Saolta

Grúpa Ollscoile Cúram Sláinte
University Health Care Group

Cancer Centre

Annual Report 2013

Contents

Foreword

The delivery of modern cancer care is a major enterprise involving a diverse group of specialists across a variety of clinical disciplines. This report highlights the extensive programme of cancer care delivered to the population of the West and North West of Ireland via our Cancer Centre. Capturing the complexity, variety and nature of this work in a backdrop of a major academic hospital and its affiliated regional institutions is a challenge. This report is possible because of the outstanding work performed by the Cancer Information Team in this regard.

Data from the Galway University Hospitals (GUH) cancer service is logged via the Hospital Inpatient Enquiry System (HIPE), the National Cancer Registry (NCR), data submitted to the National Cancer Control Programme (NCCP) and individual databases in the various specialist units and hospitals. In the absence of a unique patient/health identifier there are limitations and constraints on individual databases and these are highlighted in this report. Data sources may differ due to variations in referral centres. I am very grateful for the far-reaching support from the key national, regional and local data sources.

HIPE remains the gold standard for reporting inpatient care. I am deeply grateful to Seamus Leonard (GUH HIPE Project Manager) whose excellent work has allowed integration of inpatient activity and production of this report. Dr Sue Hennessy (GUH Waiting List Manager) has provided all outpatient data and deserves an additional note of thanks.

Multidisciplinary care for cancer patients is now the norm and the extensive contribution to our multidisciplinary programmes, complex nature of the teams and the planning of diagnostic and therapeutic interventions and individualisation of therapy for cancer patients is now taken for granted. The contribution of individuals and disciplines, including Radiology, Pathology, Medical Oncology, Radiation Oncology and Surgery, to the functioning of multidisciplinary teams is huge. Functional multidisciplinary meetings and teamwork are the glue that binds the Cancer Centre together and there are many team members – nursing, laboratory and administration - whose work in this regard is often unnoticed and undervalued. This report acknowledges their input and thanks them for their support.

Finally, I would like to express my sincere thanks to all of the clinical cancer leads, Marie Cox (Group Cancer Services Manager), Emer Hennessy (NUI Galway) and the management of the Saolta University Health Care Group for their support in putting this report together. It is a testimony to the hard work of many people and an example of the many strands being drawn together to deliver a coherent programme of care.

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

Mr Bill Maher

Chief Executive Officer
Saolta University Heath Care Group

I am delighted to present our second Annual Cancer Services Report which provides a Group-wide focus for the delivery of cancer services to our patients in 2013. Our Group expanded to include three more hospitals midway through 2013, with the welcome addition of Letterkenny General Hospital (LGH), Sligo Regional Hospital (SRH) and Mayo General Hospital (MGH). Each of these hospitals provides services to patients with a cancer diagnosis. Overall there are cancer services now provided within five of our Group hospitals.

2013 was a busy year for the Group and for cancer services, as evident from the activity data within the report. Some of the service highlights in 2013 include

- In January Galway University Hospitals (GUH) hosted the National Launch of the Brachytherapy Service by Dr Susan O'Reilly, Director of the National Cancer Control Programme (NCCP). GUH, under Professor Frank Sullivan's leadership, has taken the lead in the roll-out and training of brachytherapy across the country.
- The National Cancer Screening Service BowelScreen commenced on site in GUH and SRH thus completing the availability of the full suite of screening services (BreastCheck, CervicalCheck) across the Group.
- The Group was also successful in their submission for Irish Cancer Society/NCCP funding of €250,000 toward equipment to support the colorectal screening/symptomatic services across GUH, Portiuncula Hospital Ballinasloe and Roscommon Hospital sites. We remain very grateful and thank the Irish Cancer Society/NCCP for their ongoing support.

I could not let this moment pass without acknowledging and reminding us all of our colleague and Cancer Services Manager Ms Juliet Kelly, who sadly passed away in August 2013 following a brave battle with melanoma. Juliet has left a significant legacy in her contribution to cancer services on both a local and national level, as she worked closely with the NCCP and the National Plan for Radiation Oncology in the progression of the second phase of the Capital Project for development of radiotherapy services for GUH. Juliet is dearly missed by all.

2013 saw this work continue under the auspices of the National Plan for Radiation Oncology Project Team. Ann Cosgrove, General Manager is now leading this key project locally and enabling works have already progressed. We aim to have this project complete by 2018.

Marie Cox took up the role of Interim Cancer Services Manager in 2013 and I would like to thank her for her considerable contribution to developing cancer services, and in particular her support to the Cancer Services Strategy Group and myself.

Finally, I would like to thank Professor Michael Kerin for his leadership and unstinting support to me personally, and to cancer services generally. His trojan work is greatly appreciated.

I hope you enjoy reading this annual report and that cancer services continue to go from strength to strength across the Group.

Dr John Killeen
Interim Chair
Saolta University Heath Care Group

On behalf of the Board I am delighted to endorse the second annual cancer service report for the Group. The Saolta University Health Care Group prides itself as a leading cancer centre and has an ambitious programme to develop a world class service for the population we serve. We recognise the contribution Cancer Services across the Group has made and we look forward to supporting the comprehensive cancer programme into the future. I thank the cancer centre team involved and wish the cancer centre every success.

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 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 upcoming development of the Lambe Institute, the SFI-funded Centre for Research in Medical Devices, CÚRAM, 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 be associated with this report, the second annual report of the Saolta University Heath Care Group cancer centre. The implementation of the 2006 National Cancer Control Strategy led to radical change in the delivery of hospital-based specialised cancer services with the designation of cancer centres. The key characteristics of a Cancer Centre are sustainable high volume multidisciplinary cancer services spanning the range of diagnostics, surgery, radiation oncology and medical oncology. All new patients and selected patients with recurrent cancer are reviewed at multidisciplinary team meetings comprising all diagnostic and therapeutic specialists. Involvement in research and education of our future specialists are also vital.

This report contains a wealth of information on the cancer services provided to the people in the West and Northwest. It is only by monitoring what we do that we can celebrate what we do well, build on successes and strive to improve what can be done better. On behalf of the NCCP I thank the team for publishing this report and look forward to the ongoing development of cancer services in the Saolta University Health Care Group.

1. Saolta University Health Care Group (formerly West/North West Hospitals Group)

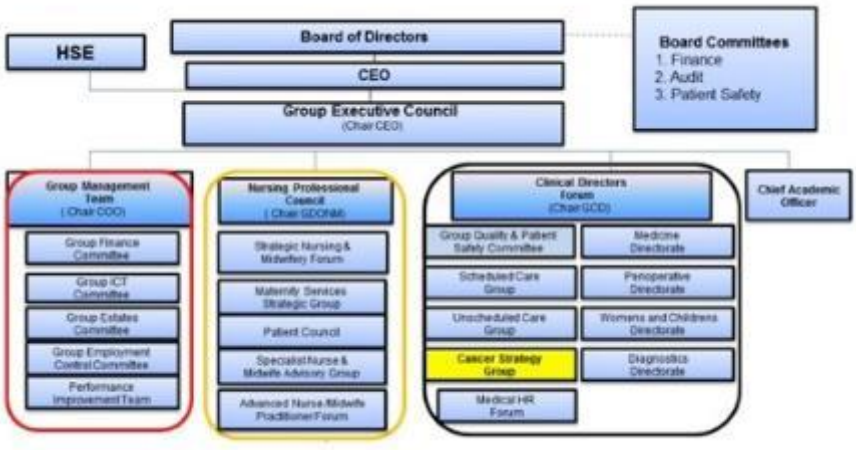
The Galway and Roscommon University Hospitals Group was originally established on the 9th January 2012 and comprised Galway University Hospitals (GUH), Portiuncula Hospital Ballinasloe (PHB) and Roscommon Hospital (RCH). In May 2013, Minister for Health, Dr James Reilly announced the re-organisation of all public hospitals into hospital groups as the next stage in a fundamental reform of the Irish acute hospital system. The West / North West Hospitals Group (WNWHG) officially came into being on the 29th July 2013 when the Galway and Roscommon University Hospitals Group was extended to include Letterkenny General Hospital (LGH), Sligo Regional Hospital (SRH) and Mayo General Hospital (MGH) with a new academic partner, National University of Ireland, Galway.

The new structure brought together six hospitals on seven sites under one Chief Executive Officer (CEO), sharing resources, budgets and service activity in order to maximise effectiveness, reduce waiting lists and provide the appropriate care for patients in the right setting.

Launch of the 2012 Cancer Centre Annual Report
From left: Dr Mary Hynes, NCCP Deputy Director, Professor Michael Kerin, GUH Cancer Strategy Group Chair, Mr Bill Maher, Saolta University Health Care Group CEO and Dr Susan O'Reilly, NCCP Director

1.1 Governance

The Board for the Galway and Roscommon University Hospitals Group expanded with the addition of the Mayo, Sligo and Letterkenny Hospitals to the Group and three non-Executive Directors were added to form the Board of the Saolta University Health Care Group.



Governance Structure of Saolta University Health Care Group

The Clinical Director structure was streamlined from six directorates to four with the Clinical Directors and an interim Chief Academic Officer appointed in November 2013. Cancer services is assigned to the Medicine Directorate.

Associate Clinical Director posts (four per site) were also progressed with the intention to have the full Clinical Directorate team in place by January 2014. The Associate Clinical Directors help develop the Group strategy for their Directorate whilst providing operational leadership for their Directorate on their hospital site.

Clinical Directors and interim Chief Academic Officer 2013
From left: Dr Donal Reddan (Medicine), Dr Colm O'Donnell (Diagnostics), Dr Geraldine Gaffney (Women and Children), Dr Paul Naughton (Peri-operative) and Dr Anthony O'Regan (Interim Chief Academic Officer).

500th Prostate Brachytherapy Patient at Galway University Hospitals
From left: Marie Cox, Interim Group Cancer Services Manager, Louise Finlay Senior Radiotherapy Physicist, Professor Frank Sullivan, Consultant Radiation Oncologist, Anysja Zuchora Senior Radiotherapy Physicist and Geraldine O'Boyle CNMII

2. National Cancer Control Programme (NCCP)

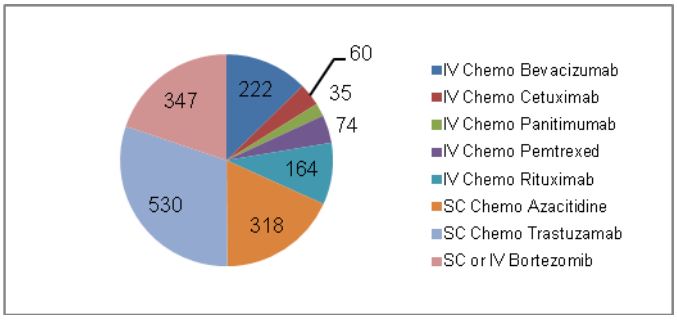
The GUH cancer centre and its satellite surgical breast unit in LGH have developed strong links with the NCCP. With the Group expansion there are cancer services in five hospitals within our catchment area. The Saolta University Health Care Group cooperates with and implements the NCCP national policies and processes across all hospitals. The Group also contributes to these policies as our clinicians hold positions on many national specialists committees. We maintain performance by reporting and adhering to national KPIs which in turn help us to drive service improvement.

2.1 High Cost Drugs

In 2012, the NCCP introduced a system where hospitals which had purchased and utilised newly approved high cost intravenous (IV) cancer drugs, e.g. Ipilimumab, would receive reimbursement via the Primary Care Reimbursement Service (PCRS). In 2013, the NCCP expanded this scheme and introduced a new national process, in conjunction with the PCRS, to oversee and manage arrangements for a number of oncology drugs. There was no change to the local hospital arrangements for the purchasing, management and control of cancer drugs.

The NCCP secured funding in 2013 for new cancer drugs approved by the NCCP technology review committee and the HSE. They also secured funding for growth in seven existing high-cost cancer drugs. Funding is reimbursed to hospitals via the NCCP, this helps to minimise the impact of growth in patient numbers and cancer drug spend on other hospital services. Patients receiving these drugs are registered on the PCRS system to allow the hospital claim reimbursement of funding. Hospitals will continue to benefit from episodic access to free drugs for clinical trials.

In January 2013, work commenced on the development and implementation of drug protocols. This work initially focused on the top high-cost cancer drugs. The protocols are intended to support the decision-making process of oncologists regarding the care of their patients and to provide a consistent approach for all hospitals for the administration of cancer drugs. Quality of care and patient safety will be supported by these national treatment protocols. Once the protocols have been approved and endorsed by the Irish Society of Medical Oncologists, and where appropriate, the Irish Haematology Society, they will be circulated to hospitals for adoption as treatment protocols.



High Cost Drug Reimbursement Scheme 2013: Numbers of IV chemo's scheduled per drug (Data source: LANTIS)

The NCCP has allocated €486,670 to the Group hospitals. Patients on the approved NCCP list are registered on the PCRS electronic system following the decision to treat. Returns to the NCCP are made on a quarterly basis. The figures here include NCCP allocation for Q1-Q3 as Q4 is calculated in, and provided in, Q1 of 2014. The breakdown of reimbursement for growth in cancer drug costs after Q3 is as follows:

Galway University Hospitals	€215,607
Sligo Regional Hospital	€69,547
Letterkenny General Hospital	€57,292, plus €49,198 for Brentuximab.
Mayo General Hospital	€55,775
Portiuncula Hospital	€39,252

The total amount received by Group hospitals from the NCCP for the purposes of reimbursement of growth in oncology drugs costs in 2013 was €1,223,939. A total of €139,386 was reimbursed in 2013 for Brentuximab.

2.2 NCCP Key Performance Indicators (KPIs) for 2013

NCCP national access KPIs for cancer sites (Lung, Prostate, Breast, Radiotherapy and Medical Oncology) are reported monthly from the various services across the five hospitals providing cancer services in the Group.

There are additional Quarterly KPIs for Breast and Radiotherapy and Bi-Annual KPIs for Upper Gastrointestinal and Colorectal cancer. 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 Forum speciality days for each cancer site. The KPIs are also utilised to drive service improvement in our Group. The KPIs are a standing item on our cancer review meetings with Dr Mary Hynes, NCCP Deputy Director, and this process of review has helped to make the connection between data collection, reporting and service improvement.

With the expansion of the Saolta University Health Care Group in 2013 we are now collating and interrogating returns from all of the Group hospitals and are working towards a truly integrated picture by mid 2014.

NCCP National Access Key Performance Indicators

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Medical Oncology (GUH)												
KPI1	78%	96%	95%	84%	97%	78%	86%	83%	86%	91%	88%	88%
Medical Oncology (PHB)												
KPI1	57%	86%	100%	75%	100%	86%	89%	100%	80%	88%	67%	100%
Medical Oncology (MGH)												
KPI1	87%	100%	89%	96%	94%	94%	100%	100%	83%	96%	93%	90%
Medical Oncology (SRH)												
KPI1	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
Medical Oncology (LGH)												
KPI1	Data not available											
Medical Oncology (Group)												
KPI1	85.5%	94.9%	95.1%	92.1%	97.3%	86.6%	91.9%	91.4%	87.7%	93.8%	91.2%	92.7%
KPI 1: Percentage of patients given first dose chemo within 15 days of ready to treat (Standard TBC by the NCCP)												
Symptomatic Breast Service (GUH/LGH)												
KPI 1	100%	100%	100%	100%	99.4%	82.9%	93.9%	100%	100%	100%	100%	98.1%
KPI 1: Percentage of urgent patients given an appointment within 10 working days (Standard 95%)												
KPI 2	88.2%	85.3%	75.5%	90.0%	96.3%	99.2%	94.2%	82.6%	72.8%	81.6%	97.1%	92.8%
KPI 2: Number of patients triaged as non-urgent and given an appointment within 84 days (Standard 95%)												
KPI 3	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)												
KPI 1	17%	26.5%	12.5%	20.5%	52%	48.6%	51.7%	20%	34.8%	13.6%	22.6%	34%
KPI 1: Percentage of patients given an appointment within 20 working days (Standard 95%)												
Rapid Access Lung (GUH)												
KPI 1	83.3%	87.3%	88.1%	97.9%	100%	92.1%	100%	98.4%	98%	100%	92.6%	98.3%
KPI 1: Percentage of patients given an appointment within 10 working days (Standard 95%)												
Radiation Oncology (GUH)												
KPI 1	77%	73%	73%	80%	85%	91%	79%	76%	85%	76%	83%	84%
KPI 1: Percentage of patients given first fraction within 15 days of ready to treat (Standard TBC by the NCCP)												

The following paragraphs provide brief commentary in relation to the KPI figures above.

Medical and Haemato-Oncology Services

Medical oncology continues to perform above the 80th percentile across the Group. Patients who do not meet the KPI are continually monitored by clinicians. A consistent challenge for this cohort of patients is the planning and timing of patients in need of concomitant chemo/radiation modalities of treatment. LGH was not in a position to submit the medical oncology KPIs for 2013. There is an action plan in place with the hospital team for submission of this suite of KPIs for 2014.

Symptomatic Breast Service

The symptomatic breast service in the Saolta University Health Care Group is provided from two sites (GUH and LGH). The teams have consistently maintained a very high performance standard across both sites. The teams on both sites are challenged with meeting the referral demands for the routine referrals with the 84 days but have maintained their performance in the 80-90th percentile.

Rapid Access Prostate (RAP)

Access to the RAP programme which commenced in 2009 is an ongoing challenge. At the beginning of 2013 only 17% of patients were being seen within the recommended 20 working days. This improved marginally during 2013 but we do not believe we have reached a position of sustained performance as yet. There has been significant focus within the team in rapid access services looking at clinic processes and data collection methods. The key focus for RAP at this time remains access to the service, the challenge remains in consistently narrowing the gap between performance and the required NCCP standard. Another consideration for the clinic is the management of the high prostatic intraepithelial neoplasia surveillance patients who require close follow up and repeat procedures. Cancer diagnosis at RAP in 2013 is consistent with that of 2012 with 270 patients diagnosed. Plans are at an advanced stage to reconfigure the current space for the rapid access service and cohort all of urology ambulatory care within one area.

Rapid Access Lung (RAL)

RAL has shown a significant improvement in achieving access targets in recent years following service reorganisation and the commencement of our lead clinician Dr David Breen.

Radiation Oncology Services

The clinical team in radiotherapy review their KPI activity at their management meetings. They have identified that the non-hormone prostate patients (a low risk group) continue to be outside the target KPI. The clinicians monitor all low risk patients on a continuous basis. Patient choice and the availability of inpatient/lodge accommodation also influence the time to commencing treatment for radiotherapy patients. Another consideration which impacts on the KPI maintenance in radiotherapy is the need to prioritise high risk patients and inpatient palliative care referrals who occupy an acute bed. Issues related to capacity, the age of our existing equipment and staffing remain a challenge.

Upper and Lower Gastrointestinal Cancer

The NCCP have piloted a suite of KPIs for the gastrointestinal cancers and GUH has participated in this pilot. The KPIs were found to be fit for purpose, demonstrated good access to assessment/diagnostics for patients with a diagnosis or high index of oesophagogastric cancer. Timely access to surgery remains a challenge and the NCCP will be commencing an elective time to surgery KPI in 2014 for all cancer sites.

