

ANNUAL REPORT  
**2013-2014**



SOUTH WESTERN SYDNEY LOCAL HEALTH DISTRICT

**CANCER SERVICES**



**Health**  
South Western Sydney  
Local Health District



# CONTENTS

---

Contents .....	1
Foreword .....	2
SWSLHD Cancer Executive Director's Report .....	4
<b>FACILITY REPORTS</b> .....	9
Bankstown Cancer Therapy Centre (BCTC) Director's Report .....	10
Liverpool Cancer Therapy Centre Director's Report .....	13
Macarthur Cancer Therapy Centre Directors report .....	15
Collaboration for Cancer Services, Research & Evaluation .....	17
<b>CLINICAL CANCER SERVICES</b> .....	22
Gynaecologic Oncology .....	23
SWSLHD Haematology .....	24
Medical Oncology - Macarthur .....	26
Medical Oncology - Liverpool .....	28
Palliative Care .....	30
SWSLHD Radiation Oncology .....	35
<b>PEAK COMMITTEES</b> .....	44
Cancer Information Programme .....	45
SWSLHD Clinical Trials .....	48
SWSLHD Cancer Education .....	50
Ingham Cancer Research Steering Committee .....	51
SWSLHD Cancer Quality .....	54
Consumer Advisory Committee .....	56
<b>ACKNOWLEDGEMENTS</b> .....	57
Fundraising and Donations .....	58
Valued Employees .....	60
Volunteers .....	61
<b>RESEARCH AND ACHIEVEMENTS</b> .....	62



*Amanda Larkin  
Chief Executive  
Officer SWSLHD*



Cancer remains one of the greatest health burdens faced by South Western Sydney Local Health District strives to provide the highest quality health care services possible for those in our community living with cancer.

The District has one of the fastest growing populations in NSW and therefore the demand on cancer services across the District continues to increase.

The District also faces other challenges including diverse communities with some having high levels of disadvantage. District residents are more likely to have increased behaviours linked to poor health outcomes including smoking and poor diet.

District cancer services staff are to be congratulated on the progress they have made in preparing to provide oncology services into the future and their work on the Cancer Services Strategic Plan.

Much has been done to encourage healthier lifestyles so that diseases like cancer can be prevented.

The advances in medical treatments for cancer are encouraging, with more people living with or beyond cancer. With this comes a greater need to access medical oncology and radiotherapy services and also the need for services to support people getting on with life despite their cancer.

We were also pleased this year to be able to provide palliative care services to more patients who were coming to the end of their lives and who chose to die at home through the PEACH program.

The District's cancer services also continue to lead the way in innovative health and medical research in partnership with the Ingham Institute of Applied Medical Research.

I would like to congratulate cancer services researchers on the successful \$6.5 million grant application for the CONCERT group with our other research partners. I am also impressed by the progress of the MRI-Linear Accelerator. This is ground breaking work which will see Liverpool become the first Hospital in Australia to have research equipment of this kind.



I would like to congratulate Professor Geoff Delaney, the cancer services team and the many volunteers and supporters on a productive year of service and to the south western Sydney community.

***Ms Amanda Larkin  
Chief Executive  
South Western Sydney Local Health District***



# SWSLHD CANCER EXECUTIVE DIRECTOR'S REPORT

---

## Highlights

---

*Pro Geoff Delaney  
Director*



2013-2014 marked a year of significant change within Cancer Services. I would like to take this opportunity of acknowledging some of the major changes that have occurred throughout the year and to thank our staff, patients, donors and volunteers for their input into a very successful year for Cancer Services.

The Cancer Wellness Centre projects continue to progress. At the time of writing of this report we have gone out to Tender for building partners for the project.

Due to the expected increasing growth of the need for cancer services across the District, preliminary planning redevelopment work has started to occur at Bankstown, Liverpool and Macarthur sites. We are hopeful that there will be announcements by the State Government shortly about whether we receive funding for the developments to occur in the next 3-5 years. We are hopeful of a positive response.

The Liverpool Cancer Therapy Centre saw a substantial change, with the relocation of the Cancer Administrative services from Elizabeth Street back to the Alex Grimson Building (in close proximity to the Cancer Therapy Centre). This has been a substantial project and I would like to thank the project development leaders, Matt Sydenham, Nicole Burr and Maree Cain. The new offices are very nice and the fact that we are now reasonably co-located has led to improvements in morale.

