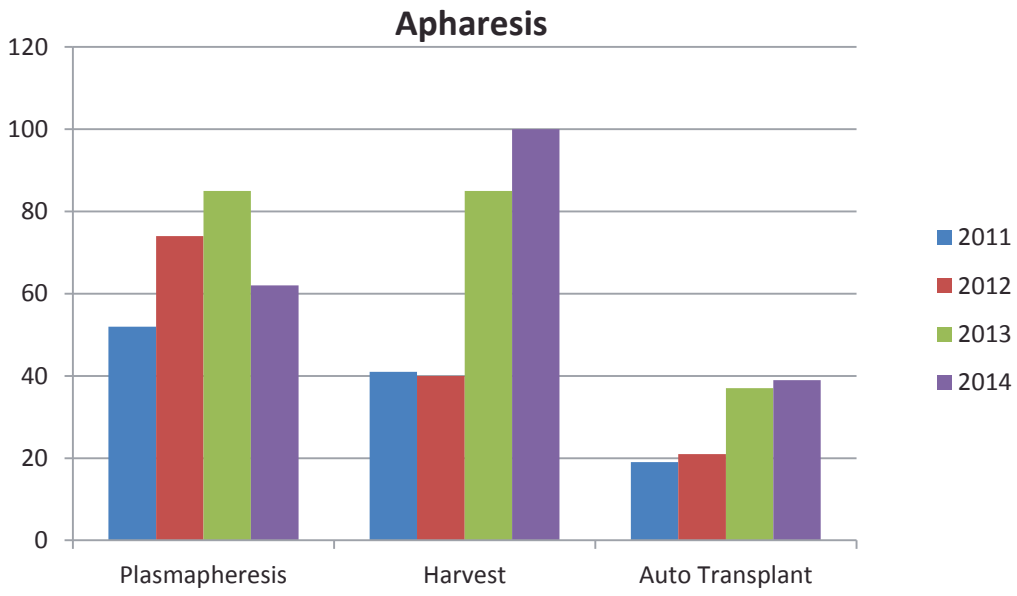
Haematology Research Program:

Research in blood cancers continues to develop at NUI Galway and Prof O'Dwyer now has an active research laboratory, funded by the Health Research Board in the Biosciences research building on the university campus. Active areas of interest are drug development in blood cancers and the study of glycosylation in myeloma.

Refer to appendix 6 for research publications

No. of Aphaeresis/Transplant Procedures (Data Source: Oncology Nursing GUH)

Activity	2011	2012	2013	2014
Plasmapheresis	52	74	85	62
Harvest	41	40	85	100
Auto Transplant	19	21	37	39



4.13 Radiology

Dr Clare Roche
Consultant Radiologist
Lead Clinician

The Radiology Departments across the Group provided a range of diagnostic, staging and surveillance imaging studies for oncology patients in 2014, including Computed Tomography, Ultrasound, Nuclear Medicine and Magnetic Resonance Imaging. In many instances, this constituted the bulk of the workload for these modalities at our hospitals (see table).

Total overall Activity for Radiology for 2014 (Data Source: Radiology)

Modality	GUH	MGH	SRH	LGH	PHB	RH
Computed Tomography	15,981 (75%)	5,723 (65%)	7,684 (65%)	6,025 (65%)	3,498 (65%)	1,724 (65%)
Magnetic Resonance Imaging	1,630 (25%)	1,018 (25%)	2,052 (25%)	644 (25%)	1,009 (25%)	35 (25%)
Nuclear Medicine	3,535 (75%)	n/a	167 (75%)	n/a	n/a	n/a
Ultrasound	6,145 (50%)	4,322 (50%)	3,889 (50%)	4,217 (50%)	2,411 (50%)	1,138 (50%)
Interventional Radiology	2,464 (70%)	122 (70%)	594 (70%)	137 (70%)	65 (70%)	17 (70%)
PET CT*	661 (99.9%)	52 (99.9%)	n/a	n/a	n/a	n/a

** Figures in brackets = estimated percentage of total workload due to oncology*

Report from GUH Radiology when compared to 2013 activity

- CT increased from 14,784 to 15,981.
- MRI increased from 1,506 to 1,630 – MRI capacity is constrained because we have only one MRI scanner in GUH.
- Nuclear medicine increased from 1,615 to 3,535 (Nuclear medicine service expanded due to replacement equipment installed).
- Ultrasound increased from 4,955 to 6,145 (expansion of ultrasound service in Merlin Park Hospital).
- Interventional radiology increased from 1,830 to 2,464 – new intervention suite installed GUH, expansion of IR service in Merlin Park Hospital and also replacement of a consultant radiologist trained in interventional procedures.
- *PET CT: Pet CT is performed in the Galway Clinic as a service level agreement – scans are reported by GUH radiologists.
- PET CT numbers for 2014 = 661 (minimal increase on 2013)

Oncology Multidisciplinary Meetings at GUH:

These meetings require considerable time commitment from radiologists: careful review of prior imaging and preparation of cases is required, and affords the opportunity to critically review current and previous imaging in the context of planning patient care/treatment.

Multidisciplinary meeting	Frequency	Length (hrs)	Number of Radiologists	Preparation (hrs)
Lung	Weekly	1	1	1
Head & Neck	Alt weeks	1	2	1
Oncology	Weekly	1	1	1.5
Lymphoma	Alt weeks	1	2	1
Gynaecology	Alt weeks	1	2	1
Gastrointestinal (Surgical)	Weekly	1.5	2	1.5
Breast (Symptomatic)	Weekly	1.5	3	2
Breast (Breast Check)	Weekly	1	3	1
Melanoma	¾ weeks	1	1	1
Urology	Alt weeks	2	1	2
Haematology	Weekly	1	1	1
Endocrinology	Alt weeks	1	1	1

In summary

Demand for imaging continues to outstrip supply. The number of examinations performed for oncology patients has risen year on year. However we remain constrained by limited resources at GUH, particularly for MRI, CT. As a result our waiting times for MRI and CT rose over the course of the year and remain unacceptabl

- Waiting times for oncology MRI scans (priority 1) 119 days.
- Waiting times for oncology CT scans (priority 1) 126 days.

4.14 Pathology

Dr Teresa McHale
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. The departments provide a high quality diagnostic service to meet the National and EU objectives of reducing the morbidity and mortality caused by cancer through early detection and appropriate service delivery and provide 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 MDMs as well as by direct referral. Since 2010 the Division of Anatomic Pathology at GUH has actively participated in the ongoing development process of the Faculty of Pathology's National Quality Indicator programme and has been involved in the development of both procedural P codes and QA codes. Currently the Division is one of the designated cancer centres participating in the roll out of the recommended guidelines

Pathology departments are also active at LGH, SRH, PHB and MGH. The following data relates to pathology activity at GUH:

P01 Core, needle, punch, shave, and curetting biopsies including liver, bronchial, lung core, endometrial pipelle, skin punch, prostate, renal, lymph node core and targeted bone core biopsy for tumour, all core biopsies are assigned P01

P02 Endoscopic GI biopsies

P03 Cancer resections:

- Specimens with no residual primary tumour (mastectomy, colectomy for malignant polyp etc)
- Regional node dissections without primary resection (axillary, neck dissections)
- Wide local excision for melanoma with or without sentinel node biopsy
- Hysterectomy for hyperplasia as well as invasive tumour. Orchidectomy for neoplasm
- Salivary gland/thyroid resections for neoplasm

P04 All other surgical specimens which are neither small biopsies nor cancer resections including TUR Bladder, TURP, lymph node biopsy, bone marrow biopsy, colectomy for diverticular disease, skin ellipse/shave excisions, hysterectomy for fibroids, endometrial currettings, lymph nodes for lymphoma diagnosis, appendix, gallbladder, fallopian tubes, placenta, TAH for non malignancy, colon resections for non malignancy

P06 Non Gynaecological cytology – FNA

P07 Non Gynaecological cytology – Exfoliative

P10 Autopsy (Non State)

Histopathology Workload at GUH 2014 (Data Source: Pathology GUH)

Specimen types	P Code	Cases	Specimens	Blocks
Small biopsy cases	P01	6115	13247	14198
GI Endoscopy cases	P02	8748	16483	17662
Non biopsy Cancer Resection	P03	5093	8853	50441
Non biopsy other	P04	12817	17117	34045
Non Gynaecological FNA	P06	544	803	6
Non Gynaecological Exfoliative	P07	3334	3737	1170
	Not coded	93	1112	62
	Totals	36744	60352	117584
Post Mortem (non state)	P10	378	378	3556

2014 Malignancy breakdown pathological site (Data Source: Pathology GUH)

Total Cases	5858
Total Surgical Cases	5623
Total Cytology Cases	235

Site	Total Cases
Dermpath	2602
Breast Symptomatic	859
Bone marrow/Haematology	204
Lymph node	146
Head/neck	121
Cardiothoracic/lung	212
Gastrointestinal	424
Liver/Pancreas/Gallbladder	56
Kidney	71
Genitourinary/Prostate	862
Gynaecological	125
Other	176

2014 Histopathology MDM activity

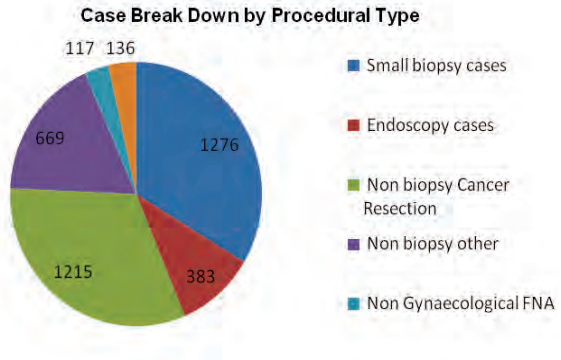
- Symptomatic breast
- Lung
- Derm path
- Oncology/Gynae
- Lymphoma
- Haematology/morphology
- Endocrine
- Cardiothoracic
- GI medical
- GI surgical
- Head & Neck
- Urology
- Cervi-check
- Colorectal

Case Break down subsection 2014 (Data Source: Pathology GUH)

Case type	Total
Surgical	3263
Non Gynae cytology	268
Referred cases	265
Total cases reviewed at MDM	3796

Case break down by procedural type 2014 (Data Source: Pathology GUH)

Code	Expansion	Total Cases
P01	Small biopsy cases	1276
P02	Endoscopy cases	383
P03	Non biopsy Cancer Resection	1215
P04	Non biopsy other	669
P06	Non Gynaecological FNA	117
P07	Non Gynaecological Exfoliative	136



The Diagnostic directorate in GUH encompasses the Radiology Department including interventional Radiology and also the Departments of Haematology the Blood and Tissue Establishment, Department of Anatomic Pathology, Department of Microbiology, Department of Clinical Biochemistry and the Department of Immunology.

The Directorate is pivotal in the provision of diagnostic both in the forms of primary direct imaging and also diagnostic testing of submitted samples from throughout the region and also furthering analysis and reporting as a second opinion as part of the MDM process. The Directorate is also involved in direct patient care e.g. the interventional radiology department which carry out a wide variety of procedures in the care of patients with cancer and also the provision and manipulation of stem cells by the Blood and Tissue Establishment for transplantation to support the administration of high dose chemotherapy.

Division of Clinical Microbiology: *Report from Prof. Martin Cormican*

The Division of Clinical Microbiology provides critical support to cancer care services. The laboratory diagnostic service is essential to the diagnosis and management of infection which is a common and critical complication of cancer and of cancer treatment. In the past year the division has introduced 24 hour laboratory service for critical tests to support cancer care and expanded its range of rapid molecular diagnostic tests. In addition the Division provides consultation services for patients with complex infections and provides support for infection prevention and control services. The laboratory services are a critical support for infection prevention and control and the direct patient consultation services as well as to the routine diagnostic service.

Department of Clinical Biochemistry: *Report from Dr. Damian Griffin*

Clinical biochemistry support cancer diagnosis and care through the provision of an ever widening repertoire of laboratory investigations. The repertoire of tests is reviewed annually as part of our management review and it has been our policy to introduce assays based on changes to the state of the art and on clinical need. Significant trends in the last few years include:

- the use of plasma metanephrines, as opposed to urinary catecholamines to screen for phaeochromocytoma
- the use of total chromogranin A as a tumour marker in neuroendocrine neoplasia
- the use of analytical services to individualise chemotherapeutic options

Tumour Markers for 2014 (Data Source: Pathology GUH)

Tumour Markers	2013	2014	Change
Total PSA	41,664	41,719	0.1%
LDH	39,587	39,859	0.7%
CEA	5,929	6,205	4.7%
CA199	4,342	4,444	2.4%
CA125	4,067	4,413	8.5%
AFP	3,049	3,612	18.5%
CA15.3	2,924	3,088	5.6%
Metanephrines	214	485	126.6%
Thyroglobulin	305	374	22.6%
Urine Catecholamines	209	160	-23.4%
5-HIAA	70	71	1.4%
Total Chromogranin A	78	33	-57.7%
HMMA (VMA)	6	7	16.7%
Inhibin B	22	20	-9.1%
Inhibin A	8	6	-25.0%
Others			
Methotrexate	172	113	-34.3%
DPD mutation testing	7	3	-57.1%
Thiopurine metabolites	n/a	1	n/a

The Galway Blood & Tissue Establishment: *Report by Dr. Amjad Hayat*

The Blood & Tissue Establishment provides blood and blood products such as Fibrinogen, Plasma, and Platelets etc. for cancer care patients undergoing chemotherapy and/or radiation and is licensed by the Health Products Regulatory Authority (HPRA) for the collection, testing, processing, storage and distribution of blood and blood components. It is also licensed by the HPRA for donation, procurement, testing, processing, preservation, storage or distribution of human tissues and cells and holds a Good Manufacturing Practice (GMP) license under which the Autologous Peripheral Blood Stem Cell program for myeloma, lymphoma and other cancer care patients operates. This incorporates peripheral blood haematopoietic stem cell collection, storage and autologous transplantation in conjunction with the GUH Apheresis team. This is an essential service for cancer care patients and in the last year the service has seen a 100% increase in activity.

In addition GBTE provides Haemovigilance and Biovigilance in the monitoring of safe transfusion and tissue practices for cancer care patients.