3. Overview of Cancer Services

3.1 Cancer Diagnostics

The ability to deliver a comprehensive cancer programme is dependent on the ability to triage, assess, investigate and diagnose cancer in a timely fashion. Some cancer services such as breast, cervical and colorectal have dedicated national screening programmes which are integrated into the local programme and are currently implemented in GUH and SRH with RCH coming on board in 2014. Cancers such as lung, prostate and breast have dedicated rapid access symptomatic clinics where patients with worrying symptoms are seen promptly. Within other cancer services patients are still seen within "general" outpatient clinics.

3.2 Cancer Therapeutics

The integrated care pathway for an individual with cancer involves collaborative team work from multiple specialties in diagnostic and therapeutic services. Decision making is done in a multidisciplinary environment (see multidisciplinary team meetings table).

The cancer therapy service (non-surgical) in GUH is provided in a 52-bed dedicated cancer inpatient facility, a radiotherapy unit with three linear accelerators and a 19 day-case chaired Haematology/Oncology Day Ward.

Specialist cancer surgery is a cornerstone of any cancer centre. In GUH the development of a NCCP cancer centre has led to a doubling of the surgeon numbers in breast, prostate, colorectal and upper GI cancer and the commencement of a lung cancer programme since the launch of the National Cancer Strategy in 2006. This has led to ongoing staffing challenges in the theatre and the development of a dedicated cancer location for cancers such as lung, breast, gynaecological and colorectal. Over the next few years we aim to align cancer theatre facilities further within our theatre complex with the segregation of emergency, elective and cancer care along dedicated programme lines.

3.3 Cancer Information Team

The development of a cancer information team is one of the most striking outcomes from the annual cancer report. The team draws information from several existing data sources such as PAS, Outpatients, HIPE, individual service databases (Lantis, Dendrite, CIS, Sharepoint) and the National Cancer Registry. PAS data can be accessed through 'insite', a web based information tool that provides multiple users with access to the PAS data warehouse ensuring that accurate data is available to all.

The members of the cancer information team work within their individual speciality areas, while contributing to improving the quality and cohesiveness of our data. During 2013, the membership of the team was enhanced to include three NCR Tumour Registry Officers (TROs), a representative from Pathology and a CNMII from critical care who maintains the Clinical Information System for the intensive care unit (ICU) and the cardiothoracic ICU.

The role of the TRO is to collect the data and register of all cases of cancer in the region. This includes collection of information pertaining to the diagnosis, staging and treatment of all forms of cancer. This information is collated in the headquarters of the NCR in Cork and used for annual incidence reports, research and other epidemiology studies. The three TROs cover all the Group hospitals including hospices and nursing homes and they liaise with the Coroner's Office for autopsy-identified cancers. As well as dealing with all tumours identified in the hospital setting, they also follow Central Statistics Office identified cancer cases. Work is ongoing within the cancer information team in gaining experience across the various data systems and making links with colleagues who deal with data in the new Group hospitals. It is envisaged that the cancer information team will be expanded to include data staff from all of the group hospitals by mid 2014.

Cancer Information Team
From left: Back row. Dr Donal Reddan, Seamus Leonard, Brid Gavin-O'Connell, Aisleen Higgins, Rita Tully, Tina Howard, Tony Canavan, and Margaret Nevin. Front row: Emer Hennessy, Marie Cox, Ger Cooley, and Christine Prendergast.
Absent from photo: Dr Sue Hennessy, Sheila McCrorie, Paul Hurney, Frances Devlin, Fiona Burke, Moya Power, Mary Byrne, Stephen Coyne, Margaret Cawley, Hilary Kelly, and Eunice Flaherty

3.4 Multidisciplinary Team Meetings (MDM)

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 requires 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 (RANPs), Clinical Nurse Managers (CNMs), Clinical Nurse Specialists (CNSs), 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.

Multidisciplinary Team Meetings

Cancer site MDM team	Time of meetings	Frequency of meetings	Outside link ups at MDM	2013 Activity
Breast	Thursday 8am	Weekly	LGH , SRH, MGH	1854 patients - GUH 375 patients – LGH 2229 patients - Total
Combined Oncology	Tuesday 8am	Three times monthly	No link up	288 patients (36 meetings approx.)
Head and Neck	Friday 12pm	Fortnightly, then weekly	No link up	230 patients (24 meetings)
Urology	Wednesday 8am	Fortnightly	Link with LGH and SRH	650 (from MDM patient lists)
Skin	Monday 1pm	Three times monthly	No Link up	550 (from MDM patient lists)
Endocrine	Monday 8am	Twice monthly	No Link up	381 (17 meetings)
Lymphoma	Friday 8am	Twice monthly	Links with LGH, SRH, MGH	96 patients Discussed. 16 meetings per annum
Gastrointestinal cancers	Friday 9am	Weekly	Links with LGH, SRH, MGH Recently inclusion of RCH/PHB to the meetings via tele-link	50 meetings 720 patients - GUH 500 patients - Satellite sites 1220 patients - Total
Gynaeoncology May 2013 -Feb 2014 (9 months)	Friday 9am	1st/3rd and 5th	No Link up	153 patients discussed (9 months)
Haematology	Monday 12pm	Weekly		40 meetings (approx.) 400 patients discussed (approx.)
Colorectal screening (Polyp)	Thursday 12.45 am	Weekly	Link up with SRH. RCH to go live in 2014	25 meetings 174 patients - GUH 144 patients - SRH
Lung	Monday 4.30 pm	Weekly	Link with RCH, MGH, SRH	45 meetings 704 patients

3.5 Outpatient Activity

There were over 254,000 outpatient attendances in GUH in 2013 and of those, 37804 were related to the cohort of patients who were newly diagnosed with cancer in 2013 (the remaining 216,000 attendances were by patients not in the 2013 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 2013 (from HIPE) to the outpatient attendance data from PAS.

Outpatient department (OPD) attendances by directorate 2013

Directorate	OPD attendances – patients diagnosed with cancer in 2013	OPD attendances – other patients	Total OPD attendances	Proportion with cancer diagnosis in 2013
Diagnostics (Interventional Radiology)	16	41	57	28.1%
Medicine	22582	82518	105100	21.5%
Surgery	13145	99606	112751	11.7%
Women and Children	2061	34038	36099	5.7%
Total	**37804**	**216203**	**254007**	**14.9%**

Note: A detailed table of outpatient activity by specialty is available in Appendix 1.

It is important to recognise the volume of outpatient workload that exists in patients diagnosed with cancer. The cohort diagnosed in 2013 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 2013

	New	Review	Unscheduled	Total
Total attendances in outpatients	9874	26064	1866	37804
Attendance at designated cancer clinics	5705	13610	227	19542
Attendance at general clinics	4169	12454	1639	18262

3.6 Hospital Inpatient Enquiry System (HIPE) Data Structure and Use

The data in this report comes from a variety of sources and is brought together by a team of data holders within GUH. Data is also included from Group hospitals to give a more rounded picture of Cancer Services in the region. At the centre of the data gathering is the HIPE Data which deals with inpatient discharges and is gathered by Clinical Coders in each of the hospitals according to the rules and guidelines set out by the Health Pricing Office (HPO) for casemix purposes. It is important to understand that these rules apply equally to all hospitals.

From a data perspective, reporting on hospital cancer activity requires a locus around which the dataset is built. This requires a unique identifier for cases. Nationally, there are two such datasets: (1) HIPE data which is collected in each hospital and returned on a monthly basis to the HPO as part of the National Casemix Program and Money Follows The Patient and (2) NCR data which is collected in each hospital and returned to the NCR. We are very grateful to the NCR and HPO for their assistance in structuring the data. Terms of use and safeguards regarding Data Protection were discussed and agreed regarding the datasets as there are significant and just constraints around data protection for both datasets. It would appear that the NCR data for GUH cases would be the ideal locus around which to base standardised and validated annual reports once a unique common identifier can be used which would link with the HIPE dataset for GUH. One challenge with NCR data is that of timeliness – tends to be two years before completion; excellent for planning purposes but not for operational

management or monitoring purposes. In the meantime, the HIPE dataset is the locus as each patient and episode has its own unique identifier.

When looking at data, it is vitally important that it is being read by all with the same understanding. For the clearest picture, taking only patients whose main reason for admission was a cancer (as opposed to a cancer-related) condition we get the results shown in the table below.

Each patient can generate more than one episode of care and HIPE records each admission (episode), whether day case or inpatient, separately.

GUH Casemix Data (Data Source: HIPE)

Year	Cases	Case Mix Index	Average Length of Stay	GUH Case Mix Index
2013	3857	2.26	10.30	1.07
2012	3996	2.10	9.65	1.03

The GUH Casemix Data table shows the patients who were admitted to GUH with a Principal Diagnosis of Cancer. It excludes day-cases. The Casemix Index (CMI) is the indicator of the complexity of inpatient cases. The GUH CMI for all inpatients was 1.07 in 2013. For patients with a Principal Diagnosis of Cancer this doubles to 2.26. Furthermore, whilst the average length of stay (ALOS) for GUH inpatients was 5 days, amongst patients with a Principal Diagnosis of Cancer, this doubled to 10.3 days. There is no linear link between CMI and ALOS meaning that doubling of one does not mean the doubling of the other. This table does not include patients for whom cancer was a secondary diagnosis, e.g. a patient who is admitted with collapse due to dehydration following surgery or chemotherapy.

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

	In-Situ	Pre-Cancerous	Primary	Secondary	Unknown	Viral	Total
Haematological Cancer			**568**		**154**		**722**
Haematological Cancer			568		154		722
Surgical Oncology	**189**	**371**	**4862**	**1545**	**51**	**328**	**7346**
Breast Cancer	32		998		5		1035
Colorectal Cancer	7		449	88	3		547
Connective Tissue			17		2		19
Endocrine Cancer	2		71	30	4		107
Gynaecological Cancer	13	371	212	6	6	328	936
Head and Neck Cancer	3		142				145
Hepatobiliary Cancer			98	290	1		389
Lung and Thoracic Cancer	3		394	294	3		694
Lymph Node Cancer				295			295
Neurological Cancer			61	121	2		184
Ophthalmological Cancer			11				11
Orthopaedic Cancer			10	279	3		292
Other and ill-defined Cancer	1		40	26	3		70
Skin Cancer	119		906	72	11		1108
Upper Gastrointestinal Cancer	4		171	19	5		199
Urological Cancer	5		1282	25	3		1315
Total	**189**	**371**	**5430**	**1545**	**205**	**328**	**8068**

4. Cancer Specialties

4.1 Breast Cancer

Mr Ray McLaughlin
Consultant Breast Surgeon
Lead Clinician

As Lead Clinician, I am delighted to report that in 2013, the Symptomatic Breast Service experienced a challenging but extremely successful year in delivering a comprehensive breast cancer programme across the region. Our performance against the NCCP national key performance indicators remains at a consistently high level as depicted earlier in this report. Women with urgent symptoms are now seen within two weeks and have their radiology and biopsies performed on the same day.

The service has a very proactive quality assurance programme indicating that we are providing a breast service in line with international best practice. This is augmented with an excellent Symptomatic Breast Away Day, what began as a once off in 2011, is now well established as an annual event. The Away Day provides a communications platform for the multidisciplinary teams across the region to engage and share experiences and ideas, while strengthening the links with our satellite centre in LGH.

We continue to hold triple assessment clinics at the Symptomatic Breast Centre (SBC) in UHG each morning Monday to Friday and Letterkenny triple assessment clinics are all day clinics held every Monday and Thursday. These are symptomatic breast clinics led by a consultant breast surgeon with immediate access to imaging led by a consultant radiologist. The nurse-led and genetic clinics continue to add to what is a very vibrant and progressive breast cancer service.

We continue to strengthen our linkages and working relationships with the other hospitals in the Saolta University Health Care Group. We feel very fortunate to be linked to the Breast Cancer Research Facility, a world class research programme, based in at NUI Galway and led by Professor Michael Kerin.

The high level of activity at the Symptomatic Breast Centres across the Saolta University Health Care Group continued in 2013 with over 13,500 patient attendances at breast clinics in the region. One of the most significant aspects of 2013 is the substantial increase in the breast cancer detection rate across the group going from 5.19 to 5.6 per 100 new patients seen, despite a slight decline in new patient attendances.

The following tables depict symptomatic breast service activity in 2013.

Symptomatic Breast Outpatient Clinic Attendance data 2013 (Data Source:SBC)

Outpatient Clinic Statistics	UHG	LGH	Total
Number of outpatient clinics per week	11	6	17
Designated cancer outpatient clinics	5	3	8
New patients	4826	1624	6450
Review patients	5646	1410	7056
Total number of patients seen	**10472**	**3034**	**13506**

Symptomatic Breast Service Cancer diagnoses 2013 (Data Source:SBC)

Performance Parameter	UHG	LGH	Total
Number of new patients diagnosed with cancer	298	63	361
Disease progression diagnosis (review)	19	7	26
Total breast cancer diagnoses	**317**	**70**	**387**

Symptomatic Breast Cancer Surgical Interventions (Data Source:SBC)

Surgical Intervention	UHG	LGH
Wide Local Excision	157	44
Excision of Margins	16	3
Mastectomy	101	19
Sentinel Node Biopsy	169	42
Axillary Clearance	61	12
Breast Reconstruction	40	7

Outpatients Attendances by Breast Cancer patients diagnosed in 2013 (Data Source: PAS)

	New	Review	Unscheduled	Total
Total attendances in outpatients	1756	5256	249	7261
Attendance at breast clinics	688	1321	12	2021
Attendance at designated cancer clinics	1481	4142	45	5668
Attendance at general clinics	275	1114	204	1593

Breast Cancer Episodes 2013 (Data Source: HIPE)

Diagnosis	Number of Episodes
In situ	77
Primary cancer	1420
Unknown	8
Total	**1505**

Breast Cancer Procedures 2013 (Data Source: HIPE)

Description	Inpatients	Day case	Total	Inpatient Bed Days
Biopsy of breast	12	503	**515**	99
Excision proc on lymph node of axilla	204	197	**401**	1027
Excision of lesion of breast	125	267	**392**	379
Examination procedures on breast	65	132	**197**	197
Simple mastectomy	152	1	**153**	1008
Applicn/insertion/removal proc on breast	6	87	**93**	29
Reconstruction procedures on breast	55	0	**55**	396
Biopsy of lymphatic structure	9	6	**15**	29
Removal/Adjustment of breast prosthesis/tissue expander	9	4	**13**	63
Other repair procedures on breast	10	3	**13**	41
Augmentation mammoplasty	8	1	**9**	58

Symptomatic Breast Centre Annual Report Launch 2013
From left: Mr Bill Maher CEO, Mr Kevin Barry Consultant Surgeon, Ms Pauline McGough CNM, Mr Ray McLaughlin Lead Clinician SBC, Ms Ger Cooley A//Business Manager SBC

BreastCheck

Dr Aideen Larke
Clinical Director BreastCheck West
Lead Consultant Radiologist

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 & Wellbeing Directorate.

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

The BreastCheck Western Unit opened in Galway December 2007 to deliver a high quality screening service to almost 80,000 women in the large geographical catchment area in the West and North West of Ireland. This includes counties Galway, Mayo, Sligo, Donegal, Roscommon, Leitrim, Clare and Tipperary North Riding. Eligible women are invited to attend either the BreastCheck Screening Unit in UHG 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.

In 2013 38,784 women were invited for a screening mammogram and 27,923, representing an uptake rate of 72% which compares favourably with other screening services.

Performance Parameter	2013 Data
Number of women screened	27923
Number of women re-called for assessment	1186
Re-call rate	4.24%
Number of women diagnosed with cancer	169

BreastCheck Western Unit Team
From left: Mr Karl Sweeney, Ms Joan Raftery, Ms Jennifer Kelly, Dr Margaret Sheehan, Dr Aideen Larke

26,172 (93.73%) clients received a normal mammogram result: 99.6% received result within 21 working days. 1,186 (4.26%) women had an abnormal mammogram and were recalled to triple assessment clinic.

In 2013, the BreastCheck Western Unit diagnosed a total of 169 women with breast cancer. This cancer detection rate (6.05 per 1000) is similar to other national and international breast screening services.

BreastCheck publishes 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 has 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.

4.2 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, soon to be seven (Mr Rogers, Mr Jaffry, Mr Walsh, Mr Durkan and Mr Bin Nusrat), six SpRs, one SHO, one Registered Advanced Nurse Practitioner (RANP), two CNM's and experienced urology nurses. 2013 marked the retirement of consultant surgeon, Mr Michael Corcoran, who provided extensive cancer surgical expertise for almost 30 years.

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 three main areas: the main outpatient clinic, St Pius' Ward and T7 Rapid Access Prostate Clinic (RAPC). In addition much of the subspecialty programmes are led and supported by RANP, Moya Power, and several experienced urology nurses. Plans to start a regional shock wave lithotripsy services (ESWL) and invasive urodynamic services are at an advanced stage, it is envisaged that both of these services will be open to referrals from early 2014. There has been infrastructural work undertaken in T7 which will facilitate the transfer of all ambulatory clinics and services for urology to one area in early 2014.

Rapid Access Prostate Clinic (RAPC)

There are two 'one-stop' prostate assessment clinics each run in T7 each week, run 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 the publication of the HIQA report into Robotic Surgery, plans are at advanced stage to develop a service level agreement with management and urology consultants at the Galway Clinic so that men diagnosed with localised prostate cancer attending RAPC who chose surgery can be offered robotic assisted radical prostatectomy. It is envisaged that this service will commence in early 2014 when Mr Durkan has completed his introductory training in robotic surgery.

Multidisciplinary Team Meetings

The uro-oncology MDM meets every second week 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.

In memory of Mary Shannon

On November 2nd 2013 our esteemed nursing colleague and friend, Mary Shannon passed away after a brief illness. Mary had almost 40 years of service, with over 20 years dedicated to the care of urology patients. In recent years she was instrumental in the development and running of the RAPC. She was much loved by all, patients and colleagues alike. Mary was greatly respected for her professionalism and kindness and she had a wonderful ability to put even the most anxious patient at ease. She is survived by her husband Sean. Ar dheis Dé go raibh a hanam dílis.