Haematology Laboratory: *Report from Dr. Ruth Gilmore*

The Haematology laboratory in GUH is integral to the diagnosis, treatment and management of patients with haematological and solid organ malignancies. The Haematology laboratory provides blood results and morphological analysis on patient samples for diagnostic purposes and during treatment. Bone marrow examination is done as part of staging in many malignancies. The laboratory coordinates testing for cytogenetic and molecular analysis to ensure an accurate diagnosis in all patients. This ultimately guides treatment and ensures that all patients receive the most appropriate treatment for them.

The Haematology laboratory in GUH also acts as a tertiary referral centre for patients with haematological malignancy including stem cell transplantation and the growing demand for the flow cytometry service reflects this increased activity. This service is essential for the diagnosis of leukaemia's and lymphomas, in testing for Minimal Residual Disease and is central to the provision of the GUH stem cell transplantation programme. A specialised coagulation laboratory service investigates and monitors coagulopathies associated with oncology and haematology populations.

Histopathology Activity across the Saolta Group 2014

	PHB	LGH	MGH	SRH	RH
PO1 Small Biopsy	490	1817	895	2614	0
PO2 GI Endoscopic biopsies	1144	2714	1248	1408	0
PO3 Non biopsy cancer resection	32	112	56	391	0
PO4 Non biopsy other	1690	2235	2497	3051	0
PO6 Non Gynaecological Cytology FNA	14	70	5	141	0
PO7 Non Gynaecological Cytology Exfoliative	132	400	209	299	0
Post-mortems	84	n/a	198	103	n/a

Molecular Article Number of molecular tests performed on site at GUH (Data Source: Pathology GUH)

Test Type	2014
HER2 (FISH)*	318
KRAS	65
NRAS	45
EGFR	77
ALK	65
BRAF	45
Subtotal (biomarkers excluding HER2)	297
Total (biomarkers including HER2)	615

** includes FISH on breast and gastric cancers*

4.15 Medical Oncology

Prof Maccon Keane
Consultant Medical Oncologist
Lead Clinician

Medical oncology services are available in five out of the seven hospitals within the Saolta University Health Care Group (GUH, PHB, MGH, SRH, and LGH). Inpatient units for the care of oncology/haematology patients are available in three of the hospital sites (LGH, SRH, and GUH). The units in Mayo and Portiuncula are satellite units of GUH and are supported by visiting oncology/haematology/radiotherapy clinicians. There are outpatient clinics held on these sites and these clinics are staffed by the day ward staff on both sites.

The teams within each hospital facilitated the NCCP oncology medication safety review group during 2014. All units are awaiting the final NCCP Safety Report and the implementation of recommendations and self-assessment questionnaires from this report. Status updates regarding the implementation of recommendations from each hospital are submitted to the NCCP 6 monthly.

The KPI of time from referral to 1st IV chemotherapy treatment in a day ward setting is returned from five of the group hospitals (this data includes Haematology chemotherapy also). The Group performance overall is 87.4% for 2014 compared to 91.6% in 2013 (it must be noted that LGH did not make returns in 2013). GUH is the most challenged day ward within the group, there are significant capacity issues which have been highlighted to the Directorate and senior management team who are working with the team to address these issues and implement possible solutions. A consistent challenge for this cohort of patients is the planning and timing of patients in need of concomitant chemo/radiation modalities of treatment.

The ongoing Protocol development of chemotherapy regimens by the NCCP continues to be integrated into the group hospitals. These protocols are available on the NCCP website.

The Community Oncology Nurse Education programme continues to run annually in the GUH site in collaboration with NUIG enhancing the care to oncology patients at home and avoiding hospital visits in some case. It is a valuable resource in the overall care of our patients.

In GUH, we welcomed a 4th Medical Oncologist, Dr Silvie Blazkova on the 1st June 2014. Dr Blazkova has worked in GUH and Portiuncula for the past 4 years as a locum consultant attending Portiuncula day ward and outpatient clinics once per week on that site.

Number of Patients undergoing Chemotherapy 2014 (Source: HIPE)

Specialty	GUH	PBH	SRH	LGH	Grand Total
Gastro Enterology	1				1
General Surgery			1	6	7
Haematology	283		86	98	467
Oncology	985	216	316	249	1766
Otolaryngology	1				1
Paediatrics	7			2	9
Radiology			2		2
Radiotherapy	8				8
Urology	29				29
Grand Total	**1314**	**216**	**405**	**355**	**2290**

Number of Chemotherapy Episodes 2014 (Data Source: HIPE)

Speciality	GUH	PBH	SRH	LGH	Grand Total
Gastro Enterology	1				1
General Surgery			2	34	36
Haematology	2987		750	1106	4843
Oncology	6126	1552	1899	2154	11731
Otolaryngology	1				1
Paediatrics	28			20	48
Radiology	1		6		7
Radiotherapy	26				26
Urology	148				148
Grand Total	**9318**	**1552**	**2657**	**3314**	**16841**

GUH Haematology/Oncology Day Ward yearly activity breakdown 2014 (Data Source: 2014 HIPE)

Haematology/Oncology Day Ward	Year Total	Monthly Average
Admin (Pentamadine)	199	17
IV Gamma Globulin	208	17
IV Immunogoblin	243	20
Maintenance of CVC	285	24
Vene Section	311	26
Bone marrow procedur	339	28
Other	532	44
Bloods & Review	1565	130
IV Bisphosphonates	1685	140
IV/SC/Oral Chemotherapies	8364	697

GUH Haematology/Oncology Day Ward Activity Data 2014 (Data Source: HIPE)

	2013	2014	% Increase
Patient Activities	15288	17887	17%
IV chemo Administered	4837	5659	17%
Herceptins Administered	538	672	25%
Bone Marrow Biopsy Procedures	339	339	0%
PO Chemotherapy	834	1117	34%

GUH Inpatient Activity Data 2014

- Census numbers (Averaged) : 65 inpatients, unchanged from 2013
- Time to admission (Lantis Data- averaged) 62% within 1 day of scheduled admission date – decreased by 10% from 2013
- Number of inpatients discharges under cancer services was 1661- a reduction of 12% on 2013 figures

The census numbers consistently reflect greater than 60 cancer services inpatients at any one time for the past 5 years, the current allocation of beds remains at 52 for the service. Despite the decrease in patient discharges our lengths of stay have lengthened overall probably due to the increase in Haematology inpatient numbers, who have longer lengths of stay due to the nature of their disease and treatments e.g. leukaemia and transplant.

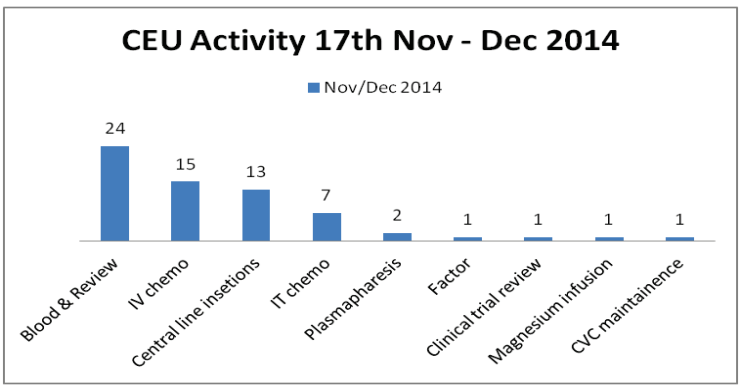
Significant delays in elective admissions were experienced at the beginning of 2014, due to:

1. High emergency care demands which closed the 5-day service on St. Joseph's ward in January 2014.
2. Capacity issues in the Haematology/Oncology Day Ward (HDW) due to space, Nursing and pharmacy staffing numbers.
3. Closure of the Cancer Assessment Unit (CAU) due to lack of nursing resource until November 2014. The opening of the Cancer Elective Unit (CEU) in November of 2014 has increased our time to admit starts to 80% over the past 3 months, as the cancer services patients now have an area to attend for day procedures and can come in on day of procedure, saving bed days.

Outpatient attendances In Medical Oncology at GUH 2014 (Data Source: PAS)

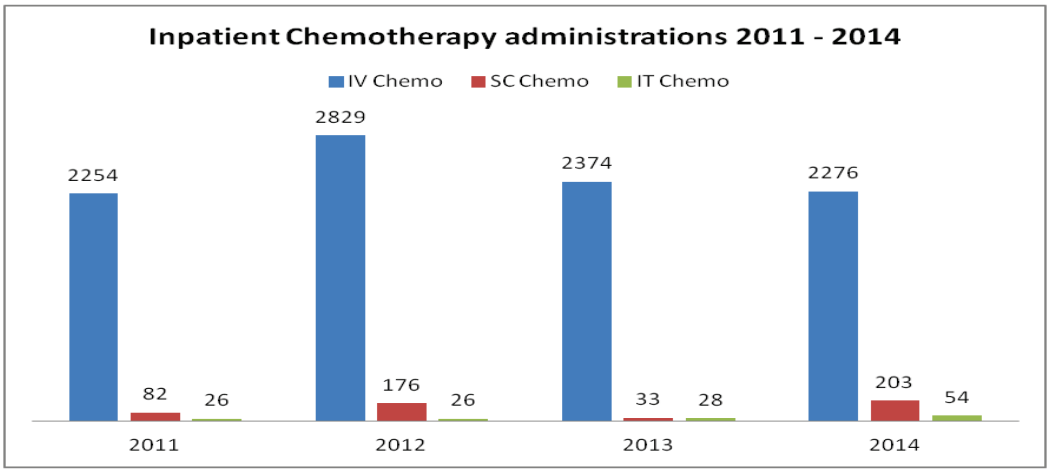
Not diagnosed with cancer in 2014	New	Review	Unscheduled	Total
Breast Cancer	182	962	10	1154
Lung and Thoracic Cancer	61	293	5	359
Colorectal Cancer	71	501	8	580
Urological Cancer	41	249	2	292
Skin Cancer	15	127	5	147
Upper Gastrointestinal Cancer	33	19	180	232
Haematological Cancer	12	117	2	131
Gynaecological Cancer	18	115	3	136
Lymph Node Cancer	17	42	n/a	59
Head and Neck Cancer	16	37	2	55
Neurological Cancer	n/a	n/a	n/a	n/a
Endocrine Cancer	5	17	2	24
Orthopaedic Cancer	n/a	n/a	n/a	n/a
Other and ill-defined Cancer	n/a	n/a	n/a	n/a
Connective Tissue	n/a	n/a	n/a	n/a
Ophthalmological Cancer	1	9	n/a	10
Total	**472**	**2488**	**219**	**3179**

Cancer Elective Unit Data (date source CEU)



Inpatient chemotherapy activity 2011 -2014

Activity	2011	2012	2013	2014
IV Chemo	2254	2829	2374	2276
SC Chemo	82	176	33	203
IT Chemo	26	26	28	54



Mayo General Hospital

The Oncology/Haematology service at MGH continued to deliver a first class outreach service in 2014 under the direction of Dr Paul Donnellan, Dr Greg Leonard and locum consultant Dr. Moutaz Abdelrahman. There are 2 weekly oncology clinics with one haematology clinic and one radiotherapy clinic led by Dr Cormac Small. In addition a weekly oncology ANP clinic takes place.

In 2014 a business proposal was submitted for a haematology RANP and a second oncology RANP. One of the Oncology CNSs commenced a nurse drug prescribing course (one nurse prescriber already in department) and there are plans in 2015 for an RANP to complete the nurse x-ray prescribing course.

For the third year in a row the oncology comfort fund sponsored a family fun day in Westport House for patients with young children/grandchildren. The day was organised by Margaret Nimmo Staff Nurse in oncology. The attendance and feedback was again very positive.

The most significant aspect of the Oncology/Haematology service data at MGH is the increase in activity across all aspects of the service when compared to 2013. Notably, day ward attendances increased by 5.8% and new cancer treatments increased from 232 in 2013 to 249 in 2014 with the total number of OPD attendances comparable with that of 2013.

Activity	Oncology	Haematology
New patients reviewed in OPD	292	107
Total OPD attendances	1764	557
Day ward attendances	4348	
New cancer treatments started (NCCP returns) *excluding supportive therapies e.g. blood products etc*	249	

Sligo Regional Hospital

There are approximately 500 in patients treated per year in a dedicated 15 (escalating to 18) bed Haematology/Oncology Inpatient Ward at SRH. In addition, a dedicated Day Oncology/Haematology Unit treats in excess of 2000 day cases per year. Dr Michael Martin and Dr Rizwan Sheik are the consultant Medical Oncologists and Dr Hodgson is the Consultant Haematologist. This service is supported by a full multidisciplinary team including CNSs, dedicated pharmacists, Social Worker, nursing team and a Clinical Research trials department with one CNS and staff nurse. The Haematology and Oncology services links in weekly with MDMs on specific cancer sites i.e. respiratory, breast, gastrointestinal, genitor-urinary and haematological cancers. The service performance against the NCCP medical oncology KPIs are consistently excellent for 2014. The service relocated to a newly refurbished Haematology/Oncology unit in December 2012, this unit was officially opened on 29th November 2014 by broadcaster and publisher Ms Norah Casey.

Haematology Day Ward Staff at Sligo Regional Hospital
From left: Mairead Grimes Senior Staff Nurse, Jill Cullen CNMII, Olive Anglim Staff Nurse, Jean Gallagher Breast CNS

Challenges

One of the biggest challenges which face SRH in the provision of Haematology Services is the fact that there is only a single Haematology Consultant on site. This has been against the background of an increased workload within the service; a business proposal for a second Haematologist has been submitted nationally. Nursing hopes to progress with the appointment of a RANP in Oncology Haematology within the next few years. The services in SRH have established close links with GUH especially since the establishment of the Saolta University Health Care Group. We look forward to forging greater links in the future and work in collaboration with the NCCP.

Portiuncula Hospital

The oncology service in PHB is part of the Saolta University Health Care Group cancer centre. This service has been in existence since 2001. Patient episodes figures have increased from ~600 in 2001 to over 3,219 in 2014. Treatment and assessment in the oncology day ward is provided by a nursing team. Each member of the nursing team is highly educated and 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. Medical oncologists Dr Silvie Blazkova, a Radiation Oncologist Dr.Jamsari Khalid 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 and sometimes bi weekly basis and a radiation oncology clinic is held each month. The oncology day ward consists of six treatment bays with recliner couches for patients. Patients attending for chemotherapy receive a comprehensive education programme prior to starting their treatment regimene. This ensures that everyone is fully informed about their disease and their drug treatment schedule prior to starting.