Urological Cancer Outpatient Attendances 2013 (Data Source: PAS)

	New	Review	Unscheduled	Grand Total
Total attendances in outpatients	1583	4863	322	6768
Attendance at urology clinics	505	1034	19	1558
Attendance at designated cancer clinics	1131	3213	13	4357
Attendance at general clinics	452	1650	309	2411

Urological Cancer Episodes 2013 (Data Source: HIPE)

	Benign	In-situ	Primary	Secondary	Unknown	Total
Prostate	847	2	982		2	1833
Urinary	163	9	785	52	1	1010
Testicle	2		49			51
Penis	1	2	20			23
Other Male Genital	2					2
Total	**1015**	**13**	**1836**	**52**	**3**	**2919**

Urological Cancer Procedures 2013 (Data Source: HIPE)

Description	Inpatients	Day case	Total	Inpatient Bed Days
Examination procedures on bladder	48	226	**274**	516
Closed Bx prostate or seminal vesicle	5	200	**205**	40
Ultrasound of abdomen or pelvis	6	132	**138**	29
Urinary catheterisation	35	29	**64**	326
Open prostatectomy	59	0	**59**	410
Endoscopic resec bladder lesion/tissue	54	0	**54**	460
Endosc destruction bladder lesion/tissue	42	5	**47**	264
Endosc ins; replace; R/O ureteric stent	38	4	**42**	365
Radical nephrectomy	41	0	**41**	411
Intraoperative ultrasound	27	13	**40**	369
Other closed prostatectomy	39	0	**39**	263
Transurethral prostatectomy	22	3	**25**	177
Orchidectomy	21	1	**22**	159
Excision procedures on penis	16	3	**19**	210
Oth applicn/ins/removal proc on bladder	13	6	**19**	716
Biopsy of bladder	13	5	**18**	96
Oth applicn/ins/removal proc on kidney	18	0	**18**	345
Partial nephrectomy	17	0	**17**	146
Cystometrography	4	13	**17**	22
Nephrostomy or pyelostomy	16	0	**16**	357
Nephroureterectomy	12	1	**13**	141

Excludes Benign Prostatic Hypertrophy

4.3 Upper Gastrointestinal Cancer

Mr Chris Collins
Consultant Surgeon
Lead Clinician

Oesophageal cancer is the eleventh most common cancer in Ireland accounting for 2.5% of all malignant neoplasms in males and 1.5% in females. The average number of new cases diagnosed each year is 242 for men and 130 for women. Deaths from oesophageal cancer ranked as the fifth most common cancer death in men in 2010.

The upper gastrointestinal (GI) cancer services department has been a long standing facility in GUH. Today it is led by Mr Chris Collins. The department consists of two Consultant Surgeons (Professor Oliver McAnena and Mr Collins), their medical teams and a CNS (Ms Anna O'Mara). Upper and lower GI services are supported by A/CNS Aine Kennedy in PHB.

In 2012 GUH was designated by the NCCP as one of the three national satellite centres for Oesophageal and GI cancer care. The centralisation of all cancer care since 2006 has improved outcomes for patient care and in GUH patients have access to a full range of treatment options under a multidisciplinary approach including radical surgery, radiation therapy and chemotherapy to ensure optimum outcomes.

There are strong links and working relationships with our Group hospital colleagues and we accept newly diagnosed cancer cases on an ongoing basis. Videoconferencing facilities permit the medical teams from Group hospitals to actively participate in our weekly MDM where are patients are discussed and a treatment plan is outlined. This meeting is also attended by teams from radiation, medical oncology, radiology and histopathology to facilitate rapid and best quality treatment of patients. All patients are offered a clinic appointment to meet with the consultant surgeon and clinical nurse specialist in our outpatients department within ten working days of the time of referral.

GUH Upper Gastrointestinal Activity 2013

	Number of patients
New oesophageal cancer patients referred to GUH	49
New gastric cancer patients referred to GUH	44
New gastro-oesophageal junction cancer patients referred to GUH	11
Number of oesophageal/gastric and gastro-oesophageal junction surgeries	30
Number of patients referred for endoscopic mucosal resection	3
Number of patients who had definitive radiation/chemotherapy	12

The upper GI Service is closely monitored against KPIs in order to ensure optimum outcomes and we are delighted to outline that we are working within these stated standards of care. KPIs are returned and evaluated on a six monthly time frame to the NCCP.

In 2013 we ran a very successful Oesophageal Cancer Awareness Day in GUH. This information day was just one of the many events which took place around the country as part of Lollipop Day which is organised by the Oesophageal Cancer Fund, a registered charity set up in 2001 to raise awareness of the symptoms of oesophageal cancer and to provide money for research so as to improve the journey and outcomes for people with this cancer and their families.

Unfortunately a percentage of our patients present with advanced disease and we are unable to offer surgical treatment. We liaise closely with our palliative care colleagues to provide supportive care to the patient and family. We also refer patients and family members to Cancer Care West.

Future objectives for the service include providing endoscopic ultrasound within the group hospitals with a specialist gastroenterologist to provide onsite EUS procedures. It is also our objective to develop the facility for performing Endoscopic Mucosal Resection and Radiofrequency Ablation in GUH. Currently patients are referred to St James' Hospital in Dublin. The introduction of oesophageal radiation brachytherapy is being discussed with

our radiotherapy colleagues and would greatly benefit the oesophageal patients who present with recurring disease while we face challenges in the face of reduced resources and limited theatre access we endeavour to continue to expand the upper GI service and continue to provide the best standard of patient care and outcomes.

Oesophageal Cancer Awareness Day

From left: Olivia Dunleavy CNS Colorectal, Mr Chris Collins Lead Clinician, Ann O'Mara A/CNS Upper GI, Bríd Ní Fhoinnagain CNS BowelScreen and Professor Oliver McAnena Consultant Surgeon

Upper GI Cancer Outpatients Attendances 2013 (Data Source: PAS)

	New	Review	Unscheduled	Total
Total attendances in outpatients	270	547	53	870
Attendance at upper GI clinics	23	64	5	92
Attendance at designated cancer clinics	200	371	13	584
Attendance at general clinics	70	176	40	286

Upper GI Cancer Episode Reports (Data Source: HIPE)

	In-situ	Primary	Secondary	Unknown	Total
Abdominal			20	3	23
Upper GI	4	289	10	3	306
Total	**4**	**289**	**30**	**6**	**329**

Upper and Lower GI Procedures 2013 (Data Source: HIPE)

Description	Inpatients	Day Case	Total	Inpatient Bed Days
Fibreoptic colonoscopy	22	91	**113**	356
Fibreoptic colonoscopy with excision	20	74	**94**	336
Colectomy	73	0	**73**	1350
Panendoscopy with excision	22	35	**57**	396
Panendoscopy	17	28	**45**	366
Anterior resection of rectum	26	0	**26**	473
Rectosigmoidectomy or proctectomy	21	0	**21**	424
Dilation of oesophagus	3	17	**20**	7
Biopsy of lymphatic structure	9	10	**19**	44
Oth applicn/ins/removal proc; oesophagus	10	4	**14**	87
Resection of small intestine	14	0	**14**	326
Stomas of small intestine	14	0	**14**	284
Other gastrectomy	13	0	**13**	405
Laparotomy	9	1	**10**	102
Other repair of large intestine	10	0	**10**	222
Partial gastrectomy	9	0	**9**	212
Adrenalectomy	8	0	**8**	72
Excision procedures on liver	8	0	**8**	118
Incision of biliary system	7	0	**7**	224
Total proctocolectomy	7	0	**7**	99
Gastrostomy or gastro-enterostomy	7	0	**7**	80
Total	**329**	**260**	**589**	**5983**

4.4 Colorectal Cancer

Mr Mark Regan
Consultant Surgeon
Lead Clinician

Mr Myles Joyce
Consultant Surgeon

The aim of the colorectal unit is to provide gold standard international care to all patients referred to our service. All cases are discussed at a Multidisciplinary meeting which involves all centres and specialities. This is in keeping with best international practice. The valued input of all attendees allow a consensus opinion on the best approach for the patient.

The unit offers open colorectal surgery; laparoscopic colorectal surgery; advanced endoscopy for complex benign polyps; transanal surgery for a subgroup of patients with rectal pathology. The presence of Gynaecology and Urology consultants with a special interest in cancer allows the more complex advanced malignancies to be dealt with in GUH.

The close working relationship between all the specialities allows easy interaction and referral of patients in a timely manner between the specialities.

Stoma therapy provides a critical adjunct to the service in GUH and associated hospitals. In GUH this excellent patient orientated service has been provided by Ms Mary Quigley and Ms Mary Smyth. Mary Smyth retired in July 2013, having given many years of service to the stoma care service in GUH. It is hoped to have Mary's role replaced in late 2013 early 2014. The Stoma Care CNS is also involved in mentoring the Upper GI/Colorectal Acting CNS in PHB. In coming years we hope to expand this service as the creation of a stoma and its aftercare are critical components to the patients care and require an expert approach.

The strong interest and professionalism of all members of the colorectal teams in the Saolta University Health Care Group ensures that the unit will go from strength to strength.

Colorectal Cancer Outpatients Attendances 2013 (Data Source: PAS)

	New	Review	Unscheduled	Total
Total attendances in outpatients	584	2246	193	3023
Attendance at colorectal clinics	89	380	14	483
Attendance at designated cancer clinics	155	664	17	836
Attendance at general clinics	429	1582	176	2187

Colorectal Cancer Episodes 2013 (Data Source: HIPE)

	In-Situ	Pre-Cancerous	Primary	Secondary	Unknown	Total
Polyp of Colon Unspecified		533				533
Secondary malignant neoplasm of retroperitoneum and peritoneum				194		194
Malignant neoplasm of rectum			163			163
Malignant neoplasm of rectosigmoid junction			137			137
Sigmoid colon			112			112
Colon, unspecified			104			104
Caecum			43			43
Ascending colon			37			37
Transverse colon			28			28
Secondary malignant neoplasm of large intestine and rectum				25		25
Descending colon			18			18
Retroperitoneum			17			17
Anal canal			14			14
Hepatic flexure			13			13
Anus, unspecified			9			9
Overlapping lesion of colon			9			9
Appendix			7		1	8
Peritoneum, unspecified			5			5
Splenic flexure			5			5
Colon					3	3
Overlapping lesion of rectum, anus and anal canal			3			3
Anus and anal canal	2					2
Rectosigmoid junction	2					2
Rectum					1	1
Specified parts of peritoneum			1			1
Total	**9**	**533**	**725**	**219**	**5**	**1491**

Stoma Care Activity 2013

Activity	Number
Pre-assessment clinic activity	14
Pre- op siting/counselling (no stoma created)	35
New Stoma created	173 (67% oncology related)
Reversal of stoma	16
In-patients review (established stoma with problems, e.g. Chemo/ Radiotherapy related)	229
In-patient referrals (non-cancer related)	38
Outpatient activity	259
PEG consultations	12
Enterocutaneous fistulae/wound	14
Neonates transferred from Temple Street & Crumlin Hospitals	7
Telephone triage/support (outside calls dealt with while on the wards are not recorded)	1827

4.5 BowelScreen

Dr Ramona McLoughlin
Consultant Gastroenterologist
Lead Clinician

BowelScreen, the National Bowel Screening Programme commenced in 2013. Approximately 5% of participants will have a positive home test kit (called a FIT kit) and require a follow up colonoscopy. The Saolta University Health Care Group Colorectal Cancer Screening Steering committee was set up in January 2013 to oversee the implementation of BowelScreen in hospitals providing the colonoscopy, histopathology, CT and surgery elements of the programme.

The multidisciplinary committee includes Consultant representatives from Gastroenterology, Radiology, Pathology and Surgery, IT staff, BowelScreen CNSs, senior nursing and administrative representatives, a bioengineer, business manager and lab manager. The Committee is chaired by a Hospital General Manager (Elaine Prendergast) and the Co-Chair/Clinical Lead is a Consultant Gastroenterologist. A representative from the NCSS also attended the monthly meetings.

Three hospitals, GUH, SRH and RCH have all received Joint Advisory Group (JAG) accreditation for their endoscopy units and are eligible to become screening colonoscopy units for BowelScreen. Portiuncula Hospital staff also joined the committee, they are preparing for JAG accreditation.

In May 2013 GUH and SRH commenced the BowelScreen service. Roscommon Hospital has planned to commence in February 2014.

BowelScreen Team
From left: Dr Ramona McLoughlin Lead Clinician, Greta Greaney CNMII, and Bríd Ní Fhoinnagáin CNS BowelScreen

BowelScreen Activity for the period May to December 2013

	GUH	Sligo	Group Total
Screening Colonoscopies performed	277	167	444
Pts with Polyps	188 (68%)	136 (81%)	324 (73%)
Surgical Referrals	18 (6.5%)	11 (6.5%)	29 (6.5%)
Cancers detected	11 (4%)	11 (6.5%)	22 (5%)
CTC referrals	11 (4%)	3 (2%)	14 (3%)
DNAs	1 (0.4%)	1 (0.6%)	2 (0.45%)

Members of the Endoscopy Unit at Sligo Regional Hospital celebrate their JAG Accreditation success
From left: Caroline Conmy, CNS Gastroenterology, Fidelma Scott, Staff Nurse, Brenda Parke, Staff Nurse, Therese Gallagher, UNO/SM, Catherine Cunningham, CNM II/Nursing Lead, Ciaran O'Boyle, Porter, Kevin Walsh, Consultant Gastroenterologist/Clinical Lead, Sinead Duffy, Staff Nurse, Aisling Queenan, Staff Nurse, Lucy Byrne, Staff Nurse, Anna Burke, CNM III, Suzanne Murtagh, Staff Nurse, Angela Walsh, Staff Nurse, Martina Anderson, Health Care Assistant & Karen Reynolds, Quality & Safety Manager/Project Lead.

The Colorectal Screening Group were successful with their submission for funding from the Irish Cancer Society/NCCP to the value of €250,000 for equipment to support BowelScreen and symptomatic colonoscopy services across GUH, RCH and PHB sites.

Presentation of cheque for Irish Cancer Society/NCCP colorectal funding €250,000
From left: Back Row: Professor Wil Van Der Putten, Marie Cox, and Ann Cosgrove. Middle Row: Dr John Lee, Ann Dooley, Professor Larry Egan. Front Row: Bill Maher, Ann Flanagan, Dr Valerie Byrnes, Donal Buggy Irish Cancer Society

4.6 Skin Cancer

Ms Deirdre Jones
Consultant Plastic Surgeon
Lead Clinician

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. The Group has a very busy skin cancer service providing care to the West/North West region as well as other midland/border counties. For every skin cancer detected it is estimated that 16-20 lesions are seen in the outpatient setting. There are Skin Triage Clinics and outpatient clinics in GUH, MGH, PHB, PCH and Ennis.

Multidisciplinary Team Meetings

The core skin cancer treatment team comprises the specialties of Dermatology, Plastic Surgery, General Surgery, Oncology and Radiotherapy. The entire service relies upon the specialist Histopathology Service as well as the Radiology Service. These are the key members of the MDM which assembles three weeks out of four to discuss all melanomas and challenging lesions. Discussing 25-40 patients per meeting, the MDT represents a considerable investment in time from the lead skin cancer pathologists and radiologists. Non-consultant hospital doctors (NCHDs) from the Plastic Surgery team spend upwards of 15 hours of administrative work per meeting collating the documentation required to effectively discuss each individual case. Afterwards the same NCHD team actions all of the plans agreed by the meeting and records the treatment plan in the patient's notes. The MDM is the cornerstone of our service and provides an invaluable forum for optimising patient care. Skin cancer patients are also discussed at the Dermatology/Pathology MDT and the Head and Neck MDM on a regular basis as required.

Education and Training

The teams involved in skin cancer treatment in GUH are actively engaged in education and training, not just of their own NCHD teams, but also regularly meet with GPs, Nursing groups and medical students in order to raise awareness of skin cancer, and to improve diagnostic accuracy and potentially streamline referral patterns in the future. There is also a strong culture of attending national and international meetings relating to skin cancer, most notably this year the International Melanoma Forum in Dublin in September and the RCS/BAPRAS Advanced Course in Skin Cancer in October 2013.

Treatments

The treatment of skin cancer in our group is primarily surgical, and we continue to provide new facilities to perform these procedures in efficient, patient-friendly ways. In addition to the day ward facilities available in GUH, Ennis and RCH we have access to the Plastic Surgery Procedures Unit (PSP) which facilitated 1,718 cases in 2013 - the majority of which were skin cases. We are currently piloting a new promising facility in MPH. In relation to the non-surgical treatment of skin cancer, the Dermatology Service provides topical therapies (Efudix, Aldara, and Picato), cryotherapy and photodynamic therapy for suitable patients.

Screening and Surveillance

We are seeing increased patient numbers year on year for skin cancer screening. Patients of all ages, gender, degrees of risk present and must be seen. This represents an enormous workload before any surgical or medical treatment is provided at all. Aside from outpatient diagnosis and treatment of skin cancers, there is also a requirement to follow-up patients who have undergone treatment for certain types of skin cancer - most notably squamous cell carcinoma and melanoma. While a system of shared care with GPs might be a desirable option for the future, from a patient's and services provider's point of view, it is not yet widespread. Transplant patients, and other patients on immunosuppressant medication are particularly in need of careful and continuous surveillance.

Challenges for the future

All members of the skin cancer service in the Group feel the lack of a modern and reliable IT system very keenly. It is simply not possible to establish accurate data for referrals, clinic attendances, treatments and outcomes. The numbers are unwieldy and often we are forced to rely on estimates and impressions. In this environment, the team's ability to report or record key performance indicators or to implement NCCP recommendations is not possible. More critically, we don't really know how much or how well we are doing, this hampers our ability to accurately plan for the future.

There is broad agreement amongst the key stakeholders that we have an absolute requirement for a solid and accurate database. It is also key that we rapidly introduce CNS and RANPs roles to help in the clinical, informational support to patients and their families. There is also a need for administrative support for the NCHD staff and the MDM process. The team are working with nursing and the Directorates to progress these resources.

The enormous and expanding geographic area served is both a strength and a challenge. We see large numbers of patients, many with significant pathology, this provides us with valuable expertise. However, there is a real need to introduce services in further peripheral centres for the benefit of patients and the hospital group alike. There is a requirement for additional consultant staff in all of the key specialties in order to be able to provide the type of skin cancer service that could be called "state of the art". We are all committed to this process, and will continue to advocate both locally and nationally for improved services for skin cancer patients.

Skin Cancer Outpatients Attendances 2013 (Data Source: PAS)

	New	Review	Unscheduled	Grand Total
Total attendances in outpatients	1679	3900	279	5858
Attendance at skin cancer clinics	610	1233	69	1912
Attendance at designated cancer clinics	294	685	10	989
Attendance at general clinics	1385	3215	269	4869

Skin Cancer Inpatient Data 2013

Cancer	Cases
Basal Cell Carcinoma	1014
Squamous Cell Carcinoma	528
Squamous Cell Carcinoma In Situ	190
Melanoma	116
Melanoma in-situ	118
Other	271
Total	2237

Skin Cancer Procedures 2013 (Data Source: HIPE)

Description	Inpatient	Day case	Total	Inpatient Bed Days
Excision of lesion(s) of skin and subcutaneous tissue	113	1714	**1827**	326
Local skin flap simple & small; sgl stg	12	85	**97**	49
Biopsy of skin and subcutaneous tissue	4	73	**77**	4
Excision proc on lymph node of axilla	26	30	**56**	163
Other split skin graft; small	26	28	**54**	192
Other full thickness skin graft	4	42	**46**	6
Other debridement of skin and subcutaneous tissue	19	2	**21**	289
Excision proc on lymph node of groin	9	5	**14**	71
Biopsy of lymphatic structure	4	6	**10**	10
Excision procedures on other M/S sites	3	7	**10**	37
Destruction of lesion skin or cartilage	0	9	**9**	0
Incision & drainage of SSCT	8	0	**8**	76
Excision proc on lymph node of neck	7	1	**8**	25
Excision; ear	0	7	**7**	0
Distant skin flap; direct	5	0	**5**	37
Total	**240**	**2009**	**2249**	**1285**

4.7 Lung Cancer

Dr David P. Breen
Consultant Respiratory Physician
Lead Clinician

Rapid Access Lung Clinic (RALC)

A multi professional team provides the RAL service across GUH and in collaboration with respiratory physicians across three Group hospitals (MGH, SRH and RCH). Patients identified at risk are assessed, including consultation, pulmonary function testing, preliminary diagnostic imaging, and a Bronchoscopy biopsy service. The RALC provides an effective symptomatic service of the highest possible quality, so that the maximum number of Lung cancers can be detected at the earliest possible stage.