Oncology Nursing Staff at Portiuncula Hospital *From left: Vicky Costello, Sally O Connor, Marie Daly and Eilis O'Leary*

Letterkenny General Hospital

Medical cancer services in LGH consist of one inpatient ward (11 beds) which facilitates haematology/oncology patients and a day ward unit which has 11 chairs. There are four examination rooms which facilitate patient review by clinicians and may be utilised to isolate patients with infection. The infrastructure of the day ward is a challenge and is overcrowded daily with minimal space around each patient chair. The day ward sees approximately 30-40 patients a day and, as with GUH, there is a considerable workload resultant from benign haematology patients.

The services for oncology outpatients continue to be held on the LGH campus but services for haematology are currently fragmented as outpatient clinics continue to be accommodated off site since the flood in 2013. The inpatient ward is also in a temporary location since the flood which hampers ability to expand services and facilitate patients with intensive therapies.

There are two Oncology Consultants, Dr Karen Duffy, Dr Jiri Vyskocil and one Haematology Consultant, Dr Ruth Morell providing medical cover for inpatient and day ward activity. There is also a RANP in Oncology and CNSs in haematology, oncology, a CNMII research nurse who provide support to the medical teams, patients and families who attend the hospital.

4.16 Radiation Oncology

Dr Joe Martin
Consultant Radiation Oncologist
Lead Clinician

The Radiation Oncology Department in GUH provides radiotherapy services to patients from the Saolta University Health Care Group. It is fully integrated into the regional multi-disciplinary cancer care teams, the National Programmes for Radiation Oncology (NPRO) and NCCP. It is a nationally-accredited centre for the training of Medical Physicists, Radiation Therapists, Oncology Nurses and Radiation Oncologists. A member of the consultant staff, Dr Joe Martin, was appointed National Lead and Clinical Advisor for radiation oncology for the NCCP in 2014.

2014 saw the welcome approval by the Department for Public Expenditure and Reform (DPER) of funding for the construction and equipping of a new, state-of-the-art radiotherapy centre that will serve the future needs of the West and North-West to the highest of international standards. Enabling works have commenced and are progressing.

2014 was a busy year, with over 1,000 patients treated with External Beam Radiotherapy (EBRT) and 125 treated with brachytherapy, resulting in over 21,000 fractions delivered (cf. Table 1). The department retains a high number of treatments per linear accelerator by national standards. Despite the high activity, the department performed well in terms of performance measures recorded nationally, with over 88% of patients commencing radiotherapy within 15 days of their designated ready to treat date.

Patient participation in clinical trial activity is an indicator of quality, and the department continues to work closely with all Ireland Cooperative Oncology Research Group (ICORG) – offering a number of international trials in radiotherapy. The unit remains committed to offering patients the options to take part in such studies, which often entail state-of-the-art treatment paradigms and meticulous follow-up of outcome.

Within our staff, Ger O'Boyle became the first Advanced Nurse Practitioner in radiotherapy in Ireland. Ger's special interest is in cancers of both the Prostate and Head and Neck. Her work will significantly enhance the scope for capture of patient outcome data, as well as enhancing the role of the nursing profession in radiotherapy. 2014 also saw the appointment of a new CNMII to Radiotherapy, Ann Marie Bohan.

In 2014 we bade a fond farewell to Dr Maeve Pomeroy, Consultant Radiation Oncologist, who retired from the HSE after many years of dedicated service to patients from the West of Ireland. We thank her for her immense contribution and wish her well for the future. Our staff in Physics and Radiation Therapy continues significant Continuous Professional Development (CPD) and research activities. These are extremely important indicators of quality, and are appended toward the end of the report due to their number and variety.

Future activity will focus on maintaining and refining existing standards of care for our patients, while commencing the complex body of work required in preparation for work in the new centre. This will bring significant opportunities for enhanced care for cancer patients within our hospital group.

Radiotherapy Activity 2014 (Data Source: Lantis)

New Patient Referrals to Radiation Oncology	1591
Review Clinics (GUH, SRH, MGH & Portiuncula)	6016
Patients Treated with External Beam Radiation Therapy (EBRT)	1076
No of Radical Patients	677
No of Radical Fractions Delivered	18,664
No of Palliative Patients	401
No of Palliative Fractions Delivered	3,092
Patients Treated - Orthovoltage	36
Patients Treated - Brachytherapy Prostate Seeds	94
Patients Treated - Brachytherapy Gynae	31

Radiation Therapists

- New techniques introduced in 2014 include the introduction of single iso for pelvis and P.A nodes treatment.
- New equipment includes a change of head and neck immobilisation material and bolus material to improve skin apposition.

Radiation Therapists attended the following events:

- The Royal Marsden IMRT/IGRT Course held at the Royal Marsden Chelsea, London in February 2014.
- The All Ireland Radiation Therapy study day held at St James Hospital, Dublin in March 2014.
- The Radiation Incidents & Reporting Workshop, held at St Luke's Hospital, Dublin.
- The Limerick Radiation Oncology study day hosted by University Hospital Limerick Radiation Oncology Department.
- A Radiation Therapist from GUH presented at the European Society for Therapeutic Radiation and Oncology (ESTRO) 33 in April 2014, held in Vienna. The presentation was presented on "Radiation Therapist led Head and Neck OAR (Organs at Risk) Delineation".
- A Radiation Therapist commenced a Masters in Clinical Research in September 2014.

Radiotherapy Nursing

- Development of a transperineal template prostate biopsy service, a new prostate biopsy process developed by leading urology and radiology consultants.
- Introduction of nurse prescribing of medication in January 2014.
- Site accreditation for Registered Advanced Nurse Practitioner (RANP) for Oncology/Radiation achieved in July 2014.
- Registered RANP appointed to post in November 2014.
- Commencement of Nurse Prescribing programme for ionizing radiation (diagnostic) in September 2014.
- All nurses attended the Irish Association for Nurses in Oncology study day and Radiation Oncology Nursing study day.
- Attendance at NCCP prostate cancer Quality and Audit forum.

Radiotherapy Physics

- For patients with cervix cancer, the Physics team commissioned a new Ring & Tandem brachytherapy applicator system to replace the old Fletcher based system. This system is a more efficient method for delivering a brachytherapy boost using High-Dose-Rate (HDR) brachytherapy and is standard in clinics in Europe.
- The Clarity Ultrasound based IGRT (Image-Guided Radiotherapy) system used for daily imaging and verification of prostate cancer patients was upgraded to a Generation-4 mobile cart based system at the end of 2014. This permitted an upgrade of the software also and replaced the IR-camera system. The existing system was at end-of-life. This system is now able to support the newer technology available by the vendor which uses a trans-perineal "autoscan" approach to ultrasound based IGRT.
- An ultrasound based HDR prostate treatment planning system called "Vitesse" was commissioned as part of a project to investigate HDR prostate brachytherapy.
- The Physics team also participated as a Beta-testing site for the Elekta Masterplan treatment planning system. The team tested the OMP V4.5 software release on-site and returned detailed reports to Elekta with recommendations about important user functions to include in the commercially released software.
- A multi-disciplinary team was formed to look at Head-and-Neck cancer treatments. Feedback from a study on head-and-neck treatment replans from the Physics planning team together with feedback from radiation therapists regarding head shells and nursing and oncologist feedback regarding patient nutrition and overall well being during treatment was shared. The group agreed on improvements and pro-active monitoring methods to optimise the treatment journey for head-and-neck patients.
- The treatment planning team increased the number of breast treatments on a shorter fractionation scheme (40Gy in 15 fractions) and has standardised a protocol for this.
- A new 2-D array device for patient specific measurements of complex IMRT treatments was commissioned during 2014 as a replacement for an end-of-life 2-D array used previously.
- There was continued participation in national and international clinical trials, the primary trial being the TROG BIG 3-07 "Randomised Phase 3 study of radiation doses and fractionation schedules after ductal carcinoma inset (DCIS) of the breast.
- Participation in the delivery of the MSc in Medical Physics at NUIG continued in 2014. The Radiotherapy Physics team deliver lectures, labs and practical sessions, treatment planning projects and measurement

demonstrations in radiation physics and radiotherapy physics on this post-graduate course. Three MSc projects based on radiotherapy physics topics were completed during the summer of 2014 also.

Dr. Maeve Pomeroy at her retirement lunch Dec 2014, and Prof Frank Sullivan

Activity Based Funding - A Radiotherapy pilot

Activity-Based Funding (ABF) is a new model for funding public health care which sees hospitals funded in line with the activity undertaken. This means that patient care rather than hospitals will be funded under the ABF model. ABF formally known as Money Follows The Patient (MFTP) was introduced in GUH in January 2014. In the department of Radiation Oncology the following ABF methodology was used:

Costs were broken down as per the hospital's general ledger. Activities within the department were quantified as per the LANTIS Oncology Information System (OIS). A cost value was assigned to each activity by allocating staff time by profession per activity as agreed with leads within the department. Equipment contract costs were divided across activities as relevant. Limitations indentified include the exclusion of capital costs and facilities costs i.e. light, heat, electricity and water.

This costing work pertains to two different methods of irradiating Prostate Cancer, LDR Brachytherapy and IMRT/IGRT.

LDR Brachytherapy Activity Based Funding 2014 (Data Source: Lantis)

Activity	Activity Qty	Total Cost €	Unit Cost Per Patient €
New Patient Visit: 1	5	763	153
Volume Study	6	1,135	227
Brachy Planning Seed	4	219	44
Pre Assess clinic	5	240	48
Permanent Implant Pr	5	19,114	3,823
OTV	1	60	12
CT Simulation	5	616	123
Dosimetry Approval	3	397	79
CT Scan Post Procedure	5	1,250	250
Follow-up Visit	14	1,405	281
Phone Consult	3	48	10
Total	56	€25,245	€5,049

IMRT/IGRT External Beam Activity Based Funding 2014 (Data Source: Lantis

Activity	Activity Qty	Total Cost €	Unit Cost Per Patient €
New Patient Visit	5	763	153
Volume Study	3	568	114
Rad Information	5	358	72
CT Simulation	9	1,108	222
Contouring	7	1,106	221
CT Approval	8	1,027	205
CT Clarity Contours	6	580	116
CT Clarity Approval	6	631	126
Ultrasound Export	5	194	39
Isodose Plan Complex	5	1,350	270
IMRT Dosimetry	5	3,270	654
IMRT QA	5	591	118
IMRT Verify	5	265	53
DRR Generation	5	71	14
Physics Plan Check	5	457	91
Export	5	315	63
Dosimetry Approval	5	661	132
RT Peer Review	5	702	140
External Beam Treatment (EBRT)	185	20,163	4,033
OTV	44	2,720	543
Follow-up Visit	12	1,204	241
Phone Consult	2	32	6
Total	342	€38,136	€7,627

Radiotherapy GOAL Jersey Day October 2014
Radiation Therapists, Medical Physics & Clerical Staff

Back row: Elaine Burke, Mike O'Connor, Caroline Lannon, Sinead Cleary, James Murphy, Christoph Kleefeld
Middle row: Bernie Boulous, Triona Brosnahan, Annie O'Hara, Riona Walsh, Rebecca O'Donovan, Orla Smyth, Sean O'Connor, Michelle Comer, Breda Keville, Joe McManus, Anysja Zuchora
Front row: Linda Coleman, Edel O'Toole, Stephen Coyne, Laura Kennedy, Margaret Ward, Catherine Flaherty

4.17 Palliative Medicine

Dr Dympna Waldron
Consultant in Palliative Medicine
Lead Clinician

Dr Eileen Mannion, Dr Camilla Murtagh, Dr Sharon Beatty, *Palliative Consultants*

In 2014 Palliative Care Service delivery was enhanced by the implementation of a regional Palliative Medicine Consultant rota providing 24/7 availabity for specialist advise for palliative care patients in GUH, MGH, PHB and RH.

In addition we were delighted by Dr Sharon Beatty's appointment as a temporary Consultant in Palliative Medicine. Her initial part time post has now been extended to a full time post based 4 days per week in GUH and 1 day per week in PHB to meet the growing palliative care referrals across the region. In addition our submission for a 4th Palliative Care CNS post in Galway University Hospital was passed at the ECC in April and we would be very keen for this post to be filled in the near future as our Palliative Care CNS play a vital role in patient and family care and support in addition to a crucial role in communication with other disciplines and home care teams to ensure a seamless transition from the hospital setting to care in the community.

In April 2015 our CEO Maurice Power met with a delegation from the Irish Hospice Foundation to discuss the appointment of an End of Life coordinator to hospitals within the Saolta University Health Care Group to ensure excellence in end of life care across the hospitals within the Group.

Galway University Hospitals Palliative Care Referrals 2014 (Data Source: Palliative Care GUH)

Diagnosis Referrals	No. of Diagnosis
Malignant Diagnosis	815
Non Malignant Diagnosis	368
Total Referrals	1,183

Education / Research

In 2014 the Department of Palliative Medicine in Galway University Hospitals supervised 1 PhD and 1 MD and I would like to congratulate Ms Veronica Mc Inerney and Dr Miriam Colleran on their recent conferring in NUIG in June 2015 for their bodies of work. Ms Mc Inerney's PhD Thesis was on ' Using *Quality of Life Information in the Clinical setting: A Randomised Controlled Trial of Using Subjective Quality of Life and Symptom Outcome Measures as a Clinical Tool in Patients with Advanced Cancer '* and Dr Miriam Colleran's MD Thesis was on '*Impact of Advanced Cancer on Sexuality'*.

A number of research projects and audits are ongoing.

Planning is currently underway for Our *5th Cuisle Beatha International Palliative Medicine Conference* in 2015.

The establishment of the Specialist Palliative Care Service in Portiuncula Hospital Ballinasloe

PHB Palliative Medicine Consultants: Dr Camilla Murtagh / Dr Sharon Beatty

The specialist palliative care service was established in PHB in 2014. The team comprises one full time CNS and has two consultant lead ward rounds per week. The service is supported by a regional consultant on-call rota at weekends. The service has an active role in multidisciplinary care in Portiuncula Hospital Ballinasloe with the establishment of a joint oncology and specialist palliative care OPD.