The main clinic for the RAL service is held on Monday afternoon in GUH. The Lead Consultant, Dr David Breen and one or two Registrars attend each clinic. The average number of patients seen is 10 new patients and 15 for review. The patients are assessed, many of them are then scheduled for more investigations the following day - such as PFTs, CT Thorax and Bronchoscopy and/or EBUS (Endobronchial Ultrasound) in Unit 8, Merlin Park Hospital.

Lung Cancer Outpatients Attendances 2013 (Data Source: PAS)

	New	Review	Unscheduled	Grand Total
Total attendances in outpatients	1649	2820	235	4704
Attendance at lung & thoracic clinics	19	168	3	190
Attendance at designated cancer clinics	1415	1962	62	3439
Attendance at general clinics	234	858	173	1265

Lung Cancer Procedures 2013 (Data Source: HIPE)

Description	Inpatients	Day Case	Total	Inpatient Bed Days
Bronchoscopy with biopsy	49	109	**158**	635
Intraoperative ultrasound	48	66	**114**	1163
Lobectomy of lung	51	0	**51**	606
Examination procedures on bronchus	19	19	**38**	285
Insertion of chest drain	29	2	**31**	550
Vascular access device	20	11	**31**	579
Excision proc on lymph node; other sites	27	0	**27**	331
Examination procedures on larynx	6	18	**24**	98
Biopsy of lung or pleura	13	4	**17**	73
Non-invasive ventilatory support	12	0	**12**	201
Exam proc; chest wall/mediastinum/diaph	10	1	**11**	138
Other measurement of resp function	1	9	**10**	11
Laryngoscopy with excision	0	9	**9**	0
Repair procedures on bronchus	8	0	**8**	105
Coronary angiography	6	2	**8**	55
Partial resection of lung	7	0	**7**	67
Other repair proc on lung or pleura	7	0	**7**	134
Tracheostomy	3	3	**6**	70

Lung Surgical Activity for Patients with Primary Lung Cancer 2013 (NCCP Data)

Diagnosis	Number of Patients
Number of patients with primary lung cancer who had a lung resection; of those	62
The number who had a lobectomy	52
Percentage of total resections	*84%*
The number who had pneumonectomy	1
Percentage of total resections	*2%*
The number who had a bronchoplastic resection	44
*Percentage of total resections**	*71%**
The number who had a local or wedge resection	9
Percentage of total resections	*15 %*
The number who had another type of resection	0
Percentage of total resections	*0%*

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

Projects/Initiatives

Unit 8 Direct - Same day assessment and investigations of malignancy - The lead clinician triages all referrals, patients who have already had a CT, with high suspicion of a malignancy, or who live a great distance from GUH will be asked to come directly to U8. A RAL nurse attends U8 to meet, assess and register patients in RALC.

Brief Smoking Cessation Course for all nurses in RAL, enabling easier conversation regarding smoking habits and cessation with patients.

A review and update of the RALC assessment form is ongoing, the purpose of which is to improve data capture from the clinic. Work continues on the development of a Lung database to capture data electronically, manage the MDM's and allow for seamless transfer of patient information across sites.

Education/Conferences

- Dympna McPhillips graduated with a Post Graduate Diploma in Nursing (Oncology) from NUI Galway
- Ellen Wiseman obtained a Professional Credit Award in Respiratory Diseases in the Community from NUI Galway
- Dympna McPhillips won a competition run by the Irish Association of Nurses in Oncology (IANO) with an article on Lung Cancer. It was published in the January edition of the IANO magazine. Dympna won a bursary of €500 Euro to be spent on travel to an Oncology conference.

Plans for 2014

A new "Joint Thoracic Clinic" is planned for 2014. It will take place on a Thursday in the main outpatient department at GUH. This will be for patients who have had investigations, have a diagnosis of cancer and their case has been discussed at the Lung MDM. The plan for their treatment will have been made and the relevant Consultant – Medical Oncologist, Radiation Oncologist or Cardiothoracic Surgeon - will be available to see the patient once they have seen the Respiratory Consultant and received their diagnosis. While awaiting a formal clinic – patients are seen on Thursday pm by the RAL lead consultant and nursing support.

4.8 Gynaecological Cancer

Mr Michael O'Leary
Consultant Obstetrician and Gynaecologist
Lead Clinician

Colposcopy Clinic

There were 4335 attendances at the Colposcopy clinics in 2013 and 984 of these were first attendances. The clinic is contracted by the NCCP to see 1000 first visits per annum. Overall DNA (Did-Not-Attend) rate was 4% amongst first visits and 9% 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.

MedLab Pathology provided cytology and high risk HPV testing. CervicalCheck funded post treatment HPV tests. HPV tests for management of persistent low-grade disease were funded by the Hospital and those with negative HPV were discharged from the clinic for cytology follow up. This led to a reduction in the number of review visits. Women attending Colposcopy have become increasingly aware of HPV as the cause of cervical cancer and staff provided information, written and verbal to educate and reassure them.

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 GoToMeeting software.

There were 374 Large Loop Excision of the Transformation Zone (LLETZ) treatments and 905 diagnostic biopsies performed. 91% of excisional treatments had CIN on histology, which meets CervicalCheck standards (>80%). Complete LLETZ results are included in the table below.

LLETZ Histology Results 2013	Number	Percentage %
Cancer (including microinvasive)	11	3
AdenoCa in situ / CGIN	16	4
CIN3	181	48
CIN2	66	18
CIN1	68	18
VAIN3	1	
HPV / cervicitis	11	3
No CIN / No HPV / normal	20	5
Inadequate / unsatisfactory	0	
Result not known by clinic	0	

A total of 21 women had cancer diagnosed at the Colposcopy clinic in 2013. Sites of cancer were, cervix (n=15), vulva (n=2), vaginal vault (n=2), and endometrium (n=2). Of the 15 cervical cancers 7 were early microinvasion and 2 of these were aged less than 30 years, 7 were squamous cell carcinoma and the age range was 30 to 59 years. There was 1 adenocarcinoma of cervix in a 39 year old woman. The CervicalCheck programme has been in operation since September 2008 and this clinic has not yet seen a reduction in cervical cancers. However it is a very positive outcome that 50% were detected at an early stage when aggressive treatment is not required. It is anticipated that as screening uptake increases the incidence of cervical cancer will be reduced.

An outreach smear clinic was introduced in May 2013 to facilitate women from the midland counties. Women who have been seen at Colposcopy in Galway and need cytology follow up by the Colposcopy team are given the option of a review appointment at Portiuncula Hospital. The Nursing/Midwifery team from Galway Colposcopy clinic provides the service at Portiuncula Hospital twice each month and 92 women attended between May and December 2013. Monthly, quarterly and annual report of activity (colp1) was generated and submitted to CervicalCheck.

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 2013 by the Colposcopy team both clinical and clerical has improved the standard of care for women in the West of Ireland and midlands.

Gynaecology Clinic

There are two Consultant Gynaecologists with a special interest in Gynaecological Oncology servicing the West and North West of Ireland, taking referrals from Galway, North Clare, Roscommon and Mayo. Not all patients from Sligo or Donegal with gynaecological cancers are referred to Galway, the majority are being referred to Dublin.

There are 1.5 theatre sessions per week in the gynaecology theatre, with additional sessions in the main theatre block when available. This became more formalised in October 2012 when allocation of Gynaecology theatre lists in main theatre was taken over by the Theatre Flow Group. Dr Katherine Astbury also operates on low risk cases in Portiuncula Hospital, Ballinasloe.

Gynaecological Cancer Outpatients Attendances 2013 (Data Source: PAS)

	New	Review	Unscheduled	Total
Total attendances in outpatients	795	1864	63	2722
Attendance at gynaecological clinics	4	245	0	249
Attendance at designated cancer clinics	185	487	1	673
Attendance at general clinics	610	1371	68	2049

Gynaecological Cancer Episodes 2013 (Data Source: HIPE)

	Benign	In-Situ	Pre-Cancerous	Primary	Secondary	Unknown	Viral	Total
Cervix	3		476	234			373	1086
Gynaecological	3	17		23				43
Ovary	63			131	8	6		208
Uterus	183			92				275
Total	252	17	476	480	8	6	373	1612

Gynaecological Procedures 2013 (Data Source: HIPE)

Description	Inpatients	Day Cases	Total	Inpatient Bed Days
Examination procedures on vagina	2	305	**307**	9
Destruction procedures on cervix	2	215	**217**	2
Abdominal hysterectomy	96	0	**96**	783
Excision procedures on cervix	3	92	**95**	16
Curettage and evacuation of uterus	30	42	**72**	84
Examination procedures on uterus	26	44	**70**	87
Other intra-abdominal excision procedure	38	0	**38**	308
Excision of lymph node	37	1	**38**	292
Excision of lesion of uterus	27	4	**31**	146
Other procedure on female genital organs	29	1	**30**	264
Salpingo-oophorectomy	24	1	**25**	105
Vaginal hysterectomy	23	0	**23**	156
Other excision procedures on ovary	20	1	**21**	74
Examination procedures on bladder	6	5	**11**	76
Other genitourinary test/measure/investigation	0	9	**9**	0
Biopsy of abdomen; peritoneum or omentum	8	0	**8**	69
Laparoscopy	4	4	**8**	9

4.9 Head and Neck Cancer

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

GUH is the tertiary referral centre for head and neck cancer for the West of Ireland, stretching from Donegal to Clare. Patients are referred directly from GPs and also from the other regional hospitals in the Saolta University Health Care Group. The Department of Otolaryngology, Head & Neck Surgery (ENT) and the Department of Maxillofacial Surgery provide Head and neck cancer services.

The ENT department consists of four consultant surgeons (Mr Gormley, Professor Keogh, Mr Lang and Ms Young), one Senior SpR, one junior SpR, three Registrars, one SHO (GP trainee) and one intern. Outpatient services are provided five days per week in GUH, one day per week in Mayo General Hospital and one day per fortnight in Roscommon Hospital.

The Maxillofacial department consists of two consultant surgeons, (Mr McCann and one locum), and three and a half registrar posts. Maxillofacial outpatient services are provided in GUH and Portiuncula Hospital.

Karen Malherbe is our Senior Speech & Language Therapist, who provides support for all patients with speech and swallowing issues before, during and after treatment. Karen provides support for inpatient and outpatient head and neck oncology services patients and attends MDT ward rounds, teaching sessions and all MDMs, where her input is greatly valued.

The head and neck cancer unit was greatly enhanced in 2013 with the arrival of a full-time head and neck cancer Clinical Nurse Specialist – Carol Brennan. Head and neck oncology patients in the West of Ireland now have a crucial link person throughout their treatment journey. Carol provides support from diagnosis, through treatment, recovery and on into longer term follow-up. This support is invaluable to patients themselves and their families. Carol also attends all MDMs and is a key figure in decision-making, helping patients work through treatment options.

Multidisciplinary Team Meetings

Meetings increased in frequency from fortnightly to weekly midway through 2013. 230 patients were discussed at 24 meetings, attended by Surgeons, Medical Oncology, Radiation Oncology, Radiology, Pathology, Speech and Language Therapy and the Head and Neck Oncology Liaison Nurse.

Trans Oral Laser Surgery (TORS)

Endoscopic CO2 laser surgery for treatment of early laryngeal cancer arrived in the West of Ireland in 2012. Funding was secured during 2013 for purchase of a new laser machine. The ability to treat patients with this new laser technology delivering CO2 waveform both via the traditional articulated arm and microscope, but also through a flexible fibre will greatly enhance the capacity to treat both early laryngeal, but also early oropharyngeal cancers.

Head and Neck Cancer Outpatients Attendances 2013 (Data Source: PAS)

	New	Review	Unscheduled	Total
Total attendances in outpatients	346	994	107	1447
Attendance at head and neck clinics	95	375	69	539
Attendance at designated cancer clinics	206	484	4	694
Attendance at general clinics	140	510	103	753

New Head and Neck Oncology Diagnoses 2013

Diagnoses (MDM)	Number
Parotid	21
Vocal Cord	13
Tongue	13
Tonsil	12
Other Larynx	10
Palate	9
Hypopharynx	6
Base of Tongue	6
Floor of mouth	6
Lower lip / Buccal mucosa	5
Melanoma (surgery)	5
Unknown Primary	4
Mandible	2
Pinna	2
Retromolar trigone	1
Nasopharynx	1
Post auricular	1
Total	**117**

Head and Neck Oncology Surgical Interventions

Surgical Interventions	Number
Microlaryngoscopy & biopsy	139
Panendoscopy & biopsy	63
Parotidectomy	41
Excision biopsy Neck Nodes	41
Neck Dissection	36
Thyroidectomy	23
Excision malignancy oral cavity/oropharynx	17
Tracheostomy	11
Hemiglossectomy with Mandibulectomy	7
Trans-oral laser resection laryngeal tumour	7
Hemiglossectomy	6
Laryngectomy	3
Maxillectomy	2
Total	**392**

Head and Neck Cancer Episodes 2013 (Data Source: HIPE)

	In-Situ	Primary	Total
Oropharynx		395	395
Nose & Sinus		17	17
Respiratory	6		6
Total	**6**	**412**	**418**

4.10 Endocrine Cancer

Dr Marcia Bell
Consultant Endocrinologist
Lead Clinician

The endocrine cancer programme comprises a multidisciplinary team involving six endocrinologists, three endocrine surgeons, two pathologists, two radiologists and two chemical pathologists.

MDMs are held twice monthly and all endocrine patients requiring surgical intervention are discussed pre- and post-operatively. Diagnostic assessments include specialist radiology, cytology and isotope studies. The service has specialist expertise in intra-operative parathyroid hormone (iPTH) measurement and sestamibi localisation for parathyroid disease.

Endocrine Cancer Outpatients Attendances 2013 (Data Source: PAS)

	New	Review	Unscheduled	Total
Total attendances in outpatients	159	423	71	653
Attendance at endocrine clinics	37	62	15	114
Attendance at designated cancer clinics	35	102	4	141
Attendance at general clinics	124	321	67	512

Endocrine Cancer Episodes 2013 (Data Source: HIPE)

	In-Situ	Primary	Secondary	Unknown	Total
Endocrine	5	109	52	12	178
Abdominal		7			7
Total	5	116	52	12	185

Endocrine Cancer Surgical Interventions 2013

Surgical Intervention	Number
Thyroidectomy	93
Parathyroidectomy	39
Adrenalectomy	10

4.11 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 out-patient 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 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 2013 a total of 37 autologous stem cell transplants were performed, 27 of which were for multiple myeloma and 9 for non-Hodgkin's lymphoma.

GUH is very actively involved in Cancer Clinical Trials (Phase I, II and III) and the Clinical Research Facility.

Haematological Cancer Outpatients Attendances 2013 (Data Source: PAS)

	New	Review	Unscheduled	Grand Total
Total attendances in outpatients	602	2180	231	3013
Attendance at haematological clinics	105	1055	66	1226
Attendance at designated cancer clinics	313	1037	44	1394
Attendance at general clinics	289	1143	187	1619

Haematological Cancer Patients 2013 (Data Source: HIPE)

	Primary	Unknown	Total
Lymphoma	260		260
Myeloma	142		142
Myleodysplastic		129	129
Lymphoid Leukaemia	74		74
Myeloid Leukaemia	71		71
Polycythaemia Vera		25	25
Immunoproliferative	13		13
Other Leukaemia	7		7
Monocytic Leukaemia	1		1
Total	**568**	**154**	**722**

Haematological Cancer Episodes 2013 (Data Source: HIPE)

	Not stated as 'In Remission'		Stated as In Remission	Total
	Primary	Unknown	Primary	
Myleodysplastic		985		985
Lymphoma	509			509
Myeloma	246		8	254
Lymphoid Leukaemia	228		5	233
Myeloid Leukaemia	210		8	218
Polycythaemia Vera		68		68
Immunoproliferative	26			26
Monocytic Leukaemia	1			1
Other Leukaemia	7			7
Total	1227	1053	21	2301

Research Abstracts Presented at the American Society of Haematology 2013

Glavey S *et al*. Silencing The Sialyltransferase Gene ST3GAL6 Inhibits Adhesion and Migration Of Myeloma Cells *In Vitro* and Reduces The Homing and Proliferation Of Tumor Cells *In Vivo.* Blood Nov 2013 122 :275

Glavey S *et al*. Low Expression Of The FUCA1 Gene Is An Adverse Prognostic Factor In Myeloma and Combined With High Sialyltransferase Gene Expression Identifies Patients At Increased Risk Of Early Disease Progression and Death. Blood Nov 2013 122 :1864

Krawczyk *et al*. Cybord Is An Active, Well Tolerated, Cost-Effective Induction Regimen In Newly Diagnosed Multiple Myeloma – a Single Centre Experience. Blood Nov 2013 122 :5396

Voorhees P *et al*. Novel AKT Inhibitor Afuresertib In Combination With Bortezomib and Dexamethasone Demonstrates Favourable Safety Profile and Significant Clinical Activity In Patients With Relapsed/Refractory Multiple Myeloma. Blood Nov 2013 122 :283

Ribrag V *et al*. A Phase 1b, Dose-Finding Study Of Ruxolitinib Plus Panobinostat In Patients With Primary Myelofibrosis (PMF), Post–Polycythemia Vera MF (PPV-MF), Or Post–Essential Thrombocythemia MF (PET-MF): Identification Of The Recommended Phase 2 Dose. Blood 2013 122:4045

Wenn K *et al*. Telomere Shortening At Diagnosis Of Chronic Phase Chronic Myelogenous Leukemia (CML-CP) Is Significantly More Pronounced In Patients With Less-Than-Optimal Versus Optimal Molecular Response (ELN criteria) After 12 Months Of Treatment With Nilotinib
Blood Nov 2013 122 :1471

Wolf D *et al*. Early PK-Analysis Predicts Molecular Response In Patients With Early Chronic Phase Chronic Myelogenous Leukemia (CML-CP) Treated With Frontline Nilotinib. Blood Nov 2013 122 :1485

Thielen N *et al*. Leukemic Stem Cell Quantification Is Of Prognostic Value In Newly Diagnosed Patients In Chronic Phase Chronic Myeloid Leukemia (CML-CP) Receiving Nilotinib Therapy: Results From The ENEST1st Stem Cell Substudy. Blood Nov 2013 122 :649

Sopper S *et al*. Immune Monitoring In Patients With Early Chronic Phase Chronic Myelogenous Leukemia (CML-CP) Treated With Frontline Nilotinib. Blood Nov 2013 122 :2731

4.12 Radiology

Dr Clare Roche
Consultant Radiologist
Lead Clinician

The Radiology Department provided a range of diagnostic, staging and surveillance imaging studies for oncology patients in the Saolta University Health Care Group catchment area in 2013. Investigations included Computed Tomography (CT), Ultrasound, Nuclear Medicine and Magnetic Resonance Imaging (MRI). In many instances, Oncology scanning constituted the bulk of the workload for these modalities at our hospitals.