Portiuncula Hospital Ballinasloe Palliative Care Referrals July – December 2014		
Malignant Referrals	28	PHB Palliative Medicine Consultants: Dr Camilla Murtagh and Dr Sharon Beatty
Non Malignant Referrals	42	
Total Referrals	70	

Roscommon Hospital Palliative Care Referrals 2014		
Malignant Referrals	96	RH Palliative Medicine Consultants: Dr Dympna Waldron / Dr Eileen Mannion/Dr Sharon Beatty
Non Malignant Referrals	71	
Total Referrals	167	

Mayo General Hospital Palliative Care Referrals 2014		
Malignant Referrals	319	MGH Palliative Medicine Consultant: Dr Ita Harnett
Non Malignant Referrals	171	
Total Referrals	490	

Sligo Regional Hospital Palliative Care Referrals 2014		
Malignant Referrals	398	SRH Palliative Medicine Consultant: Dr Cathryn Bogan
Non Malignant Referrals	154	
Total Referrals	552	

4.18 Cancer Nursing

Jean Kelly
Chief Director of Nursing & Midwifery
Saolta University Health Care Group.

Jerry Nally
Assistant Director of Nursing for Medicine and Cancer
Saolta University Health Care Group

Novice to Expert; Succession Planning in Cancer Nursing Services 2014

As Chief Director of Nursing, I am delighted to contribute to the Saolta Cancer Centre Annual Report 2014. Nursing in Cancer Service is a valued resource and plays a key role in delivering high quality care to support patients throughout their cancer journey

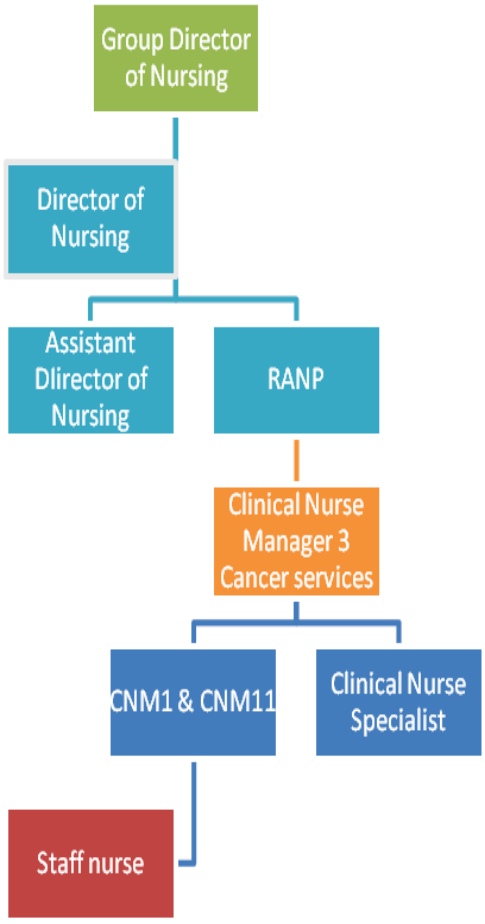
Oncology was one of the first disciplines to develop the Clinical Nurse Specialist role and there are now CNS working in all areas of cancer care. There are also more opportunities for the development and involvement of the Advanced Nurse Practitioner (ANP) in the delivery of care to cancer patients.

In Saolta there are over 300 staff nurses involved in the direct provision of care in Cancer Services many of these nurses have years of valuable experience and a higher diploma in oncology. I am always conscious that the staff nurses contribution to the cancer patient's journey is never forgotten. Jerry Nally ADON for Medicine and Cancer services and Sheila McCrorie, CNMIII Cancer Services have always emphasised the need to develop staff nurses in order to deliver expert care to our patients.

Cancer nursing has undergone substantial change in personnel throughout 2014. In order to plan and deal with the high turnover in cancer nursing there is a continuous emphasis on succession planning in the Cancer Division. This assists nursing management in ensuring staff are in place to improve the patient's health and well-being and develop clinical effectiveness. According to McConnell (2006) succession planning is "the process of identifying people who could presently move into key positions or could do so after specifically targeted development occurs". This was evident throughout the service in 2014 with many changes from directorate level through to the nursing service at the patient's bed side. (*See Fig 1*)

Recognising the importance of nursing staff development from the novice to the clinical expert is a daily challenge, and developing programs that identify, develop, motivate and allow staff to transition into appropriate positions is a key objective of the Cancer Nursing Division.

Fig 1



Novice to expert in Cancer Services

In GUH the Cancer nurses progression from the novice practitioner through to clinical expert is given priority by nursing managers. This is achieved by developing plans that focus on a number of strategies that enable nurses to successfully progress to expert nurse and plan their career options.

The novice nurse in the Cancer Services is given a detailed orientation plan that outlines their job description and role expectations, orientates them to the unit and the Multi Disciplinary Team (MDT). Most importantly, it allows them to identify their learning needs and opportunities. Furthermore, within the Cancer Services they work with a named mentor who provides on the ground support and guidance and they are supported by a clinical facilitator who provides education and training in the clinical area in order to build on and support their clinical knowledge and skill.

Rothwell and Poduch (2004) promote the concept of "technical" succession planning in order to provide specialised knowledge. This concept is very evident within cancer nursing in GUH and is evident from the support that nurses can expect from their managers within nursing. Nurses are supported both academically and financially.

The Cancer Nursing philosophy is always to provide the client with a multidisciplinary approach to care. Advancement in cancer treatment occurs on a daily bases and requires nurses to maintain and update their knowledge and skill. Appraisal plans are the norm within the Cancer Nursing Division and provide staff with a formal opportunity to develop plans to progress their career and professional development opportunities. The nurses have the opportunity to partake in weekly education sessions on the units, facilitated by their unit managers. This supports the nurse in their journey to become a competent practitioner. All staff complete internal rotation program in the Oncology/ Haematology Day ward/ Radiotherapy and Inpatient units.

2014 saw the introduction of the In Charge Study Day for the competent nurse. The purpose was to afford nurses interested in taking charge the opportunity to understand the principles of the role and guiding them in the absence of the unit manager in developing their skills.

Cancer Services nursing is focused on succession planning, continuing to support nurses in education and development, in order to meet the needs of patients. This focus enhances our efforts to attract and retain staff.

....."Experience is not the mere passage of time or longevity"……

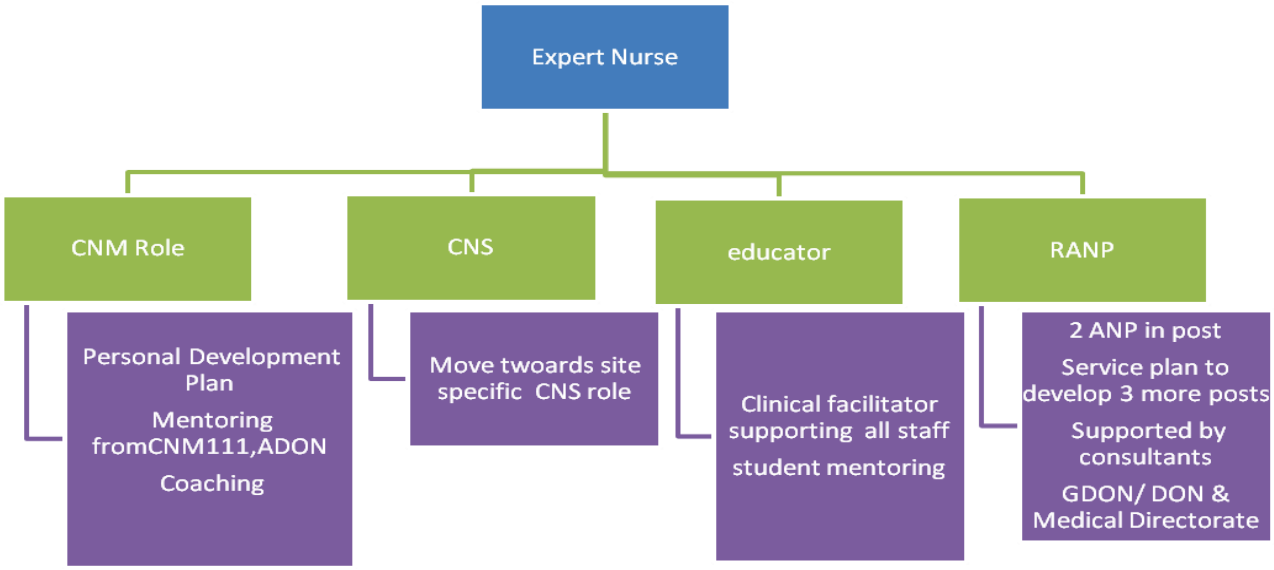


Fig.2

Registered Advanced Nurse/Midwifery Practitioners (RANP/RAMP)

The four core concepts for the RANP/RAMP as set out by the National Council for The Professional Development of Nursing & Midwifery (2008) are as follows:

1. Autonomy in Clinical Practice
2. Professional/Clinical Leadership
3. Expert Practitioner
4. Researcher

RANP Oncology - Dr Janice Richmond, LGH

The clinical role of the Registered Advanced Nurse Practitioner in Oncology is mainly in follow-up review of patients following treatment for a solid tumour. The current schedule for clinics is outlined as follows:

Monday, Tuesday & Thursday afternoons:

- ANP nursing clinics

Wednesday afternoon:

- ANP attends the Oncology OPD and reviews patients at the clinic.

Friday morning:

- Telephone follow-up clinic
- Patients can attend in a less clinical capacity (pre-arranged) for psychological support

The above equates to approximately 1000 patients in 2014. There are other aspects to the RANP role such as education, research and leadership which are a continuous part of the non-clinical weekly work.

One aspect of the RANP Oncology care/caseload is audited annually by the RANP and the results are collated and submitted to Nursing Management and to the Oncologist in LGH. The RANP Oncology is involved with some aspects of the NCCP work and is a member of a number of committees within the NCCP. Education of staff is also a major part of the RANP work and is ongoing with educational initiatives to community nurses, junior medical staff and general nursing staff. In 2014, the RANP Oncology in conjunction with the Centre for Nursing and Midwifery Education led the course entitled 'Nursing Management of Systemic Anti Cancer Treatments'. This 4-day programme is delivered by the senior oncology/haematology staff and aims to equip oncology/haematology nurses with the necessary knowledge and skills to administer systemic anti-cancer agents and safely care of patients receiving such treatments.

5.0 Pharmacy Services

Andrew Barber,
Head of Pharmacy

Robert Snedker, *Pharmacy Aseptic Manager*
John Given & Caroline Whiriskey, *CRF Trial Pharmacists*

The pharmacy supports cancer patients in GUH with five distinct but complimentary services:

1. A technical service which provides ready to administer injectable chemotherapy, primarily cytotoxic anti-neoplastic medicines but also other agents such as mono clonal antibodies. All medicines are prepared to a prescriptive order, using clean room technology assuring the microbiological integrity of the final preparation. The oncology nurse is therefore protected from unnecessary drug manipulation at the patient side and can administer the medicine in the knowledge that it has been aseptically prepared. The technical service currently prepares approximately 1400 items per month, making it one of the busiest pharmacy aseptic units in the country.

2. A clinical service, which is managed separately from the pharmacy service, yet has a very close working interface. It is best described as a 'near patient' service and is similar to that provided by clinical pharmacists to other specialities in the hospital. This service is currently involved in improving chemotherapy protocols to meet the needs of the ambulatory care nurse led service and also in supporting prescribers in making effective and timely decisions in the prescriptive orders.

3. A clinical trials service, cancer chemotherapy being a major component of their work. Their role involves the management of clinical trials medicines, their receipt, safe storage, rigorous legal and investigational documentation and the supply of trial medicines, either to the technical service for preparation or in the case of oral cancer medicines, directly to the patient.

4. A dispensing service for oral chemotherapy medicines that are supplied on a 'compassionate basis' (typically after a phase III trial has finished but before full availability as a licensed medicine has been achieved), or available licensed medicines waiting for HSE funding approval (High Tech scheme) whereby the cost if obtained from a community pharmacy would be prohibitive to the patient (typically €5000 to €7000 per month).

5. The more traditional supply of other medicines, and pharmaceuticals required by the cancer wards and ambulatory day care.

6.0 Health and Social Care Professionals (HSCP)

6.1 Physiotherapy

Norah Kyne
Temp Physiotherapy Manager III

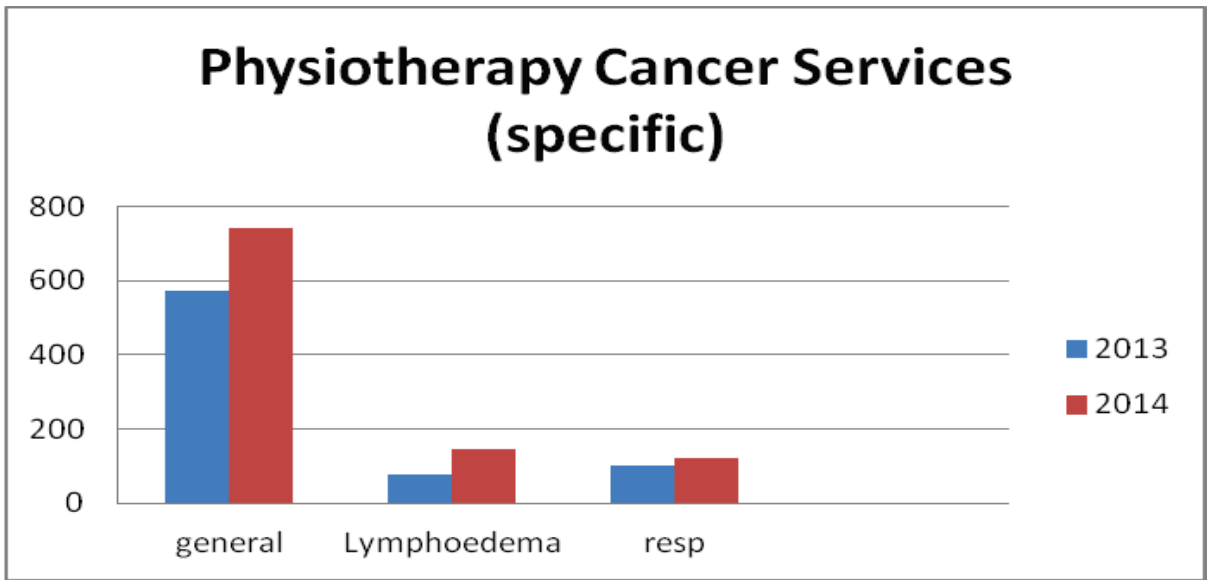
Left : Norah Kyne, Temp Physiotherapy Manager III GUH, Aoibheann Daly, Senior Physiotherapist Radiotherapy, Fiona Melia, Temp Senior Physiotherapist in Oncology

Right: Niamh Duignan Senior in Respiratory Physiotherapy, MPH

The Physiotherapy service continues to provide a service to patients through their cancer care pathway.