Data for Oncology Imaging at GUH

Modality	Estimated number of examinations/procedures for oncology patients in 2013	Estimated % of total 2013 workload
Computed Tomography (CT)	14,784	65%
Magnetic Resonance Imaging (MRI)	1,506	25%
Nuclear Medicine	1,615	75%
Ultrasound	4,955	50%
Interventional Radiology	1,830	70%
Positron emission tomography (PET) CT (externally referred service)	288	99.9%

Radiology also offered several interventional procedures to these patients. These include:

(i) diagnostic procedures (image guided biopsies)
(ii) procedures facilitating intravenous or enteral therapy (central venous catheter insertion; percutaneous gastrostomy)
(iii) procedures for complications of their disease (drainage and stent insertion, caval filter insertion)
(iv) procedures to directly treat their cancer (radiofrequency ablation, tumour chemoembolization)

Compared to figures for 2012 at The Galway University Hospitals:

1. CT increased from 10,406 to 14,784
2. MRI increased from 1,239 to 1,506
3. Nuclear medicine decreased from 3,319 to 1,615 (Nuclear medicine service was curtailed while new equipment upgrade commissioned and installed)
4. Interventional radiology decreased from 2,168 to 1,830 – combination of service curtailed while new intervention suite installed and also the resignation of a consultant radiologist who performed interventional procedures.

In addition, Radiology at GUH supported twelve oncology MDMs, most occurring weekly. These meetings require careful preparation, and afford the opportunity to critically review current and previous imaging in the context of planning patient care/treatment.

MDM Activity by the Radiology Department

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

4.13 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. There are Pathology departments at GUH, LGH, SRH, PHB and MGH.

The following data relates to pathology activity at GUH.

Histopathology Workload at GUH 2013

Specimen types	Case numbers	Specimen numbers	Block numbers
P01 Small Biopsy cases	5535	11692	12484
P02 GI Endoscopic biopsy cases	7985	14709	15398
P03 Non biopsy - Cancer Resection	4091	7310	46166
P04 Non biopsy - Other	13902	18637	34587
P06 Non Gynaecological cytology - FNA	497	461	16
P07 Non Gynaecological cytology - Exfoliative	2968	3309	1203
Totals	**34978**	**56512**	**109864**
P10 Post Mortem (non-state)	317	317	2745

P01 includes the following case types: 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 will now be assigned P01.

P02 includes: Endoscopic GI biopsies from oesophagus to anus.

P03 includes: 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 includes: 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 includes: Non Gynaecological cytology – FNA

P07 includes: Non Gynaecological cytology – Exfoliative (I have included semen specimens in this group)

P10 will include: Post mortem – Coroner

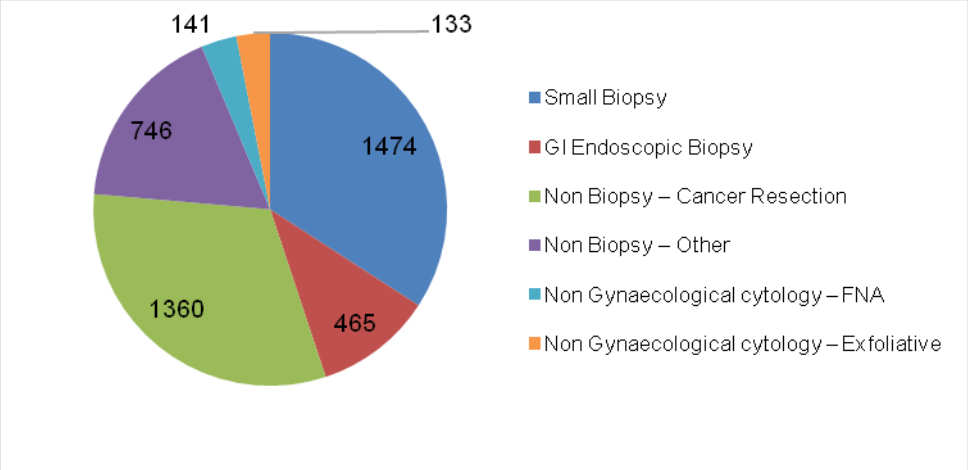
2013 Malignancy breakdown by pathological site

Total cases	5568
Total Surgical cases	5367
Total Cytology cases	201

Site	Total
Dermpath	2355
Breast Symptomatic	1005
Bone Marrow/haematology	169
Lymph Node	184
Head/Neck	142
Cardiothoracic/Lung	180
Gastrointestinal	321
Liver/Pancreas/Gallbladder	47
Kidney	63
Genitourinary/Prostate	800
Gynaecological	126
Other	176

Histopathology MDM Activity 2013

Code	Expansion	Total Cases
P01	Small Biopsy	1474
P02	GI Endoscopic Biopsy	465
P03	Non Biopsy – Cancer Resection	1360
P04	Non Biopsy – Other	746
P06	Non Gynaecological cytology – FNA	141
P07	Non Gynaecological cytology – Exfoliative	133
	Total	**4321**



4.14 Medical Oncology

Dr 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 2013. All units are awaiting the final NCCP Safety Report and the implementation of recommendations and self-assessment questionnaires from this report.

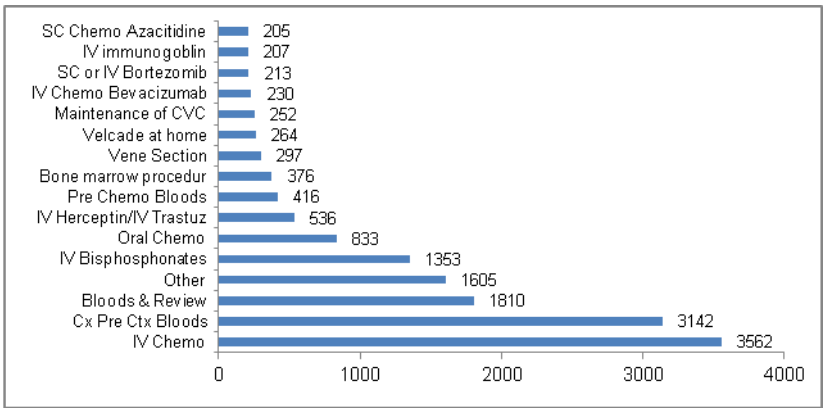
Patient episodes of chemotherapy across the Group (Data Source: HIPE)

	LGH	PHB	SRH	MGH	GUH	Group
Upper GI Cancer	1043	707	1128	808	3004	6690
Haematological Cancer	963	19	583	261	2724	4550
Urological Tissue	854	337	764	442	2113	4510
Breast Cancer	783	425	537	526	2028	4299
Colorectal Cancer	599	547	370	611	1072	3199
Skin Cancer	658	496	339	123	1528	3144
Lung Cancer	199	4	189	118	606	1116
Gynaecological Cancer	162	199	159	152	294	966
Hepatobiliary Cancer	69	19	119	86	307	600
Other and ill-defined Cancer	8	4	23	137	45	217
Head and Neck Cancer	1		3	3	154	161
Neurological Cancer	16	4	5	18	80	123
Endocrine Cancer				4	64	68
Orthopaedic Cancer			7	10	7	24
Connective Tissue Cancer	12			1	4	17
Ophthalmological Cancer					5	5
Total	**5367**	**2761**	**1226**	**3300**	**14035**	**26689**

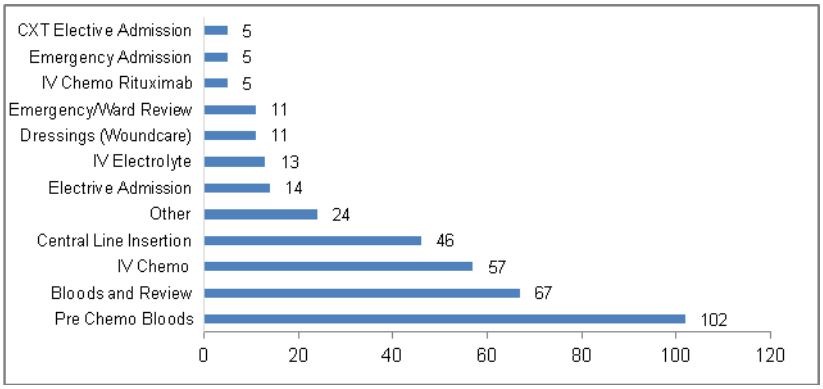
Galway University Hospitals

In the Haematology/Oncology Day Ward (HDW), chemotherapy and supporting treatments are administered. Patients are continuously monitored during cancer treatments and non-malignant haematology disorders are also treated within the unit. It has 17 chairs, 2 trolleys in 7 divided rooms; 3 single rooms, plus a 7, 4, 3 and 2 chaired area.

An average of 50 patients attend the HDW daily. 50% of these patients attend for Chemotherapy Administration (intravenous, subcutaneous, intramuscular) and are managed in 13 chairs. The remaining 50% attend for supportive therapies and are managed within a 4 chaired area. During 2013, staff have moved from paper nursing assessment to electronic nursing assessment. Notes are recorded from the “dry round – treatment planning” clinical meetings directly onto Lantis. All of the scheduling for the Cancer Assessment Unit (CAU), inpatient and day ward activity is now completed on Lantis and this allow all members of the teams to have access to this data. The CAU was closed due to staff resources from June 2013. There are still challenges with getting all stakeholders to engage fully with the system, generic “read only” access has been given to the general wards and emergency department so they can access patient records in non-oncology areas. In September 2013, a HDW review team commenced. Its brief is to examine all aspects of the HDW and how it functions. This project is being assisted by external lean consultants and corporate performance management.



GUH Day Ward Scheduled Activity 2013



Cancer Assessment Unit (CAU) Scheduled Activity (January – June 2013)

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

	New	Review	Unscheduled	Total
Not diagnosed with cancer in 2013	180	1843	32	2055
Breast Cancer	276	1055	33	1364
Lung and Thoracic Cancer	106	748	32	886
Colorectal Cancer	57	364	13	434
Urological Cancer	60	211	6	277
Skin Cancer	42	154	2	198
Upper Gastrointestinal Cancer	21	129	9	159
Haematological Cancer	19	103	2	124
Gynaecological Cancer	19	97	0	116
Lymph Node Cancer	15	78	5	98
Head and Neck Cancer	14	56	3	73
Neurological Cancer	14	25	3	42
Endocrine Cancer	4	31	1	36
Orthopaedic Cancer	3	32	0	35
Other and ill-defined Cancer	2	15	1	18
Connective Tissue		2	0	2
Ophthalmological Cancer	1	1	0	2
Total	**833**	**4944**	**142**	**5919**

Mayo General Hospital

With the formation of the NCCP and the eight national cancer centres MGH has continued to expand and develop as a nurse-led service under the direction and supervision of visiting GUH consultants, Dr Paul Donnellan, Dr Greg Leonard (oncology), Dr Amjad Hayat (haematology) and Dr Cormac Small (radiotherapy) who provide medical oncology/haematology and radiotherapy services on an outreach basis. There are two oncology clinics weekly, one haematology clinic, one radiotherapy clinic and a RANP Oncology-led clinic. These clinics are staffed by the oncology/haematology nursing team

Mayo General Hospital Haematology/Oncology Day Ward Activity

Day case attendances	4141
Number of new cancer treatments commenced	232 (does not include supportive therapies, e.g. blood products, bisphosphonates, IVIGs)
Number of OPD appointments for all haematology/oncology clinics	2336
Number of new patients in total in OPD	411
Haematology OPD reviews	626 (includes 162 new patients)
Oncology OPD reviews	1710 (includes 249 new patients)

Sligo Regional Hospital

There are approximately 500 inpatients treated per year in a dedicated 15 (escalating to 18) bedded 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 during 2013. The service relocated to a newly refurbished Haematology/Oncology unit in December 2012, this unit was officially opened on 29th November 2013 by Ms Nora Casey.

Challenges

One of the biggest challenges which faces 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 haematology/oncology within the next few years. The service 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.

Opening of the Oncology Unit at Sligo Regional Hospital 2013

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

Portiuncula Hospital

The oncology service in Portiuncula Hospital is part of the Saolta University Health Care Group cancer centre. This service has been in existence since 2001. Patient figures have increased from ~600 in 2001 to over 3160 in 2012. Treatment and assessment in the oncology day ward is provided by a nursing team. Each member of the nursing team is highly educated/trained in the area of oncology, all having a Higher Diploma in Oncology Nursing and exercise expert clinical competence in all areas related to cancer care. A medical oncologist (Dr Silvie Blazkova), a radiation oncologist (Dr Maeve Pomeroy) liaise closely with the oncology nursing staff. The department is supported by a full time medical secretary.

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

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 see 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 Hassan Shikhrakab 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 and research who provide support to the medical teams, patients and families who attend the hospital.

4.15 Radiation Oncology

Professor Frank Sullivan
Consultant Radiation Oncologist
Lead Clinician

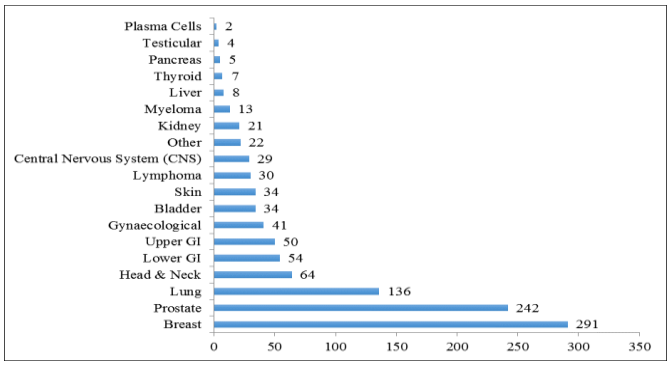
2013 continued to see the growth and development of the Department of Radiation Oncology at GUH. Almost 7500 patients were seen and dealt with by the department through the year. With almost 1500 new referrals, over 1000 receiving external beam radiotherapy and approximately 150 patients undergoing brachytherapy, the department continues to provide radiation oncology services at a high level for patients in the Saolta University Health Care Group.

New Patient referrals to Radiation Oncology	1491
Patients seen at Review Clinics (GUH, SGH, MGH & Portiuncula)	5970
Patients treated with External Beam Radiation Therapy (EBRT)	1087
Patients treated - Orthovoltage	26
Patients treated - Brachytherapy Prostate Seeds	94
Patients treated - Brachytherapy Gynae	55

National Prostate Brachytherapy Service

The National Prostate Brachytherapy Service was launched at GUH in January 2013. Led by Professor Frank Sullivan and GUH it has introduced Brachytherapy as a treatment option for prostate cancer following the training of specialists in St Luke's Hospital, Dublin and Cork University Hospital as part of the NCCP.

National Prostate Brachytherapy Service Launch, 28th January 2013.
From left, Standing: Dr Ray McLoughlin, Noel Daly, Mark Samsa (Galway Clinic), Jamsari Khalid, Stephen Coyne, Marie Cox, Dr Joe Martin, Peter Keane, Professor Wil van der Putten, Ger O'Boyle, Dr Sharon Glynn (Prostate Cancer Institute), Colette Cowan, Peter Woulfe (Galway Clinic), Anysja Zuchora, Dr Cormac Small, Dr Pat Nash, Dr Mary Hynes. Front Row: Claire Dooley (Galway Clinic), Mary Hodgkinson, Juliet Kelly (RIP), Bill Maher and Professor Frank Sullivan.



Patients treated with External Beam Radiation Treatment by Diagnosis in 2013
*Excludes patients with a diagnosis of Prostate or Gynaecological cancers where Brachytherapy was the sole treatment modality

It was an important year for our nursing division - Geraldine O'Boyle, CNMII radiotherapy received her Masters' Degree in preparation for the NMBI (Nursing Midwifery Board of Ireland) site approval for her role as Registered Advanced Nurse Practitioner (RANP) in Radiation Oncology. The nursing department within radiotherapy contribute greatly to patient care, undertaking the "on treatment visits-nursing assessments" weekly for patients and providing supportive treatments for patients experiencing side effects of their radiotherapy as day cases within the department, thus avoiding the need for unnecessary inpatient admissions.

Radiation Therapists (RT) carry out CT Scanning, contouring of anatomical regions of interest for treatment planning, active treatment, of patients requiring external beam radiation treatment (EBRT) and high dose radiation (HDR) brachytherapy to a very high standard. Patients were prioritised for radiation therapy treatment firstly by clinical need and then according to NCCP KPIs. The RTs play a critical role in the provision of patient and family information and collaborate with nursing in regard to patients experiencing treatment side effects.

Our radiation therapy group continued to provide care of the highest standard despite the challenges presented with radiation equipment approaching "its end of life". It is thanks to the vigilance and dedication of the team that our patients continue to receive care of the highest quality. The situation in regard to image quality is under constant review with physics and clinicians and there is access to external experts if necessary via the NCCP/Medical Directorate.

2013 saw the re-engagement with the National Plan for Radiation Oncology (NPRO) implementation group for planning the capital project which will result in a new radiotherapy unit which will accommodate 6 linear accelerators at GUH by 2018. This project is combined with planning for the Cork University Hospital (CUH) Phase II development. GUH and CUH have submitted business cases for the replacement of the Oncology Information system (Lantis) across both sites, we have received approval to progress to the tender stage and upgrade the system. Medical oncology have progressed significantly with their use of the Lantis system in 2013 and are keen to roll out the new system to the medical oncology units across the group.

Our reception and administrative staff continue to be an integral part of the radiotherapy team, they are the initial point of contact for patients arriving to the department and their support for the clinicians, nursing, medical and HSCP staff is critical to the department. All members of our staff, participate in the training and education of our students and graduate trainees. This spans all disciplines from radiation therapy, physics, nursing and medical trainees. The department also continues to participate in clinical research both within the hospital, in conjunction with the HRB Clinical Research Facility, nationally (ICORG etc.) and internationally.

The Radiotherapy Physics team is part of the Department of Medical Physics and Bioengineering and provides numerous services to the Radiotherapy Department. These include the following:

- Design and calculation of radiation treatment plans customised for each patient (1154 treatment plans in 2013)
- Detailed checking and independent calculation and/or measurement of all radiotherapy treatment plans
- Prostate seed implant live treatment planning and radioactive source measurement
- HDR Brachytherapy treatment planning and radioactive source measurement
- LDR Prostate Seed Brachytherapy Services
- Image Guidance in Radiotherapy (IGRT)
- First-line trouble-shooting, maintenance and repair of linear accelerators and imaging systems
- Technical support and trouble-shooting for CT scanner, Superficial skin therapy unit
- Constant Quality Assurance testing of all three linear accelerators, superficial skin unit, CT scanner, ultrasound image guidance system, portal imaging systems, HDR and LDR brachytherapy units
- Running the weekly peer review treatment planning meeting
- Radiation protection advice and organisation of radioactive source handling
- Optimisation of patient treatment techniques as part of a multi-disciplinary team
- Intensity Modulated Radiotherapy (IMRT) is used for prostate and head and neck patients
- 47 patients treated for Head and Neck cancers but 61 treatment plans were required for this cohort.

In Memoriam

In closing we wish to remember our much loved colleague, Ms Juliet Kelly, who passed away in August 2013. Juliet worked with us since the inception of our department, and subsequently rose through the ranks to work in the NCCP and latterly as Cancer Services Manager in GUH. Juliet was a wonderful member of our team, and is sadly missed by us all. May she rest in peace.

4.16 Palliative Medicine

Dr Dympna Waldron
Consultant in Palliative Medicine
Lead Clinician

2013 was another very busy year for the Palliative Care Service across the Saolta University Health Care Group with an increase in referrals in the Hospitals, Hospices and Home Care teams. Two new Palliative Medicine Consultants were appointed; Dr Camilla Murtagh was appointed as Consultant in GUH/PHB/Galway Hospice Foundation (GHF) and Dr Eileen Mannion was appointed as Consultant in GUH/RCH/GHF. They are joining their colleagues Dr Dympna Waldron (GUH/RCH), Dr Ita Hartnett (MGH/GHF), Dr Cathryn Bogan (SRH and Hospice) and Dr Donal Martin (LGH and Donegal Hospice) in the delivery of a comprehensive palliative care service in the Saolta University Health Care Group.

In November 2013 the fourth International Palliative Medicine Conference *Cuisle Beatha* took place in the Radisson Hotel Galway. An array of International and National experts joined local experts in discussing the most up to date advances in the management of complex gastrointestinal cases in patients with advanced cancer on the first day of the conference. On the second day clinical and ethical issues relating to patients with advanced neurological conditions were addressed. In our ongoing commitment to palliative care research and audit, the Department of Palliative Medicine in GUH supervised a PhD and MD student and undertook a number of clinical audits to improve patient care.

Palliative medicine consultants appointed in 2013
From left: Dr Eileen Mannion and Dr Camilla Murtagh,

Galway University Hospitals Palliative Care Referrals 2013

GUH In Patient	Cancer Diagnosis	Non Malignant	Total
January	57	21	78
February	59	13	72
March	50	23	73
April	65	41	106
May	49	29	78
June	54	28	82
July	69	28	97
August	63	20	83
September	54	22	76
October	50	23	73
November	75	23	98
December	59	17	76
Total Referrals	**704**	**288**	**992**

Roscommon Hospital Palliative Care Referrals 2013

RCH Referrals	Cancer Diagnosis	Non Malignant	Total
January	9	7	16
February	8	3	11
March	3	11	14
April	5	4	9
May	7	5	12
June	9	2	11
July	6	8	14
August	5	2	7
September	7	2	9
October	3	2	5
November	7	6	13
December	3	2	5
Total Referrals	**72**	**54**	**126**

4.17 Cancer Nursing

Marie Cox
Cancer Services Manager
Saolta University Health Care Group

Colette Cowan
Chief Director of Nursing and Midwifery
Saolta University Health Care Group

As Chief Director of Nursing, it gives me great pleasure to endorse this report. Since taking up my role in 2012 and with the emergence of the Group, nursing has made an enormous contribution to embracing the "group think concept". This is evident in cancer nursing where we have been fortunate to increase numbers of specialist roles and appointment Registered Advanced Nurse Practitioners within some cancer specialities as you will read below. The cancer nursing team also contribute at a national level with developments in education for community nursing thus ensuring patients can receive additional care in their homes. There has been great sharing of experience, skills, between the five medical oncology units across the group and this is reflected within the surgical specialist nursing roles. Looking to the future, nursing have a lot more to contribute in improving the patient/family experience within the hospital and my experience to date leads me to believe we will meet this challenge.

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

The RANP/RAMP roles within the Saolta University Health Care Group have been developed in response to patient/client need and healthcare service requirements at each site in line with national and international practice. The RANPs/RAMPs within cancer services have developed their practice beyond the scope of nursing/midwifery practice in collaboration with their respective interdisciplinary teams. They have demonstrated commitment to service development within these areas such as telephone triage clinics, Bone Marrow Aspiration procedures, cervical screening, therapeutic interventions, review clinics, introduction of survivorship initiatives and clinical management of delayed side effect management such as erectile dysfunction in men with prostate cancer.

The RANP/RAMP's are clinically skilled, experienced and autonomous nurses/midwives who are competent, accountable and responsible for their own practice. They are educated to Master's Degree Level 1 (or higher) within their specialist area and have undertaken supervised clinical practice hours in line with National Council guidelines. The RANP/RAMP's utilise advanced clinical nursing/midwifery knowledge, critical thinking skills to provide optimum patient/client care through caseload management of patients undergoing diagnosis, treatment or recovering from a cancer diagnosis. Advanced nursing/midwifery practice is grounded in the theory and practice of nursing/midwifery and incorporates nursing/midwifery and other related research, management and leadership theories and skills in order to encourage a collegiate, multidisciplinary approach to quality patient/client care. All of the RANP/RAMP's participate in National service development committees in their area of expertise and take a leadership role in their specific nursing/midwifery network associations.

Currently the following RANP/RAMP posts are within the Saolta University Health Care Group

RANP Oncology - Dr Janice Richmond, LGH

Janice was the first accredited Advanced Nurse Practitioner in Oncology in Ireland and has been in post since April 2006. Janice is a nurse prescriber and x-ray prescriber. Her caseload involves managing the follow-up surveillance of adult individuals with a solid tumour diagnosis. Three RANP nursing clinics are held weekly. The RANP also attends the weekly Medical Oncology Clinic in the Outpatient Department and offers a telephone follow-up clinic. 972 patients were reviewed by the RANP Oncology in 2013.

RANP Urology - Ms Moya Power, GUH

Moya Power was appointed RANP in March 2007. Her caseload involves administration of Intravesical chemotherapy and BCG treatment for patient with bladder cancer. Moya works closely with the ward nursing team in undertaking trial of void/catheter removal following complex surgery and instruction in catheter care and clean Intermittent Self Cathetersiation technique for patients. Acceptance of referrals for urinary flow studies, bladder scanning, assessment of Lower Urinary Tract Symptoms (LUTS) and Intravesical instillation of Cystistat for interstitial cystitis. In addition Moya works with the nurse in the Daffodil Centre and Cancer Care West in regard to counselling and assessment of men with urological cancer.

RANP Oncology - Ms Mary Hannigan, MGH

Mary was appointed to the post of Registered Advanced Nurse Practitioner in Oncology in January 2011. Mary is a registered nurse prescriber. The RANP caseload involves managing the follow-up surveillance of adult individuals with a history of solid tumours or lymphoma. The RANP attends the weekly Medical Oncology Clinic in the Outpatient Department and there is one RANP nursing clinic a week. The role also involves the review of patients on the oncology/haematology day ward and patients that are admitted to the hospital who are active anti-cancer treatment. Once the day units CNMII post is filled the plan is to increase the RANP outpatient caseload and support a second Consultant lead oncology clinic weekly.

RANP Oncology - Vacant post – Ms Mary Egan retired 2012, PHB

RANP Haematology - Ms Teresa Meenaghan, GUH

Teresa was appointed in November 2012. The caseload management of the RANP Haematology involves patients suffering from myeloma, stable acute leukaemia/supportive care and Idiopathic thrombocytopenia purpura (ITP). Teresa sees approximately 70-100 patients a month. Teresa is a Registered Nurse Prescriber and maintains the national nurse-prescribing database.

From January 2013- December 2013	
Total Patients Seen	**1065**
Myeloma	**336**
ITP	**134**
Bone Marrows	**134**
Others (includes Myelodysplasia patients on Vadiza and stable Chronic Lymphocytic Patients on Monthly review for IVIG)	**328**

RAMP Colposcopy - Ms Maura Molloy, GUH

Maura was appointed to her post in April 2011. There were 4 colposcopy clinics per week in 2013, 2 were Consultant led and 2 were led by the RAMP. There were also 3-4 smear clinics per week in 2013 and these were all midwife led.

2013 Activity	
Total Patients Seen	**4335**
LLETZ	**378**
Cervical Biopsies	**904**

In response to a patient Audit, Nursing/Midwifery staff from the Colposcopy Clinic commenced an outreach smear clinic at Portiuncula Hospital in May 2013. The outreach clinic from GUH is the first smear clinic of its kind in the CervicalCheck programme. The clinic facilitates women from the midlands who have previously had to travel to Galway for follow up smears. The first clinic took place on Friday May 24th 2013 and there are 2 clinics scheduled every month.

A gynaecology study day for practice nurses, GPs and Hospital staff was organised in collaboration with practice development. Multidisciplinary speakers including RAMP gave updates on gynaecology developments. The services was delighted that Ms Pat Rogers was nominated as **RAMP Candidate Colposcopy** in 2013 at GUH, her appointment as RAMP is expected in mid 2014.

RANP Candidate Radiotherapy - Ms Geraldine O' Boyle, GUH

Site preparation process was ongoing during 2013 with expected site approval in 2014. The GUH post will be the first RANP post for radiotherapy in Ireland. The main purpose of the post is to assist in meeting the needs of radiation oncology patients in the Saolta University Health Care Group.

Caseload Management of Radiation Oncology Patients by the RANP:

A. Acute toxicities associated with radiation treatment.
B. Follow-up for prostate cancer patients post their radiation treatment.
C. Erectile dysfunction for prostate cancer patients.
D. Registered Nurse Prescriber.

Ger is a Registered Nurse Prescriber and will be completing her Ionising radiation prescribing module in 2014I. It is envisaged she will take up the RANP post in late 2014.

5.0 Pharmacy Services

Robert Snedker
Pharmacy Aseptic Manager

John Given
Caroline Whiriskey
CRF Trial Pharmacists

It must be noted that for this 2013 report, our focus has been on pharmacy services within the Cancer Centre and budget details contained in this submission relate to GUH only. We expect to have more comprehensive service and budget details from the other cancer related pharmacists for the 2014 report.

The pharmacy supports the treatment of cancer in GUH with two distinct but complimentary services, (1) technical and (2) clinical. It achieves this with three grades of staff, registered pharmacists, qualified pharmacy technicians and health care assistants.

1. The technical service essentially provides ready to administer injectable chemotherapy, primarily cytotoxic drugs but also other anti-neoplastics such as some biologicals, e.g. monoclonal antibodies. All preparations are completed to a prescriptive order and are made using clean room technology. Sometimes referred to as 'isolators', such technology not only assures the microbiological integrity of the drug but also protects the staff (pharmacy technicians) from long term exposure to cytotoxic drugs. The cancer nurse is also therefore protected from unnecessary drug manipulation at the patient side and can administer the drug in the knowledge that it has been aseptically prepared. The technical service is currently preparing an average of 1300 separate infusions or injections per month, which is the highest in the country (NCCP Oncology Medication Safety Review survey 2013). Pharmacy refers to the unit as PASU, Pharmacy Aseptic Services Unit, which is located close to the haematology/oncology day ward.

2. The clinical service, which is managed separately from the technical service and yet has a very close working interface, is best described as 'a near patient' service, and is similar to that provided to other specialities. In addition the service strives to meet Draft NCCP standards (2013), final report expected in early 2014. For example "Recommended Minimum Pharmacist Checks for Chemotherapy Orders/Prescriptions", "Prescription Order Checking Responsibilities". All require the input from a competent clinical pharmacist with extensive oncology/haematology experience.

Supporting the two services are the more traditional pharmacy services such as the procurement of medicines and distribution and supply to in and outpatient cancer wards. By year end 2014, GUH will purchase approximately €8.8million worth of antineoplastic medicines, which will represent a 10% increase over 2012, the main cost pressure being the increasing use of new biological medicines.

Finally in the last few years we have developed a medicines clinical trials service, many trials (phase 1, 2 and 3) are for cancer but not exclusively so. This service is supported by one HSE employed pharmacist, one CRF employed pharmacist and one HSE employed pharmacy technician. Their role involves the direct supply of oral trial medicines to trial patients and the supply of trial injectables to the technical service, all upon the receipt of a prescriptive order. They are also responsible for the receipt and safe storage of trial medicines, separate from other 'licensed' medicines and for the rigorous documentation of receipt, storage and supply that is required by investigational companies.

6.0 Health and Social Care Professionals (HSCP)

This 2013 report is focusing on the GUH site in regard to the role of the HSCPs, as the Group integration evolves we would be keen that the HSCP Managers in GUH will link with their colleagues in the group hospitals so any service initiatives or patient data can be included in the 2014 report.

Physiotherapy

Norah Kyne
Acting GUH Physiotherapy Manager

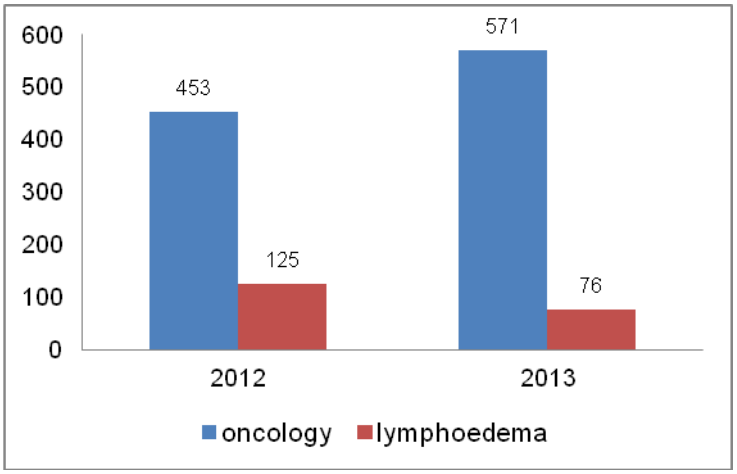
Physiotherapy is involved in care of the cancer patient through the complete care pathway of the patient.

Cardiothoracic and prostate patients are assessed preoperatively by physiotherapy staff. Audit of preoperative input in the prostate service has demonstrated that the Pelvic Floor Muscle Exercise education programme is delivering positive effects.

Post-operative physiotherapy care is part of core service to patients following any major surgical intervention for cancer, from potential stay in critical care through to rehabilitation on the wards. This involves respiratory, postural and mobility interventions to facilitate the patients return to pre-morbid mobility status as soon possible.

2013 has seen an increase in orthopaedic surgery, specifically spinal surgery for patients with cancer. Physiotherapy on spinal tumour patients accounts for 50% of non-elective spinal surgery, which involved 47 patients in 2013.

Physiotherapy also provides a limited out patient service to cancer survivors dealing with the consequential impact of cancer management. Presenting conditions include mobility issues, musculoskeletal pain, fatigue and lymphoedema. Of these, lymphoedema management presents the greatest ongoing challenge. Lymphoedema is a chronic condition which if not managed appropriately results in major health concerns including recurring cellulitis, immobility, pain and reduced quality of life. Referrals for management of this condition arise mainly from breast, gynaecology, plastics and urology services.



Physiotherapy statistics for oncology/radiotherapy and lymphoedema services

Oncology Social Work

Maire Lardner, Oncology Social Worker
Lorraine Keegan, Senior Social Work Practitioner
Rachel Macken, Senior Oncology Social Worker

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

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

The OSW team have been involved in a number of Irish Cancer Society schemes. They are currently working on the rollout of the “Care to Drive” initiative. The OSW team also follow-up links with educational institutions via student placements and social work representative bodies, e.g. IASW and Oncology/Haematology National Social Workers Group.

2013 Oncology Social Work Activity

	Patient Numbers
Number of Patients Seen from Medical Oncology	1102
New Referrals	1011
Follow up activity	791

Dietetics

Grainne O’Byrne
Dietetics Manager

The Nutrition and Dietetic Service 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 to patients following any major surgical intervention for cancer, from potential stay in the critical care unit through to the wards.

35 patients with a cancer diagnosis were discharged on Home Enteral Feeding in 2013. This process involves collaboration between the hospital team, community dietetics team and the family to ensure patient safety/comfort at home. Patients discharged on Home Enteral Nutrition are transferred to care of the Community Nutrition & Dietetic Service, where available.

Dietetic Input to Cancer Services

Service	Dietetic Time (hrs)	Individual Patients	New Patients	Return Visits
Haematology	483.5	260	146	742
Oncology	444	244	161	582
Radiotherapy	656	419	168	803
Surgery	166	89	62	241
Total	**1749.5**	**1012**	**537**	**2368**

Speech and Language Therapy

Gerardine Keenan
Speech and Language Therapy Manager

The Speech and Language Therapy Service at GUH is involved in the management of swallowing and communication difficulties through the complete care pathway of the cancer patient.

Speech and Language Therapy should be part of the core service offered to patients presenting with cancers of the head and neck. Many patients with other cancers, for example cancers of the oesophagus, lung and brain, present with swallowing difficulties requiring Speech and Language Therapy management. Dysphagia management of cancer patients can include diagnostic imaging of swallow function by Modified Barium Swallow study.

GUH set up the first dedicated Speech and Language Therapy post to Radiotherapy in Ireland, with the appointment of Ms Emma Killian, Senior Speech and Language Therapist in 2006. The service is offered to inpatients and outpatients attending for radiotherapy.

	Numbers
Radiotherapy Outpatient Appointments	256
Number of Outpatient Clinics	40

Speech and Language Therapy management of all other patients with a cancer diagnosis is ward-based. Specific cancer related activity cannot be separated from other general activity currently.

Occupational Therapy

Pauline Burke
Occupational Therapy Manager

Occupational Therapy is available to patients referred from Oncology, Haematology and Radiotherapy Services. OT interventions provided include assessment of functional ability and cognitive status; evaluation of seating/positioning needs and energy conservation strategies for Activities of Daily Living. The occupational therapy team is an integral part of Discharge Planning as they assist with assessment of equipment needs, consideration of home environment and forge links with community services for patient and family follow up.

Occupational Therapy Data 2013

	Numbers
New Referrals	298
Total Patient Visits	611
Treatment Units (15min units)	2541

7. Cancer Patient and Research Support

7.1 Health Promotion Services

Laura McHugh, Health Promotion Officer, HSE West
Irene O'Byrne, Smoking Cessation Advisor, GUH

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 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.

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 2013.

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, and in exceptional cases staff and patients are supported in arranging exemptions for patients to smoke in a designated area.