Activity has increased for Physiotherapy within the cancer specific services, as per graph below. This is also relevant for the cancer cases within the general services of surgical, medical, orthopaedic and Obs/Gynae services, resulting in increased activity and complexity of the Physiotherapy caseload.

Physiotherapy assessment for patients admitted under Respiratory Service, Dr Breen for day case investigation of lung cancer in Unit 8 Merlin Park. These patients are identified at the Rapid Access Lung Clinic GUH and referred and admitted to Unit 8 for further investigation as day patients. Physiotherapy is provided for exercise tolerance assessment. Average patient number is 10 per month. In addition, Outpatient Respiratory Physiotherapy is provided for patients with post radiation pneumonitis.



Specific Physiotherapy Cancer Services 2014 (Data Source Physiotherapy GUH)

Outside of direct patient care and within the current resources, Physiotherapy strives to incorporate changes as per best practice to ensure optimum patient care and create awareness of the value physiotherapy intervention brings to the cancer care pathway

Continued Professional development in this service area in 2014:

- Supportive Skills in Cancer Care
- Lymphoedema Kinesiology Taping
- Practical Management of Breathlessness in Palliative Care
- 2 day Lymphoedema workshop.

Developments and achievements for Physiotherapy in cancer for 2014 include:

- Increase of uptake for pre and post operative physiotherapy for patients post prostatectomy, with numbers increasing from zero to 21 patients from May 2014 through December 2014.
- Lung cancer survivors are identified as a group suitable for lung cancer survivorship classes. We plan to run these when facilities are available.
- Plan for dedicated breast care pathway in liaison with Symptomatic Breast Unit commenced.
- Lecture to nursing participants in the School of Nursing and Midwifery NUIG, on Management of Lymphoedema, 14th January 2014.
- Participation in National Lymphoedema Awareness Day in liaison with Daffodil Centre, 6th March 201.4
- Invitation to and presentation given on the topic of “Living with Lymphoedema”, at the Irish Cancer Society National Conference in the Aviva Stadium, 20th September 2014.
- Successful bid, in liaison with the Irish Society of Chartered Physiotherapists, for funds to host a Manual Lymphatic Drainage Review course in GUH, facilitating maintenance of this competency for Physiotherapists involved in this service. Course dates 3rd and 4th October 2014.

6.2 Oncology Social Work

Máire Lardner
Medical Social Worker, Oncology

Rachel Macken, *Senior Social Worker, Radiotherapy*
Lorraine Keegan, *Senior Social Work Practitioner*

The Oncology Social Work team provides support, advice and counselling (if necessary) to both inpatient and outpatients at GUH and also provides a broad range of services to clients and their families. We refer where necessary to appropriate statutory/voluntary services and agencies with the community to assist patients in returning to home independently or alternative options. The Medical Social Work Department respects the dignity and individuality of each patient, adhering to professional standards and ethics while acknowledging the ethos of Saolta hospital group.

Services provided by the Oncology Social Work team include:

- Psychosocial assessments.
- Supportive intervention e.g. elder abuse, child care and protection, homelessness, crisis management (e.g. domestic violence, addiction).
- Individual counselling (including loss and grief, altered body images, stress and coping resources).
- Care planning/discharge planning.
- Advocacy and mediation, legal issues.
- Networking/liaising with statutory and voluntary services/agencies (including hospice/palliative home care teams and cancer support centres) on behalf of both patients and their families.
- Bereavement and end of life care.
- Facilitating family meetings /case conferences.
- Educational input e.g. to new members of staff, scheduled ward nursing talks, linkage with students in NUIG.

The Oncology Social Work team are committed to inter-disciplinary working (attending weekly MDTs in medical and radiation oncology) and focus on ensuring that clients have adequate intervention through services provided during their treatments at GUH. This can involve completing a thorough psychosocial assessment with the patient to assess their need, ADL's and safety prior to discharged, referring as necessary patients to local community supports and services e.g. Public Health Nurse, local home help co-ordinator or for respite/convalescence. These services are an essential part of enabling many patients return home as some may feel fatigued or have side effects following treatment and they require time to recuperate and recover.

Social Work continues to have an important role with regard to working with family members, especially being a link for the multi-disciplinary team in communication with the family in assessing the family's ability to cope with the patient's particular needs and ensuring that they are linked into the appropriate community services. This can involve basic social work support, task-centred casework, guardianship advice, financial stress, mental health, conflict management as assistance in navigating the increasing bureaucratic systems supporting our clients groups whether under or over 65's (e.g. medical cards, home care packages, social welfare, long-term care, disability services etc).

During 2014 approx 1,083 new patients were referred and assessed by the Oncology Social Work Team

	Medical Oncology	Radiation Oncology
New	614	576
Review	357	297
Total number of patients	1083	

**A number of new patients return and are seen as a review patient*

Our staff members continue to update their skills and knowledge and keep up to date with social work issues (team members are affiliated with Irish Association of Social Workers and Family Therapy Association of Ireland) and are represented at National Social Workers in Oncology meetings. Statutory registration of our profession under Coru took place in 2014 so the introduction of Continuous Professional Development (CPD) is now essential for all Social Workers in order for us to maintain our standards of practice. In terms of service development (bearing in mind GUH's status as a Centre of Excellence for Cancer Services), our Head of Department continues to submit proposals regarding the crucial need for a dedicated social work post both within haematology and palliative care respectively. The Oncology Social Work team will continue to lobby for these priority posts in 2015 given the complex needs of these clients groups.

6.3 Speech and Language Therapy

Gerardine Keenan
Speech and Language Therapy Manager

At UCHG, Speech and Language Therapy has involvement in delivery of assessment and treatment and management of swallowing and voice and speech difficulties that may occur during or after radiotherapy.

The Speech and Language Therapy department 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 attend weekly MDT meetings with the treating Radiation Oncology consultants, dieticians, nurses and radiation therapists to ensure there is a holistic picture of the patient with Head and Neck Cancer being taken care of from all aspects of radiotherapy.

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 and decided, again with representatives from ENT, Oral Maxillofacial Surgery, Radiation and Medical Oncology as well as Radiology.

Approx 300 patients are seen by Speech and Language Therapy during the year based in the Radiotherapy department, where staffing allows. The Speech and Language Therapy in GUH also provides a service to General Oncology needs to the in-patients admitted to the wards on both Medical and Radiation (non head-and-neck) services. We also hold weekly clinics (hopefully, bi-weekly from 2016) 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.

While a dedicated Speech and Language Therapy service is allocated for Radiotherapy and Head & Neck cancers, general Oncology referrals are routinely seen on referral under General Medicine / Surgery.

6.4 Dietetics

Grainne O'Byrne
Dietetics Manager

The Nutrition and Dietetic Service at GUH is involved in the care of the cancer patient through the complete care pathway. Nutrition should be part of the core service offered to patients undergoing all cancer treatment from diagnosis to rehabilitation. Post-operative dietetic care is part of the core service available to patients following any major surgical intervention for cancer, from potential stay in the critical care unit through to the wards and discharge.

52 patients with a cancer diagnosis were discharged from GUH on Home Enteral Feeding in 2014. This process involves collaboration between the hospital dietetic team, community dietetics team and the family to ensure patient safety/comfort at home. Patients discharged on Home Enteral Nutrition are transferred to the care of the Community Nutrition & Dietetic Service, if available. This is an increase on the 35 patients discharged on HEN in 2013. These patients require ongoing dietetic intervention to ensure adequate nutritional intake.

The radiation oncology dietitian focuses predominantly on head and neck patients who are at huge risk of malnutrition and weight loss, which, if not monitored can lead to delays in treatment and recovery. Regular dietetic monitoring of head and neck cancer patients in GUH, during and after treatment, is paramount and in line with international guidelines. Close links with such patients has meant that patients do not necessarily need admission for initiation of enteral feeding as it can be initiated in the out-patient setting.

Dietetic access for all haematology and oncology patients is vital as patients can lose increased amounts of weight, including muscle mass, prior to their admission and commencement of treatment. This can be due to a reduced intake, the disease process or a combination of both and this can have a major impact on their response treatment and recovery. Already 1 in 3 patients are malnourished on admission to hospital, impacting on the length of their hospital stay.

GUH: Nutrition and Dietetics Input to Cancer Services 2014 (Data Source: Dietetics)

Speciality	Direct	Indirect	Individual Patients	New Patients	Return
Oncology	13,138/219hrs	13,127/ 219hrs	238	156	566
	438 hrs				
Haematology	9907/165hrs	10,600/178hrs	196	116	505
	342 hrs				
RRx	12247/ 204hrs	11,759/ 196hrs	283	161	479
	400 hrs				
Surgical Cancer	5409/90hrs	7606/ 127hrs	84	56	3320
	217 hrs				
Total	1397 hrs		801	489	4870

LGH: Nutrition and Dietetics Input to Cancer Services 2014 (Data Source: Dietetics)

	Under Haematologist		Under Oncologist	
	New	Review	New	Review
Inpatients	24	32	59	99
Oncology/Haematology Day Services	8	38	33	179
Total	32	70	103	285

6.5 Occupational Therapy

Pauline Burke
Occupational Therapy Manager

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 the community (PCCC) social services regarding provision and follow up.
- Acute interventions and rehabilitation to maximise functional performance in everyday activities
- Provision of specialist advice in adapting lifestyle 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

Occupational Therapy 2014 Activity Levels (Data Source: Occupational Therapy GUH)

Year	NEW *	Total Patients	Staff Contacts	Activity Units *	WTE *
2014	290	307	455	1944	0.4 WTE

**The above figures only account for Cancer patients referred to Occupational Therapy. Each patient is assigned 15mins. 2014 service was on an essential priority basis only secondary to staffing levels within the Occupational Therapy team with 0.4 WTE OT available to provide cover in 2014.*

7.0 Health Promotion Service

Laura McHugh
Health Promotion Officer, HSE West

Health Promotion staff in GUH concentrate efforts on implementing evidence based strategies to improve the health of the hospitals patient population across disciplines and throughout the organisation.

Health Promotion staff run brief intervention training courses for smoking cessation, which equip staff with skills and knowledge to structure brief conversations with their patients in relation to smoking. Three training courses were delivered in GUH in 2014.

GUH became a Tobacco Free Campus in February 2012 and an ongoing implementation plan is in place. Actions concentrate on supporting patients who smoke whilst in hospital through the prescribing of nicotine replacement therapy during their inpatient stay, providing intensive one to one cessation support with smokers who wish to make a quit attempt whilst in hospital or after they go home. In exceptional cases staff and patients are supported in arranging exemptions for patients to smoke in a designated area.

Health Promotion supports the promotion and communication of national services and campaigns locally through BreastCheck, CervicalCheck, BowelScreen and the Irish Cancer Society Daffodil Centre. In partnership with the Daffodil Centre and other specialist staff, an annual Health Information Awareness Plan for highlighting disease specific awareness days is developed with management

.

8.0 Clinical Trials

Research activity has grown significantly over the past 10 years at Galway University Hospital which has led to affiliations 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. The Health Research Board, Clinical Research Facility Galway (HRB-CRFG) is a joint collaboration between the Galway University Hospital, The National University of Ireland Galway and the Health Research Board with its primary objective 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. There is a significant translational research programs in cancer undertaken by Professor Kerin's and his research team.

Early phase clinical studies constitute an important part of our cancer research activity. Professor Michael O Dwyer is leading nationally in conducting Phase 1 Clinical Trials in Haematology and in the development of a national blood cancer research network putting GUH on the map internationally in terms of delivery of service and standards in research.

As the national and international clinical research enterprise expands, 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 2014, 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 total there were 14 therapeutic cancer trials initiated in 2014 in addition to the exiting studies previously opened amounting to a total of 37 clinical trials for the treatment of cancer open by year end 2014. The total number of patients actively participating in cancer clinical trials at GUH in 2014 was 881 Clinical trials were available to patients with cancers in the following disease areas Gastrointestinal, Haematology Multiple Myeloma, Lymphoma, Myelofibrosis, Breast, Melanoma and Gynaecology.

New Patients Accrued to studies 2014: 126 (205 patients referred for trials)

Indication	Number of Patients accrued 2014
Breast	48
Lung	1
GI	6
Gynae	1
Melanoma	1
Haematology	7
Radiotherapy	5
Translational	28
Total	97

Total No. of Patients on Clinical Trials (end of Dec 2014)

	Number of Patients
On treatment	238
In Follow Up	423
Translation	220
Total	881

9.0 Cancer Research

NUI Galway is the academic partner of the Saolta University Health Care Group. With over 17,000 students and more than 2,400 staff, it has a distinguished reputation for teaching and research excellence. Cancer biology and therapeutics is a strategic research priority at NUI Galway and over the last number of years the partner institutions have built a strong team of internationally recognised basic and translational cancer researchers and clinicians.

9.1 Clinical and Translational Research Facility – The Lambe Institute

Construction work commenced on the NUI Galway's €20m Clinical Research Facility and Translational Research Facility (CRF-TRF) in September 2013. The building will facilitate cutting-edge medical research side-by-side with patient care in Galway University Hospital. This sharing of medical expertise and accommodation including HSE in-patient facilities will help inform new strands of clinical research. The completion of this building is due in early 2015.

The TRF building is located on the grounds of GUH and is directly adjacent to the University's Clinical Science Institute, GUH's Critical Care Facilities, Ward Accommodation Block and the Maternity Wards.

The major benefits of this facility include the ability to provide access to cutting-edge clinical trials and access to novel therapies for patients in the West of Ireland. Clinical care provided in a research-intensive environment has been proven internationally to result in the best patient outcomes. As a result, patient care will improve, and the ability of our hospital to attract and retain the very best medical and allied health staff will be improved.

9.2 Breast Cancer Research

The laboratory research group, based in NUI Galway, is primarily funded by Breast Cancer Research and researchers 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, in the USA, UK and Ireland. Locally, at NUI Galway, a strong partnership exists with REMEDI and various other academic research units, including Psychology, Physics, Pathology, Biostatistics and Health Economics. The clinicians in the Symptomatic Breast Unit are all research active. They contribute to and lead some of the major research outputs. The laboratory research team consists of senior scientists and postgraduates, completing either Masters or PhD degrees. Many of these graduates are developing a special interest in breast cancer research and management. The research is underpinned by a large cancer biobank.