Bowel Cancer Awareness Day 2013
From left: Aine Kennedy A/CNS Upper GI PHB, Olive Gallagher Daffodil Centre Information CNM, Mary Quigley Stoma Care CNS, and Olivia Dunleavy CNS Colorectal

7.2 National Breast Cancer Research Institute (NBCRI)

091 526677
info@nbcri.ie
www.nbcri.ie

This national organisation has funded breast cancer research at NUI Galway since 1991. Its current research director is Professor Michael Kerin. The National Breast Cancer Research Institute funds postgraduate researchers and provides financial support for the running of the research laboratory. The National Breast Cancer Research Institute funded research team are currently investigating the presence of biological markers involved in the detection, development and spread of breast cancer. Dr Róisín Dwyer and Dr Nicola Miller, Lecturers in the Discipline of Surgery, and clinical consultants supervise the various projects.

Postgraduate students funded by National Breast Cancer Research Institute in 2013:

- Sonja Khan
- Deirdre Wall
- Cathy Brougham
- Dr Ailbhe McDermott
- Dr Peadar Waters
- Dr Niamh Hogan
- Dr Terri McVeigh
- Dr Marese Murphy
- Dr Máire Caitlín Casey
- Dr Doireann Joyce
- Dr Cillian Clancy

The National Breast Cancer Research Institute also supports a Summer Research School for undergraduate medical students. In 2013 there were five medical students funded - Gregory O'Neill, Paul JoonKoo Choi, Stephanie Bollard, Malavika Suresh and Maria Duignan.

National Breast Cancer Research Institute Tricia McCarthy Memorial Fellowship
From left: Triona McCarthy (sister of Tricia McCarthy and Sunday Independent columnist), Dr Doireann Joyce (MD student scholarship recipient), Professor Michael Kerin (Research Director) and Miriam Hand (Director)

Cancer Biobank

The Discipline of Surgery at NUI Galway has developed a Cancer Biobank with financial support from the National Breast Cancer Research Institute. 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 a vital 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 National Breast Cancer Research Institute funded 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.

7.3 Cancer Care West

091 540040
www.cancercarewest.ie

Inis Aoibhinn is located on the grounds of GUH 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.

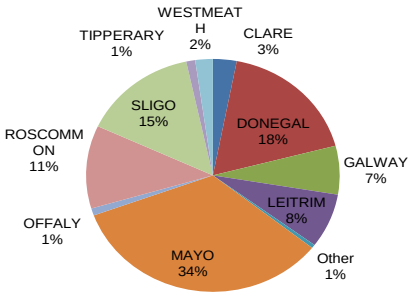
The **Cancer Care West Support Centre** has been in operation since May 2009. Services available are outlined in the table below.

During 2013, the centre was visited over 6,400 times by 1,340 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 2013. 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 Galway University Hospital has become ever more apparent during 2013. During the year 176 patients were seen in the hospital, representing an almost 100% increase on 2012. We consider this one of our most essential services with psychological distress due to cancer diagnosis, being the biggest reason for referral.

Cancer Care West Support Centre Services

	Number of Patients
Psychology	520 (404 clinical, 116 counselling)
Seen in hospital	115 (160 hours)
Oncology Information	510
Reflexology	144 (7mth service)
Yoga	93
Massage	132
Art Class	35
Creative Writing	35
Tai-Chi	41
Exercise	67
Nutrition	33
Benefits Advice	196



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.

7.4 Irish Cancer Society

Patient Support

The Irish Cancer Society has been developing information and support services for 50 years and is the leading provider of cancer information in Ireland. The Daffodil Centres are part of the Society's Cancer Information Service (CIS) which offers advice, information and support to anyone worried about any aspect of cancer prevention, early detection, diagnosis, treatment and care.

The Irish Cancer Society established its ninth Daffodil Centre in 2013 in conjunction with Letterkenny General Hospital. In 2013 the centre dealt with **1293** enquiries from people with questions and concerns about cancer.

Providing information and support since 2009 the Daffodil Centre in University Hospital Galway over **2000** people visited the centre or attended one of the many cancer prevention/ awareness stands.

Care to Drive

The Care to Drive service, a volunteer delivered transport service operated by the Irish Cancer Society, has been available to patients in the Galway, Mayo, Sligo & Donegal areas travelling to Sligo General Hospital and Letterkenny General Hospital since 2011. The figures for 2013 are as follows:

Hospital	No. of clients	No. of journeys	No. of drivers	No. of km
Sligo General Hospital	25	298	46	23,714
Letterkenny General Hospital	40	914	41	87,525

Daffodil Centre and Staff at Letterkenny General Hospital
From Left: Tina Quinn, Carmel Sweeney, Teraze Toby (Cancer Information Nurse), Bonnie Oliver, Grace Peoples, Margaret Russell

Research

The Irish Cancer Society funded the following projects in 2013:

Collaborative Cancer Research Centre BREAST-PREDICT
NUI Galway funding, Investigators involved: Professor Michael Kerin, Dr Roisin Dwyer - €551,611

Irish Programme for Stratified Prostate Cancer Therapy (iPROSPECT)
NUI Galway funding, Investigator involved: Dr Sharon Glynn - €249,648

8. Clinical Trials

Dr Maccon Keane, GUH Clinical Trials

Professor Martin O'Donnell, Director HRB-CRFG

The Health Research Board Clinical Research Facility Galway (HRB-CRFG) began operations in March 2008. Since then, we have initiated over 140 studies, recruited over 5,000 and increased our staffing from 5 to 43 members, including Programme Manager, IT Manager, Research Nurse Manager, Quality and Regulatory Affairs Manager, Biostatisticians, Study Coordinators, Research Nurses, Research Assistants, Database Developer, Research Pharmacists, Data Managers and Data Associates. The HRB-CRFG is completing studies across a spectrum of disease areas, including oncology, cardiovascular disease and diabetes, haematology, rheumatology, renal, obstetrics, psychiatry, dermatology, infectious diseases and general practice. These studies span a broad range of study designs (early phase clinical trials, Phase III clinical trials, case-control studies, and prospective and retrospective cohort studies), research disciplines (clinical trials of medicinal products to population health research), and collaborations (local, national and international studies). The HRB-CRFG has built expertise in all aspects of study conduct, including: study methodology/design and biostatistics, data management and biometrics, site monitoring/audit, pharmacovigilance and quality, and many of these activities have attracted independent funding.

The Oncology/Haematology Clinical Trials Unit in GUH has been in operation for the past 10 years. The unit is an active member of the All-Ireland Collaborative Oncology Research Group (ICORG) and runs both investigator led research studies as well as larger scale pharmaceutical company trials. Through the clinical trials run by the unit, patients in the West of Ireland have gained access to a number of new cancer therapies that would otherwise not have been available to them. We have active clinical trials in the treatment of melanoma, multiple myeloma, mantel cell lymphoma, breast, prostate, lung, gastrointestinal and gynaecological cancers. Along with the activity in medicinal studies the Unit also successfully runs Radiotherapy and Translational studies. For a detailed list of active trials at please see Appendix 2.

We have also invested in the development of a Data Management/Biostatistics hub, which will serve as a National resource with the proposed National Clinical Research Framework, and have received funding to provide Data Management and Biostatistical services for ICORG.

In January 2015, a purpose-built CRF, funded by the HRB, will be completed. The building will have capacity for outpatient and inpatient clinical research across a spectrum of translational and clinical research activity, and will enable expansion of our current clinical research activities.

HRB-CRFG Trials open to recruitment in 2013

Enrolled	Number of Patients Enrolled
Haematology	20
Translational	39
Radiation Oncology	22
Total	**83**

GUH Clinical Trials open to recruitment in 2013

Trial Indication	Phase of Trial	Number of Trials Open	Number of Patients recruited
Haematology	III	4	8
Breast	II, III, IV	7	43
Gastrointestinal	II, III	2	6
Melanoma	IV	2	2
Lung	III	2	2
Gynaecology	IV	1	1
Radiation Oncology	III, IV	3	7
Translational	III, IV	4 (3 GI, 1 Breast)	57
Total		**25**	**126**

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.

NUI Galway is a member of the Irish Clinical Research Infrastructure Network (ICRIN) which links all clinical research facilities in the country. ICRIN, as the Irish member of the European Clinical Research Infrastructure Network (ECRIN), forms part of a European-wide effort to construct an infrastructure for multi-centre and multi-national clinical trials sponsored by academic institutions and industry.

9.1 NUI Galway Research Institutes and Centres

The development of research centres and institutes at NUI Galway has encouraged interdisciplinary research programmes and collaborations with industry partners in areas of strategic importance, both regionally and nationally. The following research centres and institutes illustrate the established cancer and health research programmes at NUI Galway.

- Health Research Board Clinical Research Facility Galway (HRB-CRFG)
- Regenerative Medicine Institute (REMEDI)
- Institute for Lifecourse and Society
- National Centre for Biomedical Engineering Science (NCBES)
- Prostate Cancer Institute
- Centre for Chromosome Biology
- UNESCO Child and Family Research Centre
- Centre for Pain Research
- Centre for Clinical Health Services Research and Development

Research is also carried out in collaboration with the Health Economics and Policy Analysis (HEPA) group, the School of Psychology, the Whitaker Institute for Societal Change and various other schools and disciplines at NUI Galway.

9.2 Clinical and Translational Research Facility – The Lambe Institute

Construction commenced in September 2013 on the Clinical and Translational Research Facility (CRF/TRF) adjacent to the Clinical Science Institute. It is due for completion in 2015. It will house the HRB-CRFG and the Surgery, Pathology and Pharmacology research laboratories of the School of Medicine. The development of the CRF is funded by the Health Research Board and the Health Service Executive and the TRF by NUI Galway, the Galway University Foundation and the National Breast Cancer Research Institute. The building will have capacity for outpatient and inpatient clinical research across a spectrum of translational and clinical research activity, and will enable expansion of our current clinical research activities.

9.3 Breast Cancer Research

Breast cancer research is led by Professor Michael Kerin and Professor Grace Callagy of the School of Medicine. The core research areas are gene and microRNA profiling in cancer, in-situ biomarker analysis, human mesenchymal stem cells (MSCs) in cancer, population genetics and the role of the tumour microenvironment in breast cancer. A comprehensive Cancer Biobank and breast cancer database has been developed over many years in collaboration with the clinical cancer teams at GUH. Collaborative research is carried out with various NUI Galway schools and disciplines as well as national and international institutes: the National Centre for Medical Genetics, ICORG, Beaumont Hospital, Royal College of Surgeons in Ireland, Biomedical Diagnostics Institute DCU, Yale University Medical Center, University of Arizona, the Mayo Clinic, Baylor College of Medicine, University of Oxford and Nottingham Trent University.

9.3.1 BREAST-PREDICT

In August 2013 the first Collaborative Cancer Research Centre, BREAST-PREDICT, funded by the *Irish Cancer Society* was launched. The centre comprises six national academic centres involving clinical, translational and population research groups. Funding of €7.5million over five years was granted for this collaboration. Professor Michael Kerin is the Principal Investigator and Dr Róisín Dwyer, the Funded Investigator, of the NUI Galway BREAST-PREDICT research group. In October 2013 Killian O'Brien joined the group as a PhD student.

9.3.2 Breast Cancer Genetics

In April 2013 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 Colorectal Cancer Research

To date several postgraduate research projects have been undertaken in the Discipline of Surgery in the field of colorectal cancer. Dr Kah Hoong Chang MD and Dr Elrasheid Kheirelseid PhD carried out their research into the gene and microRNA profiles of colorectal cancer under the scientific supervision of Dr Nicola Miller and the clinical guidance of Mr Mark Regan and Professor Oliver McAnena. This research continues today with Dr Niamh Hogan MD and Dr Cillian Clancy (MD candidate) supervised by Dr Róisín Dwyer and Mr Myles Joyce.

9.5 Prostate Cancer Research

The **Prostate Cancer Institute** (PCI) is led by Professor Frank Sullivan (Director). Dr Sharon Glynn is a Principal Investigator. The PCI was awarded three grants in 2013.

1. *Irish Cancer Society* - IPCOR (Irish Prostate Cancer Outcomes Research) a collaborative programme grant with lead investigators Dr David Galvin, Dr Ray McDermott, Dr Linda Sharp and Professor Frank Sullivan. The grant is a 5 year effort, totalling €1,742,091.
2. *Irish Cancer Society* - iPROSPECT, a Transformative Program Grant co-funded by Movember, with lead investigators Dr Ray McDermott, Professor Stephen Finn, Professor John O'Leary, Dr Antoinette Perry and Dr Sharon Glynn. The grant is a 2 year effort, totalling €750,000.
3. Dr Sharon Glynn was also awarded a *Breast Cancer Campaign* Project grant in 2013. The grant is a 3 year effort, totalling £196,000 and involves a collaboration between Professor Frank Sullivan and Dr Sharon Glynn, Professor Michael Kerin (Surgery), Dr Aideen Ryan (REMEDI), Professor Grace Callagy (Pathology) and Dr David Wink of the United States National Cancer Institute.

The Prostate Cancer Institute gave four oral presentations on their work in 2013. These included the British Association of Urological Surgery Annual Meeting in Manchester UK, the Irish Society of Urology Annual Meeting in Wicklow, and the Prostate Brachytherapy UK and Ireland Conference in Chichester. PCI research presented included "*Introducing novel toluidine sulfonamide EL102, a potential chemotherapeutic in prostate cancer*", "*Human Endogenous Retrovirus K Expression Predicts Prostate Cancer*" and *"Outcome of patients treated with salvage brachytherapy for local failure after initial radiotherapy for prostate cancer, Galway experience*".

In addition to oral presentation PCI researchers also presented over ten posters at various meetings including the Irish Association for Cancer Research, Royal Academy of Medicine in Ireland, the Gordon Conference on Nitric Oxide in California, and the American Association for Cancer Research.

9.6 Nurse Practitioner and Nursing Research

Janice Richmond (RANP) and Mary Grace Kelly (Clinical Trials Nurse), were awarded the inaugural Cancer Nursing Research Grant, by the *Health Research Board*, under the auspices of the NCI/Northern Ireland/Republic of Ireland Cancer Consortium. This research investigated the knowledge and perception of lifestyle cancer risk factors among people in Ireland who have had cancer. There is involvement with the NCCP Community Oncology Nursing Programme and a number of committees/working groups.

9.7 Radiotherapy Physics Research

An investigation into the effect of radiation on the performance of ventilators and life-supporting medical devices inside the linear accelerator (linac) rooms was undertaken when treatment of an ICU patient was indicated. The study showed that medical devices are sensitive to neutrons produced when the linac is delivering its higher photon energy (15MV) and that lowering the energy for treatment of these patients could help in avoiding any potential interference. Detailed information about the effects was published in the European Journal of Medical Physics and accepted at the Irish Association of Physicists in Medicine Annual Scientific meeting in Galway.

A study was carried out as part of the MSc in Medical Physics at NUI Galway to investigate the shielding properties of the existing radiotherapy bunkers at GUH after ten years of use. This study also looked at how these bunkers would perform for other photon energies and modern radiation beam characteristics e.g. flattening filter free beams. This work was presented at the international ESTRO Forum in 2013.

9.7.1 Radiation Protection and Licensing Regulation

The licence for use of radiation is issued by the Radiological Protection Institute of Ireland (RPII). In November 2013, the RPII carried out a routine inspection of the Radiotherapy facilities at GUH. The Radiation Protection Advisor, Radiotherapy Physics team and Radiation Safety Officer compiled and collected the documents required for this visit and assisted with the inspection.

Ongoing safety requires a process of reviewing radiation incidents and near misses. A PhD student from NUI Galway has been studying incidents in radiotherapy and the human factors and processes related to them. He produced two studies in 2013 which have been published in European Journal of Medical Physics.

9.8 Postgraduate Research

Along with the full-time MD and PhD researchers that undertake cancer research, students from the Masters (MSc) in Regenerative Medicine undertake a five month research project for their thesis. In 2013 Killian O'Brien carried out his project - "*Loss of MicroRNA-504 Expression is Associated with Breast Cancer"* - in the Discipline of Surgery under the supervision of Dr Róisín Dwyer. Previous students from this MSc course, James Ryan and Sonja Khan, have gone on to do their PhDs with the breast cancer research group.

MSc Regenerative Medicine student Killian O'Brien presenting his research in NUI Galway

9.9 Undergraduate Research

There is an active Summer Student Research Programme in the College of Medicine, Nursing and Health Sciences. In 2013 this was led by Professor Peter McCarthy. Hospital or laboratory-based projects are funded by various agencies for 6-8 weeks. Almost 90 students took part in the Summer Student Research Programme in 2013.

A medical student from 2012, Maria Duignan was awarded a bursary to attend and present her student research at the Society of Academic & Research Surgery (SARS) annual conference which took place at the Royal Society of Medicine, London in January 2013.

Students have the opportunity to present their research at the annual College of Medicine, Nursing and Health Sciences Research Day.

College of Medicine, Nursing and Health Sciences Undergraduate Research Day 2013 winners:

- Gold Medal - Kevin Farrell
  Emergency Caesarean Section in Women who have had a previous Caesarean Section: A Cohort Study of Morbidity
- Best Basic Science Oral Prize - Conor Lyons
  Regulating Immunogenicity and Tolerogenicity of BMDCs through Cell Surface Glycosylation
- Best Poster Prize - Conor Palmer
  The effects of injury local environment cues on the therapeutic potential for mesenchymal stem cells

9.10 Awards and Achievements

Sonja Khan (PhD student) received a *Health Research Board* bursary to attend the National Cancer Institute Molecular Prevention Course in Washington DC in 2013.

Undergraduate students, Lauren Hughes and Lua Rahmani, received *Wellcome Trust* Student Scholarships and Una McVeigh and Mahrukh Azhar received *Health Research Board* funding for their summer student research in 2013.

Dr Jemima Dorairaj and Dr Brian Kelly graduated with MD degrees and Dr Ronan Glynn was conferred with a PhD. All three carried out their research in the Discipline of Surgery, NUI Galway. Deirdre Wall was also awarded her PhD in 2013. Deirdre carried out her research with the Biostatistics Unit of the HRB-CRFG under the supervision of Dr John Newell.

NUI Galway MD Conferring. From left: Dr Brian Kelly and Dr Jemima Dorairaj

For a list of research publications from the cancer centre in 2013 please see Appendix 3.

10. Education and Training

Clinical education and continuous training in Medicine, Nursing, Health and Social care is a key priority of the Saolta University Health Care Group. NUI Galway is the partner academic institution.

10.1 Medical Academies

NUI Galway medical academies are co-located in Sligo Regional, Mayo General, Letterkenny General and Portiuncula Hospitals. The Portiuncula Hospital Medical Academy was opened in 2013 as an alliance between NUI Galway and the University of Limerick.

Students from the College of Medicine, Nursing and Health Sciences carry out a portion of their training at the one of the regional academies, studying the same curriculum as their classmates based on the GUH campus. Internet and videoconferencing facilities facilitate linkages between the centres including multidisciplinary meetings, joint lectures, tutorials and discussion groups.