9.3 Breast Cancer Genetics

In April 2014 multiple publications from a large body of international collaborative research work were reported in *Nature Genetics* involving extensive analysis of 10,052 breast cancer cases and 12,575 control cases of European ancestry. The results analysed more than 200,000 SNPs (single nucleotide polymorphisms) and showed that 41 of these are strongly associated with breast cancer susceptibility. In addition, genetic links between breast, prostate and ovarian cancer were identified. The study, a collaboration involving multiple international research centres and genetic consortia, is the largest genetic association study in cancer to date. Professor Michael Kerin and Dr Nicola Miller of the Discipline of Surgery contributed to these studies.

9.4 Postgraduate Research

Research in 2014 focussed on the study of circulating microRNAs, the role played by mesenchymal stem cells in tumour targeting and the inheritance of breast cancer risk. Ten medical undergraduate students took part in the summer research programme under the supervision of postgraduates and senior researchers. Students were funded by the Health Research Board, the Wellcome Trust and Breast Cancer Research. Funded by Breast Cancer Research the following researchers were conferred with doctoral degrees by NUI Galway.

From left: Dr Niamh Hogan MD and Dr. Peadar Waters MD

From left: Dr Sonja Khan PhD, Dr Claire Glynn PhD and Dr Ailbhe McDermott PhD and Dr James Ryan PhD (not pictured).

Dr Máire Caitlín Casey (MD researcher) won the audience prize at the NUI Galway *Threesis* final in November and Killian O'Brien (PhD researcher) was awarded the third judges prize (pictured right). *Threesis* is a public outreach research initiative where researchers present their work in three minutes and three slides.

Dr Terri McVeigh (PhD researcher) was awarded a Health Research Board SpR Fellowship in Clinicall Genetics and is continuing her breast cancer genetics research. In May 2014 she coordinated a successful "DNA Drive" recruiting over 900 healthy volunteers to her study. Terri was the winner of the Best Paper - Irish Journal of Medical Science at the RAMI Doctor Awards with her paper "Familial breast cancer genetic testing in the West of Ireland". Terri also took third place in the Clinical Genetics Society SpR Poster Prize at the British Society of Genetic Medicine meeting.

Killian O'Brien (PhD researcher), won the Higher Education Authority *Making an Impact Competition 2014*, a competition aimed at demonstrating the impact of translational research to the public.

Dr Doireann Joyce (PhD researcher), pictured left, won the Research Medal at the annual Sir Peter Freyer Surgical Symposium on September 5th 2014 for her PhD research examining exosomes in breast cancer.

9.5 Undergraduate Research

There is an active Summer Student Research Programme in the College of Medicine, Nursing and Health Sciences. Dr Rosin Dwyer took over the role of Chair of the Undergraduate research Committee in September 2014 and convened the annual College of Medicine, Nursing and Health Sciences Research Day on October 24th.

College of Medicine, Nursing and Health Sciences Undergraduate Research Day 2014 winners:

- James P Murray Memorial Gold Medal - Gerard Browne
- Oral presentation runner up prize - Orla Hennessy
- "Students Choice" prize - Robert Mulligan
- Poster presentation prize - Ella Cahalan

10.0 Cancer Charities: Patient and Research Support

10.1 Breast Cancer Research

www.BreastCancerResearch.ie
091 893888

This national organisation has funded breast cancer research at NUI Galway since 1991. Professor Michael Kerin is Research Director of the laboratory. Breast Cancer Research funds several research programmes. The research team are currently investigating the presence of biological markers involved in the detection, development and spread of breast cancer. Since 2004 the focus of the Research Programme has been on personalised medicine and the individual standard of cancer care. Notable developments have involved the funding of Translational Research facility at the GUH site, the funding of multi MD, and PhD students and post doctrinal researchers. The research programme is based around a cancer Biobank and a data base stretching back to the early 1990's.

The research programme also provides career development opportunities for summer medical students, through its Summer Research School for undergraduates. In 2014 there were six medical students supported for eight weeks over the summer period. It also contributes greatly to the research metrics of NUI Galway and the Saolta University Health Care Group.

Breast cancer research is dependent on its many volunteers both locally and nationally, their support is vital to the continued development of the research programme.

Surgery Department Breast Cancer Research Team
Back Row: Dr Andrew McGuire, Dr Micheal Newell, Dr James Brown, Killian O'Brien
Middle Row: Dr Sonja Khan, Dr Roisin Dwyer, Emer Hennessy, Professor Michael Kerin
Front Row: Dr Terri McVeigh, Claire Glynn, Dr Nicola Miller, Dr Maire Caitlin Casey, Dr Doireann Joyce, Eimear Ramphul, Dr Aoife Lowery

Cancer Biobank

The Discipline of Surgery at NUI Galway has developed a cancer biobank with the financial support of Breast Cancer Research. The Cancer Biobank has received ethical approval from the *GUH Clinical Research Ethics Committee* and patients are requested to sign a consent form in order for specimens to be collected. This consent form has also received ethical approval.

The biobank is vital resource for our researchers to have access to clinical samples in order to investigate the various biological markers of cancer. The specimens stored in our biobank are used by researchers and our official collaborators at research institutes nationally and internationally. Specimens are collected from patients from several hospitals around Ireland, e.g. Beaumont, St James', Sligo, Mayo, Letterkenny, and Galway.

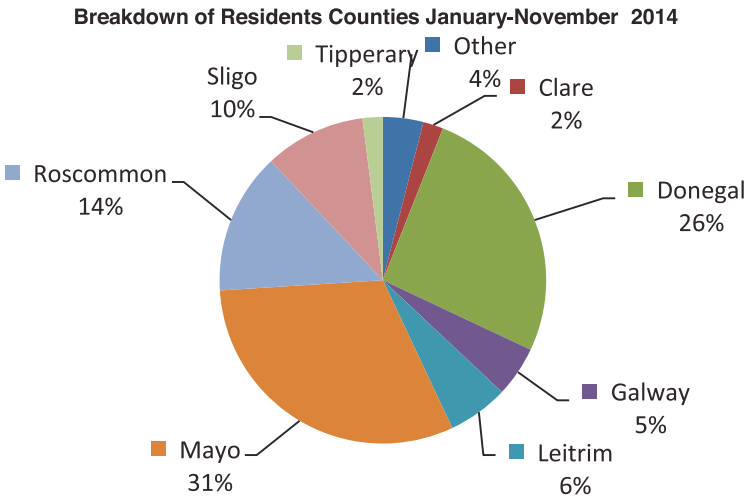
10.1 Cancer Care West

091 540040
www.cancercarewest.ie

Inis Aoibhinn is located on the grounds of UHG and provides accommodation to patients undergoing radiotherapy treatment. The residence provides a "home away from home" environment for patients. It comprises 33 ensuite bedrooms and has facilities for a patient's family member or guest to share.

Cancer Care West Support Centre Services

	Number of Patients
Psychology	591
Seen in hospital	243 (300 hours)
Oncology Information	468
Reflexology	160
Yoga	93
Massage	159
Art Class	38
Tai-Chi	69
Exercise	58
Nutrition	44
Benefits Advice	175



The Cancer Care West Support Centre has been in operation since May 2009.

During 2014, the centre was visited over 7,100 times by 1,401 people affected by cancer. This figure does not include people who attended training events or public talks at the centre. If these figures are included, over 1450 people accessed the centre during 2014. Most of the people who used the centre availed of individual services, including psychology, oncology information, benefits advice and complementary therapy. This includes 188 residents of Inis Aoibhinn who find the support services a very useful addition to their radiotherapy service.

The need for a psycho-oncology service at GUH has become ever more apparent during 2014. During the year 243 patients were seen in the hospital, representing an almost 100% increase on 2013. We consider this one of our most essential services with psychological distress due to cancer diagnosis, being the biggest reason for referral.

A significant proportion of clients using the service are at least two to four years post treatment. This is consistent with the findings of the *Cansurvivor Report* published by the NCCP and the HSE East Region. In a survey of the needs of cancer patients, the need for medium to long-term support was highlighted often up to six years post treatment. This continues to be one of the strengths of the CCW Support Centre in that it is community based and not in the hospital. A model is therefore emerging of marrying traditional cancer support centre services with more formal psycho-oncology services.

During 2014 Inis Aoibhinn provided over 7,000 bednights to 402 patients and their families. Inis Aoibhinn supports families from all over the West of Ireland, including counties Galway, Clare, Donegal, Leitrim, Limerick, Mayo, North Tipperary, Roscommon and Sligo. Also, during 2014 Cancer Care West provided support to 13 families through our Patient & Family Support Scheme.

10.3 Irish Cancer Society

Patient Support

The Irish Cancer Society Daffodil Centres provide information and support services in Letterkenny and Galway. The Daffodil Centres are part of the Cancer Support Service and there are now 13 Daffodil Centres in Ireland.

They provide advice, information and support to anyone worried about any aspect of cancer-prevention, early detection, diagnosis, treatment and care. They provide information and support to patients and relatives as well as the general public. In 2014 Letterkenny Daffodil Centre dealt with 646 enquiries from people with questions and concerns about cancer. Galway dealt with 902 enquiries. The Daffodil Centres also ran various cancer awareness and information stands which 639 people attended in Letterkenny and 527 attended in Galway

Volunteer Driving Service

The Volunteer Driving Service (formerly Care to Drive) is operated by the Irish Cancer Society and available to patients in Galway, Mayo, Sligo, Donegal and Roscommon areas travelling to Galway, Sligo or Letterkenny for chemotherapy treatment. The figures for 2014 are as follows:

Hospital	No of Clients	No of Bookings	No of Drivers	Claimed Mileage €	Estimated Mileage
Sligo	18	177	28	19,585.40	3,714
Donegal	35	556	29	78,192.10	13,384
Galway	38	300	43	37,306.90	6,851

Research

The Irish Cancer Society funded the following projects in 2014:

- Irish Prostate Cancer Outcomes Research (IPCOR), Participating institutions: Galway University Hospital, Galway Clinic, Bon Secours Hospital Galway - €1,749,377
- Health Inequalities in Childhood Cancer Survivors, NUI Galway funding, Investigator involved: Dr Michal Molcho - €119,290
- Breast Predict: the first national research consortium : €1m/1 year nationally

11.0 Appendices

11.1 Appendix 1: Summary High Cost Drugs

As in other years, in 2014 the Saolta University Health Care Group have secured funding from the NCCP via the Primary Care Reimbursement Service (PCRS) for high cost oncology drugs.

The following tables represent areas to the Saolta University Health Care Group for 2014:

High Cost Drug Reimbursement Scheme 2014: Numbers of IV chemo's scheduled per drug (Data source: LANTIS)

	Hospital	Drug	Patient Numbers	2014
Saolta Group	MGH	Cabazitaxel	3	€92,004.00
		Pertuzumab	2	€23,777.81
	SRH	Ipilimumab	1	€78,412.50
	GUH	Cabazitaxel	1	€32,472.00
		Decitabine	1	€23,210.10
		Eribulin	9	€4,646.28
		Ipilimumab	13	€977,542.50
		Pertuzumab	3	€30,571.47
	LGH	Pertuzumab	2	€61,142.94
	PHB*	nil	0	€0.00
Saolta Group Total				€1,323,779.60

** Portiuncula didn't receive any funding for ODMS drugs in 2014.*

Sum of Amount in full Hospital Group 2014 (Data Source: NCCP)

Saolta	Hospital	Expenditure & Funding 2014	2014
	GUH	NCCP funding for top-drug spend	€765,142
	LGH	NCCP funding for top-drug spend	€236,604
	MGH	NCCP funding for top-drug spend	€96,372
	PHB	NCCP funding for top-drug spend	€19,497
	SRH	**NCCP funding for top-drug spend**	**€128,081**
Saolta Group Total			**€1,245,697**

Sum of Oncology PCRS: Jan – May 2014 (Data Source: NCCP)

PCRS Drugs	Jan - May 2014	Full Year 2014
Brentuximab (Adcetris)	-	€131,802.00
Decitabine (Dacogen)	-	€23,210.10
Eribulin (Halaven)	€10,314.00	€46,046.28
Cabazitaxel (Jevtana)	€26,400.00	€32,472.00
Pertuzumab (Perjeta)	-	€30,571.47
Ipilimumab (Yervoy)	€454,750.00	€977,542.50
Total	€491,464.00	€1,241,644.35

11.2 Appendix 2: Saolta Group NCCP KPI Access Performance 2014

Medical Oncology

KPI 1	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
	%	%	%	%	%	%	%	%	%	%	%	%
GUH	61.5	76.6	72	62.5	65.8	80.6	55.2	61.1	80	80	69.6	90
PHN	75	100	100	100	100	100	88.9	90.9	73.3	75	100	100
MGH	100	96	95.2	9.8	94	87	92	93.8	100	95.7	100	100
SRH	100	100	100	100	100	100	100	100	100	100	100	100
LGH	100	90.9	90	88.2	94.4	83.3	100	93.8	100	100	100	100
Group KPI1	85.1	89	87.7	81.4	85	89.5	83.7	83.7	90.2	90.6	88.4	95.9

KPI 1: Percentage of patients given first dose of chemo within 15 days of ready to treat (Standard TBC by the NCCP)

Symptomatic Breast Service (GUH/LGH)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
	%	%	%	%	%	%	%	%	%	%	%	%
KPI1	97.9	97.7	98	83.3	81.8	64.7	93.7	99.3	100	96.1	89.7	70.9
KPI 1: Percentage of urgent patients given an appointment within 10 working days (Standard 95%)												
KPI2	82	73.8	79.8	86.4	82.7	79.4	63.7	72	63.7	73.4	69.8	88.5
KPI 2: Number of patients triaged as non-urgent and given an appointment within 84 days (Standard 95%)												
KPI3	100	100	100	100	100	100	100	100	100	100	100	100
KPI 3: Percentage of patients with a diagnosis of primary breast cancer discussed at MDM (Standard 95%)												

Rapid Access Prostate (GUH)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
	%	%	%	%	%	%	%	%	%	%	%	%
KP1	29.6	30.6	17.5	30	39.7	59.5	35.9	50.8	31.4	48.3	69.2	92.2
KPI 1: Percentage of patients given an appointment within 20 working days (Standard 95%)												

Rapid Access Lung (GUH)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
	%	%	%	%	%	%	%	%	%	%	%	%
KPI1	88.9	94.4	76.2	66.7	52.4	48.9	69.5	60	87.3	86.7	89.3	89.1
KPI 1: Percentage of patients given an appointment within 10 working days (Standard 95%)												