10.2 NUI Galway Postgraduates Courses

- PhD and MD Degrees
- Masters of Health Sciences (Nursing/ Specialist Nursing)
- Masters of Health Sciences (Advanced Practice with Prescribing)
- Masters/Diploma/Cert of Health Sciences (Clinical Education)
- MSc in Clinical Research (offered via the HRB Clinical Research Facility Galway)
- MSc in Biostatistics (offered via the HRB Clinical Research Facility Galway)
- MSc in Regenerative Medicine
- Masters of Medical Science
- Masters in Surgery
- Postgraduate Diploma/Cert in Health Sciences (Clinical Primary Care)
- Postgraduate Diploma in Nursing (Oncology, Palliative Care, Perioperative, Education, Acute Medicine)

10.3 Community Oncology Nursing

NCCP Nurse Training Programmes include (1) the Community Oncology Nurse programme and (2) the Nurses in Primary Care Programme

On Monday 28th January, Dr Susan O'Reilly, NCCP Director presented Community Nurses from Galway and Mayo with certificates on completion of the Community Oncology Nursing Programme. Thirteen nurses completed the Programme and received certificates. There are now 28 (fifteen nurses also completed this programme last year) nurses in the Community in the West who can support patients in their own homes who are undergoing chemotherapy in the Saolta University Health Care Group Cancer Centre.

NCCP Certificate Presentation to Community Nurses from Galway and Mayo on completion of the Community Oncology Nursing Programme
Front row from left: Helen Armstrong, Palliative Care, Castlebar; Fidelma Mullarkey, Achill; Dr Susan O'Reilly, Director, National Cancer Control Programme; and Anita Fannon, Ballinasloe. Back row from left: Mary Prendergast, Balla, Co Mayo; Breda McLoughlin, Kilkelly/Kilmovee, Co Mayo; Barbara Folan, Rosmuc, Co Galway; Helen Rutledge, Ballina; Helen Martin, Portumna, Co Galway; and Cheryl McDonagh, Galway City East Primary Care Centre in Doughiska.

10.4 Conferences

Cuisle Beatha – November 22nd-23rd 2013

The fourth International Palliative Medicine Conference, *Cuisle Beatha*, took place in November 2013. This biennial meeting is multidisciplinary, involving medical and surgical and consultants and doctors, dieticians, pharmacists, occupational therapists, nurses, care staff, psychologists, psychotherapists, gerontologists, psychiatrists, neurologists, physiotherapists, social workers, academics and researchers.

From left, back row: Professor Tony O' Brien, Dr Shaun O'Keeffe. Front row: Ian Carter, Professor Frank Brennan, Ms Deirdre Browne, Dr Dympna Waldron, Dr Donal Reddan and Ms Colette Cowan

Sir Peter Freyer Memorial Lecture and Surgical Symposium – September 4-5th, 2013

Hosted by Professors Michael Kerin and Oliver McAnena the 38th Sir Peter Freyer Surgical Symposium was attended by over 200 surgeons and clinical personnel. The Memorial Lecture was given by Professor Leslie K. Nathanson, University of Queensland, Brisbane, and the State of the Art lecture was delivered by Professor Patrick Broe, President of the Royal College of Surgeons in Ireland.

From left: Professor Michael Kerin, Professor Leslie Nathanson (Guest Speaker), Professor Oliver McAnena and Professor Patrick Broe (Guest Speaker).

11. Cancer Centre Vision

The development of a functional dedicated Cancer Centre for the West and North West of Ireland remains a challenge due to the current arrangement whereby the delivery of cancer care is integrated across a large functional network of hospitals. Such an arrangement poses challenges due to competing patient needs, emergency scenarios impacting on elective cancer care and disintegrated functionality. However this is often unavoidable due to the needs of patient flow, intensive care facilities and co-location of cancer and complex clinical care for patients with same system diseases.

International programmes of cancer care are organised around a physical infrastructure that enhances patient flow, facilitates multidisciplinary working and improves outcomes. There is a compelling argument for the development of a comprehensive cancer centre in this region. A cancer centre will allow structured multidisciplinary team work, database integration, access to therapy, expansion of cancer research programmes and improved patient outcomes to be achieved. It will enhance the patient experience and facilitate same day access to diagnostics in the early phase and state of the art treatments later in the pathway of care. The aim of our Cancer Strategy Group is to develop this centre over the next decade. This report highlights the necessity and defines the roadmap.

The report also illustrates the research resources and translational opportunities across multiple cancer sites. It has highlighted the extraordinary productivity of some young clinicians and scientists in creating the next generation of discovery and patient-centred therapeutic advances. The research activity is underpinned and supported by clinical care providers, national funding agencies, e.g. HRB and SFI, and a network of well organised and dedicated voluntary cancer charities. The HRB/HSE funded Clinical Research Facility and Galway University Foundation funded Translational Research Facility will open on the GUH campus in 2015. The National Programme for Radiation Oncology is well advanced for the delivery of a state of the art radiation oncology centre by 2018.

We live in an era of increasing demands, innovation opportunities and translational research which is changing the face of modern cancer care. The integration of these factors into a modern, patient-centred campus or cancer centre is essential and provides a real and achievable goal for our programmes over the next decade.

Professor Michael J Kerin
Chair, Cancer Strategy Group

Appendices

Appendix 1 - Outpatient Data

Outpatient attendances by directorate and specialty 2013

Directorate	Specialty	OPD attendances – patients diagnosed with cancer in 2013	OPD attendances – other patients	Total OPD attendances	Proportion with cancer diagnosis in 2013
Diagnostics	Interventional Radiology	16	41	57	28.1%
Medicine	Pain relief	280	1308	1588	17.6%
	Cardiology	1236	15894	17130	7.2%
	Dermatology	1224	9093	10317	11.9%
	Endocrinology	342	4988	5330	6.4%
	Gastroenterology	431	5493	5924	7.3%
	Geriatrics	112	1061	1173	9.5%
	Haematology	1445	2780	4225	34.2%
	Immunology	21	418	439	4.8%
	Infectious diseases	206	3126	3332	6.2%
	Medicine	587	11260	11847	5.0%
	Nephrology	287	3073	3360	8.5%
	Neurology	245	5966	6211	3.9%
	Oncology	3864	2055	5919	65.3%
	Palliative care	21	37	58	36.2%
	Respiratory	1055	8812	9867	10.7%
	Radiation therapy	10968	2224	13192	83.1%
	Rheumatology	258	4930	5188	5.0%
Medicine Total		**22582**	**82518**	**105100**	**21.5%**
Surgery	Cardiothoracic surgery	137	661	798	17.2%
	ENT	1135	9144	10279	11.0%
	Ophthalmology	1187	19056	20243	5.9%
	Maxillofacial surgery	359	2275	2634	13.6%
	Orthopaedics	793	25808	26601	3.0%
	Plastics	2409	7466	9875	24.4%
	Surgery (General)	4555	19209	23764	19.2%
	Urology	1849	4722	6571	28.1%
	Vascular surgery	484	5413	5897	8.2%
Surgery Total		**13145**	**99606**	**112751**	**11.7%**
Women and Children	Gynaecology	282	1724	2006	14.1%
	Obstetrics	1754	26369	28123	6.2%
	Paediatrics	25	5945	5970	0.4%
Grand Total		**37804**	**216203**	**254007**	**14.9%**

Appendix 2 - Clinical Trials

GUH Trials open to recruitment in 2013

Trial Name	Full Trial Title	No. of Patients recruited
Aflibercept	A Multicenter, Single arm, Open Label Clinical Trial to Evaluate the Safety and Health Related Quality of Life of Aflibercept in Patients with Metastatic Colorectal Cancer (mCRC) Previously Treated with an Oxaliplatin Containing Regimen	2
AMGEN	Study to Investigate Which Clinical Risk Factors are considered by physicians when conducting overall febrile neutropenia risk assessments in patients receiving chemotherapy with an intermediate (10%-20%)Febrile Neutropenia Risk	3
Angiopredict	Exploratory Phase II clinical trial comprising biomarker analysis of oxaliplatin plus fluorouracil/leucovorin (FOLFOX) in combination with bevacizumab (bvc) in first line treatment of metastatic colorectal cancer (CRC) expressing mutant K-ras.	1
ANZGOG	ANZGOG -0701 Does palliative chemotherapy improve symptoms in women with recurrent Ovarian cancer.	1
Aphinity	APHINITY – BIG 4-11/BO25126/TOC4939G: A randomised multicenter, double blind, placebo-controlled comparison of chemotherapy plus trastuzumab plus placebo versus chemotherapy plus trastuzumab plus pertuzumab as adjuvant therapy in patients with operable HER2-positive primary breast cancer.	2
CA209-067	A Phase 3, Randomized, Double-Blind Study of Nivolumab Monotherapy or Nivolumab Combined with Ipilimumab Versus Ipilimumab Monotherapy in subjects with Previously Untreated Unresectable or Metastatic Melanoma	1
CADY	The CADY Study - Detection of Cardiac Dysfunction in Patients Treated with Trastuzumab for HER-2 Positive Breast Cancer	8
E1505	A Phase III Randomized Trial of Adjuvant Chemotherapy With or without Bevaacizumab for Patients With Completely Resected Stage 1B (>4cm) – IIIA Non-Small Cell Lung Cancer	1
Eloquent	A Phase 3, Randomised Open Label of Lenalidomide/Dexamethasone With or Without Elotuzumab in Subjects with Previously Untreated Multiple Myeloma	1
IPI- Lung	A Randomized, Multicenter, Double-Blind, Phase 3 Trial Comparing the Efficacy of Ipilimumab in Addition to Paclitaxel and Carboplatin versus Placebo in Addition to Paclitaxel and Carboplatin in Subjects with Stage IV/Recurrent Non-Small Cell Lung Cancer (NSCLC)	1
MABEASE	A comparative, randomised. Parallel-group, multi-centre, phase 111B study to investigate the efficacy of subcutaneous (SC) Rituximab versus intravenous (IV) Rituximab both in combination with CHOP (R-CHOP) in previously untreated patients with CD20 positive diffuse large B-cell lymphoma	4
Mavericc	MAVERICC: A randomised phase II study of Bevacizumab/Mfolfox6 VS. Bevacizumab/FOLFIRI with biomarker stratification in patients with previously untreated metastatic colorectal cancer	4
MEK116513	A phase III, randomised, open-label study comparing the combination of the BRAF inhibitor, dabrafenib and the MEK inhibitor, trametinib to the BRAF inhibitor vemurafenib in subjects with unresectable (stage IIIC) or metastatic (stage IV) BRAF V600E/K mutation positive cutaneous melanoma.	1
miRNA	Circulating miRNAs: Novel Breast Cancer Biomarkers and their use for guiding and monitoring responses to chemotherapy	40
Myocet	A Phase I/II study of Lapatinib plus non-pegylated liposomal doxorubicin in patients with HER2+ve metastatic breast cancer following disease progression during, or after, treatment with Trastuzumab and Taxanes.	2
Palliative Lung	A Clinical Trial Using 3-Dimensional Conformal Radiation Therapy Reduce the Toxicity of Palliative for Lung Cancer.	1
Resilience 12444	A Phase III Randomized, Double-Blind. Placebo-controlled Trial Comparing Capecitabine Plus Sorafenib Versus Capecitabine Plus Placebo in the Treatment of Locally Advanced or Metastatic HER2-negative Breast Cancer	1
SCC Retreat	A Phase II Trial Evaluating the Efficacy of a Radio-Biological Based Re-Irradiation Strategy for Patients with Malignant Spinal Cord Compression.	1
SHINE	A Randomized, Double-blind, Placebo-controlled Phase 3 Study of the Bruton's Tyrosine Kinase (BTK) Inhibitor, PCI-32765 (Ibrutinib), in Combination with Bendamustine and Rituximab (BR) in Subjects With Newly Diagnosed Mantle Cell Lymphoma.	2
SNP	Correlation of Single Nucleotide Polymorphism (SNP) profile of domain III of EGFR to skin toxicity and disease response to treatment with Cetuximab	5

Swog	SWOG S1007 – Phase III, Randomized clinical trial of standard adjuvant endocrine therapy +/- chemotherapy in patients with 1 – 3 positive nodes, hormone receptor- positive and HER 2 – negative breast cancer with recurrence score (RS) of 25 or less.	33
TCHL	A Phase II neo-adjuvant study assessing TCH (Docetaxel, Carboplatin and Trastuzumab, TCL (Docetaxel, Carboplatin and Lapatinib) and the combination of TCHL (Docetaxel, Carboplatin, Trastuzumab and Lapatinib) in ErbB2+ve breast cancer patients.	4
TRIO 022	A5481008/TRIO 022: A Randomized, Multicenter, Double-blind Phase 3 Study of PD-0332991 (Oral CDK 4/6 Inhibitor) Plus Letrozole Versus Placebo Plus Letrozole For The Treatment of Postmenopausal Women With ER (+) HER2 (-) Breast Cancer Who Have Not Received Any Prior Systemic Anti-Cancer Treatment For Advanced Disease	1
TROG	A Randomized Phase 111 Study of Radiation doses and fractionation schedules in low-risk ductal carcinoma in-situ (DCIS) of the breast (ICORG 10-06) TROG 07.01/BIG 3.07	5
ZEST	Zest Study: A Phase 3, Open Label Multicentre Randomised Study of Sequential Zevalin (ibritumomab tiuxetan) versus Observation in Patients at least 60 Years of Age with newly Diagnosed Diffuse Large B-Cell Lymphoma in PET-Negative Complete Remissions after R-Chop or R-Cchop like Therapy	1

HRB-Clinical Research Facility Haematology trials open to recruitment in 2013

Phase	Name of trial	Patients Enrolled 2013	Total Patients Enrolled
Phase 1	**Novartis Myelofibrosis Phase 1** A Phase 1b, open-label, multi-center, single arm, dose finding study to assess safety and pharmacokinetics of the oral combination of panobinostat and ruxolitinib in patients with primary myelofibrosis (PMF), post-polycythemia veramyelofibrosis (PP-MF) or post-essential thrombocythemiamyelofibrosis (PET-MF)	1	4
Phase 1	**GSK Phase 1b** study evaluating safety, tolerability, PK, PD and clinical activity of GSK2110183 dosed in combination with bortezomib and dexamethasone in subjects with relapsed/refractory Multiple Myeloma GSK 110183	5	9
Phase 3	Resonate 2:A Randomised, Multicentre, Open-label, Phase 3 Study of the BRUTON'S Tyrosine Kinase (BTK) Inhibitor Ibrutinib versus chlorambucil in patients age 65 or older with treatment naïve CLL or small lymphocytic leukaemia (PCYC 1115 CA)	4	4
Phase 3	A Phase 3, Randomised, Controlled Study Evaluating the Efficacy and Safety of GS-1101 (CAL-101) in previously Treated Chronic Lymphocytic Leukaemia` **Gilead**	1	1
Phase 3	Jakarta trial A Phase 3, Multicenter, Randomized, Double-Blind, Placebo-Controlled 3-Arm Study of SAR302503 in Patients with Intermediate-2 or High-Risk Primary Myelofibrosis, Post-Polycythemia Vera Myelofibrosis, or Post-Essential Thrombocythemia Myelofibrosis with Splenomegaly	0	2
Phase 3	**Resonate 1** A Randomized, Multicenter, Open-label, Phase 3 Study of the Bruton's Tyrosine Kinase (BTK) Inhibitor Ibrutinib versus Ofatumumab in Patients with Relapsed or Refractory Chronic Lymphocytic Leukemia/Small Lymphocytic Lymphoma PCYC-1112-CA	1	1
Phase 3	**Stratus trial; Celgene (Pomalidomide MM-010**) A Multicenter, Single-Arm, Open-Label Study With Pomalidomide In Combination With Low Dose Dexamethasone In subjects With Refractory Or Relapsed And Refractory Multiple Myeloma	5	5
Phase 3	Novartis **ENEST Freedom** AMN 107. A single-arm, multicenter, nilotinib treatment-free remission study in patients with BCR-ABL1 positive Chronic Myelogenous Leukemia in chronic phase who have achieved durable minimal residual disease (MRD) status on first line nilotinib treatment	3	3
Phase 3	**Quaazar trial; Celgene** A phase 3 randomised double blind placebo controlled study to compare efficacy and safety of oral azacitidine plus best supportive care as maintenance therapy in subjects with AML in complete remission	0	0
Translational	Bone Marrow Research Project (BMR)	25	69
Translational	Bone Marrow Stem Cell Project (BMSC)	3	3
Translational	iPS Study; Induced Pluripotent Stem Cells-Making stem cells from somatic tissues	11	16

Phase 3	A re-treatment safety study of radium-223 dichloride in subjects with metastatic castration-resistant prostate cancer who received an initial course of at least four doses of radium-223 dichloride 50 kBq/kg every four weeks	17	20
Phase 3	Millennium study 005 A Phase 3, Randomized, Double-Blind, Multicenter Trial Comparing Orteronel (TAK-700) Plus Prednisone With Placebo Plus Prednisone in Patients With Metastatic Castration-Resistant Prostate Cancer That Has Progressed During or Following Docetaxel-based Therapy	0	6
Phase 3	**Millennium study 004** A Phase 3, Randomized, Double-Blind, Multicenter Trial Comparing Orteronel (TAK-700) Plus Prednisone With Placebo Plus Prednisone in Patients With Chemotherapy-Naïve Metastatic Castration-Resistant Prostate Cancer	0	6
Phase 3	**PASS study .Ferring:** A Prospective Observational Safety Study in Patients with Advanced Prostate Cancer Treated with Firmagon (Degarelix) or a GnRH Agonist.	0	2
Phase 3	**Radicals:** Radiotherapy and Androgen Deprivation in Combination after Local Surgery	5	14
	Total Patients on study 2013	**81**	**165**

Appendix 3 - Cancer Research Publications

McDermott AM, Kerin MJ, Miller N. Identification and validation of miRNAs as endogenous controls for RQ-PCR in blood specimens for breast cancer studies. PLoS One. 2013 Dec 31;8(12):e83718. doi: 0.1371/journal.pone.0083718. eCollection 2013. PubMed PMID: 24391813; PubMed Central PMCID: PMC3877087.

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Appendix 4 – CancerTeam 2013

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Mr Ray McLaughlin
Mr Michael Sugrue (LGH)
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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

Skin
Mr Alan Hussey
Ms Deirdre Jones
Mr Jack Kelly
Mr Padraic Regan

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 Orla Young

Endocrine
Professor Michael Kerin
Mr Denis Quill
Ms Orla Young

Medicine

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

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

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

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

Palliative Care
Dr Eileen Mannion
Dr Camilla Murtagh
Dr Dympna Waldron

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

Radiology

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Dr John Bruzzi
Dr Ian Davidson
Dr Rachel Ennis
Dr Catherine Glynn
Dr Aideen Larke
Dr Derek Lohan
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 Sinead Walsh

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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
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Dr Maccon Keane
Dr Greg Leonard

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