Radiation Oncology (GUH)

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
	%	%	%	%	%	%	%	%	%	%	%	%
KPI1	86.2	84.9	91.2	86	81	83.9	89.4	91.9	94.2	88.5	81.1	86
KPI 1: Percentage of patients given first fraction within 15 days of ready to treat (Standard TBC by the NCCP)												

**In the majority of cases the outliners are explained by the insufficient capacity, clinical decision or patient choice. It is also important to note that the clinicians are actively involved on an ongoing basis in the surveillance of any patients not meeting KPI.*

11.3 Appendix 3: Cancer Information Team 2014

Name	Speciality area	
Fiona Burke	Surgical Lung data	Clinical Information system (CIS) Cardiothoracic system in ICU
Mary Byrne	Tumour Registration Officer NCRI	NCRI Database
Tony Canavan	Chief Operations Officer ,Saolta Group	n/a
Margaret Cawley	Tumour Registration Officer NCRI	NCRI Database
Geraldine Cooley	Business Manager Symptomatic Breast Unit	n/a
Marie Cox	Group Cancer Services Manager	Lantis, Dendrite, Sharepoint, PAS
Stephen Coyne	Radiotherapy Services Manager	Lantis
Frances Devlin	Histopathology	Histology Information system
Eunice Flaherty	Treatment Schedule Coordinator	Lantis
Brid Gavin-O'Connell	Cancer Services Database manager	All Clinical Information Systems
Sue Hennessy	Waiting List Manager	PAS/Sharepoint system
Emer Hennessy	NUIG Dept. of Surgery	n/a
Aisleen Higgins	Database Manager Radiotherapy, Oncology & Haematology	Lantis
Tina Howard	Cancer Services MDM Coordinator	Cancer MDM
Paul Hurney	Directorate Information Services	PAS & Data Warehouses
Hilary Kelly	Tumour Registration Officer NCRI	NCRI Database
Seamus Leonard	HIPE Manager GUH	HIPE Database
Sheila McCrorie	CNM III Cancer Services	Access's Lantis
Margaret Nevin	Database Manager Symptomatic Breast Unit	Dendrite Database
Moya Power	RANP Urology	n/a
Christine Prendergast	Cancer Services	All Clinical Information Systems
Donal Redden	Group Medical Director	n/a
Rita Tully	Information Services	PAS & Data Warehouses

11.4 Appendix 4: Summary of HIPE Data

Number of Inpatient episodes of patients with a cancer diagnosis 2014 (Data Source: HIPE)

Reporting Group	Benign	In-Situ	Pre-Cancerous	Primary	Secondary	Unknown	Viral	Grand Total
Haematological Cancer								
Haematological Cancer				1172		840		2012
Surgical Oncology								
Breast Cancer		103		1091		5		1199
Colorectal Cancer		1	612	620	200	1		1434
Endocrine Cancer				108	38	9		155
Gynaecological Cancer	251	20	542	422	20	8	487	1750
Head and Neck Cancer		4		275		6		285
Hepatobiliary Cancer				148	497	2		647
Lung and Thoracic Cancer				880	534	14		1428
Lymph Node Cancer					285			285
Neurological Cancer				102	168	11		281
Ophthalmological Cancer		2		7				9
Orthopaedic Cancer				21	454	5		480
Skin Cancer		181		1260	104	9		1554
Upper Gastrointestinal Cancer		7		330	38	8		383
Urological Cancer	1088	30		1562	47	8		2735
Other and ill-defined Cancer				72	41	4		117
Connective Tissue				41		6		47
Grand Total	1339	348	1154	8111	2426	936	487	14801

Number of Patients with any cancer diagnosis in 2014 (Data Source: HIPE)
(i.e. would have been admitted for any reason which may or may not include the cancer diagnosis)

Specialty	GUH	PBH	RH	SRH	LGH	Grand Total
Anaesthetics	7					7
Cardio Thoracic Surgery	70					70
Cardiology	91				12	103
Clinical Immunology	1					1
Dental Surgery			1			1
Dermatology	266			303		569
Endocrinology	64				27	91
Gastro Enterology	179			121	35	335
Gastro Intestinal Surgery	1					1
General Medicine	54	233	88	330	279	984
General Surgery	1317	417	282	501	930	3447
Geriatric Medicine	79				21	100
Gynaecology	517	106		180	174	977
Haematology	342			121	153	616
Infectious Diseases	34					34
Maxillo-Facial	86	18				104
Neonatology	1			2		3
Nephrology	47			3	32	82
Neurology	11					11
Obstetrics	19	8		5	1	33
Oncology	524	162		278	262	1226
Opthalmology	95			33	8	136
Orthopaedics	51			30	17	98
Otolaryngology	227			109		336
Paediatrics	25	16		12	19	72
Pain Relief	10	1		8		19
Plastic Surgery	1841		991			2832
Radiology	21	21	48	73		163
Radiotherapy	182					182
Respiratory Medicine	192		26		50	268
Rheumatology	40			2		42
Urology	936	20		37	2	995
Vascular Surgery	12					12
Breast Surgery *					8	8
Grand Total	7342	1002	1436	2148	2030	13958

**Breast Surgery Activity is coded as General Surgery for HIPE purposes with the exception of LGH*

Number of episodes for patients with any cancer diagnosis in 2014 (Data Source: HIPE)

Specialty	GUH	PBH	RH	SRH	LGH	Grand Total
Anaesthetics	11					11
Cardio Thoracic Surgery	120					120
Cardiology	124				18	142
Clinical Immunology	2					2
Dental Surgery			1			1
Dermatology	334			341		675
Endocrinology	100				48	148
Gastro Enterology	252			146	37	435
Gastro Intestinal Surgery	2					2
General Medicine	99	368	188	633	442	1730
General Surgery	1863	533	322	690	1304	4712
Geriatric Medicine	113				47	160
Gynaecology	662	114		221	229	1226
Haematology	1292			660	1299	3251
Infectious Diseases	47					47
Maxillo-Facial	118	19				137
Neonatology	1			2		3
Nephrology	772			35	318	1125
Neurology	32					32
Obstetrics	26	8		7	2	43
Oncology	1131	732		1159	1445	4467
Opthalmology	120			38	8	166
Orthopaedics	81			52	26	159
Otolaryngology	501			142		643
Paediatrics	164	123		36	137	460
Pain Relief	17	2		17		36
Plastic Surgery	2169		1123			3292
Radiology	59	25	49	139		272
Radiotherapy	265					265
Respiratory Medicine	403		49		105	557
Rheumatology	57			2		59
Urology	1329	28		75	2	1434
Vascular Surgery	20					20
Breast Surgery *					11	11
Grand Total	12286	1952	1732	4395	5478	25843

**Breast Surgery Activity is coded as General Surgery for HIPE purposes with the exception of LGH*

Number of patients with a Primary Diagnosis of cancer in 2014 (Data Source: HIPE)
(i.e. the cancer what cause the admission)

Specialty	GUH	PBH	RH	SRH	LGH	Grand Total
Anaesthetics	4					4
Cardio Thoracic Surgery	71					71
Cardiology	1				2	3
Clinical Immunology	1					1
Dental Surgery			1			1
Dermatology	268			305		573
Endocrinology	40				9	49
Gastro Enterology	120			94	31	245
General Medicine	28	100	58	119	162	467
General Surgery	1203	299	255	460	801	3018
Geriatric Medicine	35				8	43
Gynaecology	473	51		168	167	859
Haematology	338			132	167	637
Infectious Diseases	13					13
Maxillo-Facial	83	13				96
Nephrology	16				12	28
Neurology	6					6
Obstetrics	6	4		1		11
Oncology	467	184		245	261	1157
Opthalmology	73			29	8	110
Orthopaedics	33			8	10	51
Otolaryngology	190			104		294
Paediatrics	24	9		8	14	55
Pain Relief	6			4		10
Plastic Surgery	1809		967			2776
Radiology	13	20	15	54		102
Radiotherapy	184					184
Respiratory Medicine	139		20		35	194
Rheumatology	21			1		22
Urology	879	17		32	2	930
Breast Surgery *					8	8
Grand Total	6544	697	1316	1764	1697	12018

**Breast Surgery Activity is coded as General Surgery for HIPE purposes with the exception of LGH*

Number of episodes Inpatient's with a Primary Diagnosis of cancer in 2014 (Data Source: HIPE)

Specialty	GUH	PBH	RH	SRH	LGH	Grand Total
Anaesthetics	6					6
Cardio Thoracic Surgery	108					108
Cardiology	3				2	5
Clinical Immunology	1					1
Dental Surgery			1			1
Dermatology	332			341		673
Endocrinology	55				11	66
Gastro Enterology	167			110	32	309
Gastro Intestinal Surgery	1					1
General Medicine	55	150	124	200	224	753
General Surgery	1643	376	273	573	1050	3915
Geriatric Medicine	44				18	62
Gynaecology	597	57		204	205	1063
Haematology	1186			494	1165	2845
Infectious Diseases	17					17
Maxillo-Facial	111	14				125
Nephrology	21				18	39
Neurology	16					16
Obstetrics	6	4		1		11
Oncology	903	610		729	1169	3411
Opthalmology	82			29	8	119
Orthopaedics	50			12	11	73
Otolaryngology	379			125		504
Paediatrics	154	74		18	97	343
Pain Relief	10			7		17
Plastic Surgery	2101		1096			3197
Radiology	21	23	15	77		136
Radiotherapy	241					241
Respiratory Medicine	295		38		60	393
Rheumatology	26			1		27
Urology	1170	24		49	2	1245
Vascular Surgery	1					1
Breast Surgery *					11	11
Grand Total	9802	1332	1547	2970	4083	19734

**Breast Surgery Activity is coded as General Surgery for HIPE purposes with the exception of LGH*

HIPE Cancer Report for Mayo General Hospital 2014 (Data Source: HIPE MGH)

Description	Total
Patients with a Primary Diagnosis of Cancer – not Chemotherapy	645
Patients with any Diagnosis of Cancer – not Chemotherapy	849
Episodes with a Primary Diagnosis of Cancer – not Chemotherapy	1645
Episodes with any Diagnosis of Cancer – not Chemotherapy	2200
Chemotherapy Episodes	2370
Chemotherapy Patients	362

11.5 Outpatient Data

Appendix 5: Summary Outpatient Data

Outpatient attendances by directorate and specialty 2014 (Data Source: PAS)

Directorate	Specialty	OPD attendances – patients diagnosis 2014	OPD attendances – other patients	Total OPD attendances	Proportion with cancer diagnosis in 2014
Medicine	Pain relief	713	1639	2352	30.31%
	Cardiology	1408	17431	18839	7.47%
	Dermatology	1248	9442	10690	11.67%
	Endocrinology	42	1236	1278	3.29%
	Gastroenterology	222	2531	2753	8.06%
	Geriatrics	50	394	444	11.26%
	Haematology	1363	2764	4127	33.03%
	Immunology	20	504	524	3.82%
	Infectious diseases	45	467	512	8.79%
Medicine Total:		**5111**	**36408**	**41519**	**23.67%**
General Medicine	Nephrology	334	3390	3724	8.97%
	Neurology	284	6380	6664	4.26%
	Oncology	3574	2240	5814	61.47%
	Radiation Therapy	12670	2420	15090	83.96%
	Respiratory Medicine	190	1183	1373	13.84%
	Rheumatology	260	5369	5629	4.62%
General Medicine Total:		**17312**	**20982**	**38294**	**8.70%**
Surgery	Cardiothoracic Surgery	158	739	897	17.61%
	ENT	1120	8286	9406	11.91%
	Ophthalmology	1367	20166	21533	6.35%
	Maxillofacial Surgery	386	2717	3103	12.44%
	Orthopaedics	903	25187	26090	3.46%
	Plastic Surgery	2496	6749	9245	27.00%
	General Surgery	4001	15955	19956	20.05%
	Urology	2242	5010	7252	30.92%
	Vascular	591	7700	8291	7.13%
Surgery Total:		**13264**	**92509**	**105773**	**12.54%**
Women & Children	Gynaecology	2294	7646	9940	23.08%
	Obstetrics	340	21137	21477	1.58%
	Paediatrics	38	6193	6231	0.61%
Women & Children Total:		**2672**	**34976**	**37648**	**7.10%**
Grand Total		38359	184875	223234	16.37%

11.6 Publications

Appendix 6: Cancer Research Publications

Glavey SV, Manier S, Natoni A, Sacco A, Moschetta M, Reagan MR, Murillo LS, Sahin I, Wu P, Mishima Y, Zhang Y, Zhang W, Zhang Y, Morgan G, Joshi L, Roccaro AM, Ghobrial IM, O'Dwyer ME. The sialyltransferase ST3GAL6 influences homing and survival in multiple myeloma. Blood. 2014 Sep 11;124(11):1765-76. doi:10.1182/blood-2014-03-560862. Epub 2014 Jul 24. PubMed PMID: 25061176; PubMed Central PMCID: PMC4162107.

Keane NA, Glavey SV, Krawczyk J, O'Dwyer M. AKT as a therapeutic target in multiple myeloma. Expert Opin Ther Targets. 2014 Aug;18(8):897-915. doi:10.1517/14728222.2014.924507. Epub 2014 Jun 6. Review. PubMed PMID: 24905897.

FitzGerald J, Murillo LS, O'Brien G, O'Connell E, O'Connor A, Wu K, Wang GN, Rainey MD, Natoni A, Healy S, O'Dwyer M, Santocanale C. A high through-put screen for small molecules modulating MCM2 phosphorylation identifies Ryuvidine as an inducer of the DNA damage response. PLoS One. 2014 Jun 5;9(6):e98891. doi:10.1371/journal.pone.0098891. eCollection 2014. PubMed PMID: 24902048; PubMed Central PMCID: PMC4047068.

O'Dwyer ME, Swords R, Nagler A, McMullin MF, le Coutre PD, Langabeer SE, Alvarez-Iglesias A, Fan H, Woodman RC, Giles FJ, Conneally E. Nilotinib 300 mg BID as frontline treatment of CML: prospective analysis of the Xpert BCR-ABL monitor system and significance of 3-month molecular response. Leuk Res. 2014 Mar;38(3):310-5. doi: 10.1016/j.leukres.2013.11.016. Epub 2013 Dec 1. PubMed PMID: 24333114.

Joy Buckley, Janusz Krawczyk, Fionnuala Ni Chonchubhair, Nelly Besson, Margaret Tarpey, Margaret Murray, Michael O'Dwyer, and Amjad Hayat. A Single Centre Analysis of Spectra Optia Stem Cell Collection Data from Multiple Myeloma and Lymphoma Patients, with and without Plerixafor.

Alessandro Natoni, Michele Moschetta, Siobhan Glavey, Ping Wu, Gareth J. Morgan, Lokesh Joshi, John L. Magnani, Irene M. Ghobrial, and Michael E O'Dwyer. Multiple Myeloma Cells Express Functional E-Selectin Ligands Which Can be Inhibited Both in-Vitro and in-Vivo Leading to Prolongation of Survival in a Murine Transplant Model.

Mairead Reidy, Marianne vanDijk, Niamh Keane, Michael O'Neill, and Michael E O'Dwyer. Initial Evaluation of Novel Dual PIM/PI3K and Triple PIM/PI3K/mTOR Inhibitors in Multiple Myeloma.

Oliver Giles Best, Kyle Crassini, Michael O'Neill, Michael E O'Dwyer, and Stephen P. Mulligan. Dual Inhibition of PIM and PI3-Kinase By Ibl-202 Is Highly Synergistic Compared to Mono-Molecular Inhibition and Represents a Novel Treatment Strategy for Chronic Lymphocytic Leukemia.

Monaghan D, O'Connell E, Cruickshank FL, O'Sullivan B, Giles FJ, Hulme AN, Fearnhead HO.
Inhibition of protein synthesis and JNK activation are not required for cell death induced by anisomycin and anisomycin analogues.
Biochem Biophys Res Commun. 2014 Jan 10;443(2):761-7. doi: 10.1016/j.bbrc.2013.12.041. Epub 2013 Dec 12.

Egan L, D'Inca R, Jess T, Pellino G, Carbonnel F, Bokemeyer B, Harbord M, Nunes P, Van der Woude J, Selvaggi F, Triantafillidis J.
Non-colorectal intestinal tract carcinomas in inflammatory bowel disease: results of the 3rd ECCO Pathogenesis Scientific Workshop (II). J Crohns Colitis. 2014 Jan;8(1):19-30. doi: 10.1016/j.crohns.2013.04.009. Epub 2013 May 7. Review.

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Oh WK, McDermott D, Porta C, Levy A, Elaidi R, Scotte F, Hawkins R, Castellano D, Bellmunt J, Rha SY, Sun JM, Nathan P, Feinberg BA, Scott J, McDermott R, Ahn JH, Wagstaff J, Chang YH, Ou YC, Donnellan P, Huang CY, McCaffrey J, Chiang PH, Chuang CK, Korves C, Neary MP, Diaz JR, Mehmud F, Duh MS.
Angiogenesis inhibitor therapies for advanced renal cell carcinoma: toxicity and treatment patterns in clinical practice from a global medical chart review.
Int J Oncol. 2014 Jan;44(1):5-16. doi: 10.3892/ijo.2013.2181. Epub 2013 Nov 15.

Coughlan D, Yeh ST, O'Neill C, Frick KD.
Evaluating direct medical expenditures estimation methods of adults using the medical expenditure panel survey: an example focusing on head and neck cancer.
Value Health. 2014 Jan-Feb;17(1):90-7. doi: 10.1016/j.jval.2013.10.004. Review.

Ryan DJ, McPhillips D, Bruzzi J, Breen D.
A clue in a colour? EBUS-TBNA in the analysis of isolated mediastinal lymphadenopathy.
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J. Khalid, M.F. Jamaluddin, A. Zuchora, S. Cleary, L. Fahy, M. Moore, G. O'Boyle, M.N. Ibrahim, and others
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Physica Medica: European Journal of Medical Physics, Vol. 30, Issue 6, p724
Published in issue: September 2014

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Anysja Zuchora, Margaret Moore, Geraldine O'Boyle, Muhammad Jamaluddin
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Michael Martyn, Christoph Kleefeld, Margaret Moore, Mark Foley
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Conferences

Sir Peter Freyer Memorial Lecture and Surgical Symposium – September 5-6th 2014:
Hosted by Professors Michael Kerin and Oliver McAnena the 39th Sir Peter Freyer Surgical Symposium was attended by over 200 surgeons and clinical personnel. The Memorial Lecture was given by Dr John D. Birkmeyer, Professor of Surgery, University of Michigan and the State of the Art lecture was delivered by Mr James M Sheehan, Galway Clinic

2nd Annual Cancer Conference – December 5th, 2014 Guest Speaker – Professor Mark Lawlor, Chair in Translational Cancer Genomics at Queen's University Belfast

11.7 Appendix 7: Cancer Services Team

Galway University Hospitals

Surgical Oncology

Breast
Mr Kevin Barry (MGH)
Professor Michael Kerin
Ms Carmel Malone
Mr Ray McLaughlin
Mr Michael Sugrue (LGH)
Mr Karl Sweeney

Urology
Mr Michael Corcoran (Ret.)
Mr Garrett Durkan
Mr Syed Jaffry
Mr Paddy O'Malley
Mr Eamon Rogers
Mr Killian Walsh

Upper GI
Mr Chris Collins
Professor Oliver McAnena

Colorectal
Mr Myles Joyce
Professor Oliver McAnena
Mr Eddie Myers
Mr Mark Regan

Plastic and Reconstructive Surgeons
Mr Alan Hussey
Ms Deirdre Jones
Mr Jack Kelly
Mr Padraic Regan

Lung and Cardiothoracic
Mr Mark DaCosta
Mr Dave Veerasingam

Gynaecology
Ms Katherine Astbury
Mr Michael O'Leary

Head and Neck
Mr Peter Gormley
Professor Ivan Keogh
Mr John Lang
Mr Patrick McCann
Ms Mona Thornton
Ms Orla Young

Endocrine
Professor Michael Kerin
Mr Denis Quill
Orla Young

Medicine

Dermatology
Dr Mary Laing
Dr Trevor Markham
Dr Pauline Marren
Dr Annette Murphy

Gastroenterology
Dr Valerie Byrnes
Professor Larry Egan
Dr John Lee
Dr Ramona McLoughlin

Endocrinology
Dr Marcia Bell
Dr Liz Brosnan (MGH)
Dr Sean Dineen
Professor Fidelma Dunne
Dr Francis Finucane
Professor Timothy O'Brien

Haematology
Dr Moutaz Abdulrahman
Dr Ruth Gilmore
Dr Amjad Hayat
Dr Janusz Krawczyk
Dr Margaret Murray
Professor Michael O'Dwyer

Palliative Care
Dr. Sharon Beatty
Dr Eileen Mannion
Dr Camilla Murtagh
Dr Dympna Waldron

Respiratory
Dr David Breen
Professor JJ Gilmartin
Dr Michael O'Mahony
Dr Anthony O'Regan
Dr Bob Rutherford

Radiology

Dr Diane Bergin
Dr John Bruzzi
Dr Ian Davidson
Dr Rachel Ennis
Dr Catherine Glynn
Dr John Hanaghan
Dr Aideen Larke
Professor Peter McCarthy
Dr Ray McLoughlin
Dr Joseph Murphy
Dr Ann-Marie O'Connell
Dr David O'Keeffe
Dr Gerry O'Sullivan
Dr Claire Roche
Dr Declan Sheppard
Dr Sinead Walsh

Pathology

Dr Caroline Brodie
Professor Grace Callagy
Dr Mary Casey
Dr Frans Colesky
Dr Stephanie Curran
Dr Teresa McHale
Dr Zsolt Orosz
Dr Sine Phelan
Dr Margaret Sheehan
Dr Michael Tan
Dr Brigit Tietz

Medical Oncology

Dr Silvie Blazkova
Dr Paul Donnellan
Dr Maccon Keane
Dr Greg Leonard

Radiation Oncology

Dr Joseph Martin
Dr Maeve Pomeroy
Dr Cormac Small
Professor Frank Sullivan

Clinical Research Facility

Professor Frank Giles
Veronica McInerney CNMIII
Professor Martin O'Donnell
Professor Frank Sullivan

Cancer Nursing

Breast Symptomatic
Bernie Broder CNMII
Mary Dowd CNS
Mary Grealish CNS
Helena Kett CNS
Paula Leonard CNS
Catherine Masterson CNS
Pauline McGough CNMII
St Michael's Ward

Upper GI/Colorectal
Olivia Dunleavy CNS
Patricia O'Brien CNMII
Anna O'Mara CNS
Mary Quigley Stoma Care CNS
St Gerard's Ward

Urology
Rose McGuinness CNMII
Muriel Mooney CNMII RAPC
Moya Power RANP
Ann Ryan CNMI
Deirdre Horan
St Pius' Ward

Lung/Cardiothoracic
Marie Cloonan CNMIII
Patricia McConnell CNMII CT ICU
Imelda Fleming CNMII RALC
Ellen Wiseman CNMII RALC
Michelle Wren CNMII CT Unit
Jacinta Murphy SN

Gynaeoncology
Ann Marie Burke CNMII
St Monica's Ward

Colposcopy
Rachael Comer CNMII
Maura Molloy RAMP
Patricia Rogers RAMP

Head and Neck
Carol Brennan CNS
Bernie Broder CNMII
Rose McGuinness CNMII
St Michaels and Pius' Wards

Endocrine
Helen Burke RANP
Aideen Gleeson CNMII
St Teresa's Ward

Dedicated Cancer Inpatient Wards
Niamh Killilea CNMII
Sheila McCrorie CNMIII
Claire McHugh CNMII
Mary McLoughlin CNMII
Deirdre O'Halloran CNMI
St Joseph's and Patrick's Wards

Cancer Elective Unit
Niamh Killilea CNMII

Medical Oncology
Eimear Butler CNS
Edel McNamara CNS
Sheila Talbot CNS

Radiation Oncology
Sinead Carr CNS
Ger O Boyle RANP
Annmarie Bohan CNMII

Haematology
Carmelita Gibbons CNS
Karen Maloney CNS
Teresa Meenaghan RANP
Katherine Mullarkey CNS
Maura Sweeney CNS

Oncology Day Ward
Christina Farrell CNMII

Chemotherapy/Apheresis
Breda Lally CNS
Karen Mulhall CNS

Palliative Care
Mary Burke CNS
Patricia O'Brien CNS

Clinical Trials Unit
Eamon Boland
Mary Byrne
Rachael Dalton
Olive Forde
Marian Jennings
Helen O'Reilly

Pharmacy

GUH Aseptic services
Andrew Barber
Caitriona Collins
Peter Kidd
Harold Lewis
Robert Snedker
Christine Waage

CRF Pharmacy Personnel
John Given
Caroline Whiriskey

BreastCheck Western Unit

Jennifer Kelly (Unit Manager)
Dr Aideen Larke
Joan Raftery (RSM)
Dr Margaret Sheehan
Mr Karl Sweeney

BowelScreen

Dr Valerie ByrnesDr Brian Egan
Professor Larry Egan
Gretta Greaney CNMII
Dr Carol Goulding
Mr Myles Joyce
Dr John Lee
Dr Ramona McLoughlin
Bríd Ní Fhionnagáin CNS

CervicalCheck
Dr Katherine Astbury
Rachel Comer CNMII
Maura Molloy RAMP
Mr Michael O'Leary
Pat Rodgers RAMP Candidate

Sligo Regional Hospital

Surgical Oncology
Mr Iftikhar Ahmed
Mr Martin Caldwell
Mr Tim O'Hanrahan

Haematology
Dr Andrew Hodgson

Oncology
Dr Michael Martin
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11.8 Appendix 8: Acronyms and Abbreviations

ABF	Activity Based Funding
ACAD	Ambulatory Care and Diagnostic Centre
AHP	Allied Health Professional
BSCCP	British Society for Colposcopy and Cervical Pathology
CCW	Cancer Care West
CAU	Cancer Assessment Unit
CEO	Chief Executive Officer
CEU	Cancer Elective Unit
CNM	Clinical Nurse Manager
CNS	Clinical Nurse Specialist
COO	Chief Operations Officer
CPD	Continuous Professional Development
DNA	Did Not Attend
DOHC	Department of Health and Children
DPER	Department of Public Expenditure and Reform
EBRT	External Beam Radiotherapy
ECOG	Eastern Cooperative Oncology Group
ENT	Ears Nose Throat
EORTC	European Oncology Research Treatment Group
ESWL	Extracorporeal Shock Wave Lithotripsy
GI	Gastro Intestine
GIST	Gastro Intestinal Stromal Tumours
GP	General Practitioner
GUH	Galway University Hospital
HDW	Haematology Day Ward
HEN	Home Enteral Nutrition
HIPE	Hospital Inpatient Enquiry
HPRA	Health Products Regulatory Authority
HPV	Human Papillomavirus
HRB-CRFG	Health Research Board, Clinical Research Facility Galway
HSCP	Health and Social Care Professionals
ICORG	Ireland Cooperative Oncology Research Group
IFHNOS	International Federation of Head and Neck Oncologic Societies
JAG	Joint Advisory Group
KPIs	Key Performance Indicators
LGH	Letterkenny General Hospital
LLETZ	Large Loop Excision of the Transformation Zone
MDM	Multidisciplinary Meetings
MDT	Multi Disciplinary Team
MFTP	Money Follows The Patient
MGH	Mayo General Hospital
MPUH	Merlin Park University Hospital
MRC	Medical Research Council
MUCH	Management of Uncertainty
NCCP	National Cancer Control Programme
NCRI	National Cancer Registry of Ireland
NMBI	Nursing and Midwifery Board of Ireland
NPRO	National Programme for Radiation Oncology
NSABP	National Surgical Adjuvant Breast and Bowel Project
NUI	National University of Ireland
OCF	Oesophageal Cancer Fund
OIS	Oncology Information System
PAS	Patient Administration System
PHB	Portiuncula Hospital Ballinasloe
PHRI	Population Health and Research Institute
PCRS	Primary Care Reimbursement Service
RALC	Rapid Access Lung Clinic

RAMP	Registered Advanced Midwifery Practitioner
RANP	Registered Advanced Nurse Practitioner
RAPC	Rapid Access Prostate Clinic
RH	Roscommon Hospital
RSM	Radiography Services Management
SFI	Science Foundation Ireland
SHO	Senior House Officer
SN	Staff Nurse
SpR	Specialist Registrar
SRH	Sligo Regional Hospital
UCD	University College Dublin
UHG	University Hospital Galway
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