We continue to work with the NSW Cancer Institute. A major project that is being undertaken at the present time is the review of the Cancer Care Coordinators' model of care and a change in the funding model that the NSW Cancer Institute will be planning to roll out next year with respect to Care Coordination. Jayne Robinson is currently leading a review to attempt to align our Cancer Care Coordination Programme with the expected Key Performance Indicators from the NSW Cancer Institute.

The Palliative Care Group has had significant growth in staff, particularly at the Liverpool and Campbelltown sites and for the first time in many years they are nearly fully staffed. Previously it has been hard to completely fill positions due to a nationwide shortage of Palliative Care Specialists.



I would like to acknowledge the hard work that the Palliative Care Team have done in very trying times prior to the filling of all of these positions. In addition, the Palliative Care group, led by Meera Agar and Janeane Harlum, were successful in obtaining NSW Health Funding to lead the PEACH Programme across the South Western Sydney District. This programme will hopefully lead to a service where more patients who have a wish to die at home, with appropriate nursing supervision, have that opportunity to do so.

The Cancer Therapy Website has undergone substantial change and I would like to acknowledge the significant efforts of Sandy Avery, the website committee and the Consumer Advisory Group in getting this to be much more user-friendly. In addition, there has been some redesign of the multi-disciplinary team meetings to better facilitate patient discussion and documentation.

The Cancer Services Strategic Plan continues to progress and is available for staff viewing at

[http://intranet.sswahs.nsw.gov.au/sswahs/cancer/PDF/Strat\\_plan.pdf](http://intranet.sswahs.nsw.gov.au/sswahs/cancer/PDF/Strat_plan.pdf)

I would like to acknowledge Sandra Avery's very significant work in progressing this Strategic Plan and coordinating all of the various nominated people in getting this plan progressed.

With respect to research, the major achievement this year was the successful grant with the NSW Cancer Institute for the "CONCERT" group which is an amalgamation of the South Western Sydney Group, Illawarra Group and the ACT Group into a Translational Research Centre. This is led by Professor Paul DeSouza and managed by A/Prof Norbert Kienzle and the grant is for \$6.5M over five years. This grant has led to significant funding supplementation of a further \$1.6M from UNSW Australia, University of Western Sydney, University of Wollongong, the Ingham Institute Applied Medical Research and the Illawarra/Shoalhaven Local Health District.

In addition, there is a further \$7.2M of "In-Kind" contributions in terms of laboratory Infrastructure, running costs and salaries provided by the Ingham Institute Applied Medical Research, the Illawarra/ Shoalhaven Local Health District, South Western Sydney Local Health District, Illawarra Health and Medical Research Institute, University of Western Sydney, UNSW Australia and University of Wollongong. The research efforts of the Cancer Services continue to progress very well as shown in the continuing growth of publications and grants successes listed in this Annual Report. We are in for some very exciting times at South West Sydney with respect to cancer research.

A number of clinicians across the District, and the University of Western Sydney and University of New South Wales, have contributed to the development of some research projects across the District that will be conducted on Cancer Survivorship. Professor Afaf Girgis continues to lead the pilot project of "PROMPT- Care" to improve electronic capture of patient reported outcomes.



The Information Technology group has continued to provide excellent support. Mosaik remains the backbone of our service and is the main data repository for all cancer patients. There was successful rollout of the Mosaik system to the Bankstown Cancer Therapy Centre in 2013 and this went very well, with very few problems. I would like to thank this group in particular for the way that they rolled this out very rapidly.

Fundraising remains a major focus for Cancer Services and we remain indebted to our fundraisers and donors. Our volunteers continue to provide fantastic patient and clinician support through a variety of programs across the LHD and I am always in awe at the amount of time and the levels of compassion shown by our volunteers. A number of the more specific efforts from fundraising and volunteers have been highlighted throughout this report.

---

*Cancer services falls within its allocated budget each year, showing a fiscal responsibility to the health service.*

---

The Liverpool Cancer Therapy Centre underwent a change in management with respect to the appointment of Dr. Eugene Moylan as the new Director of the Liverpool Cancer Therapy Centre. I would like to congratulate Eugene on his new appointment.

## **Key Performance Indicators**

---

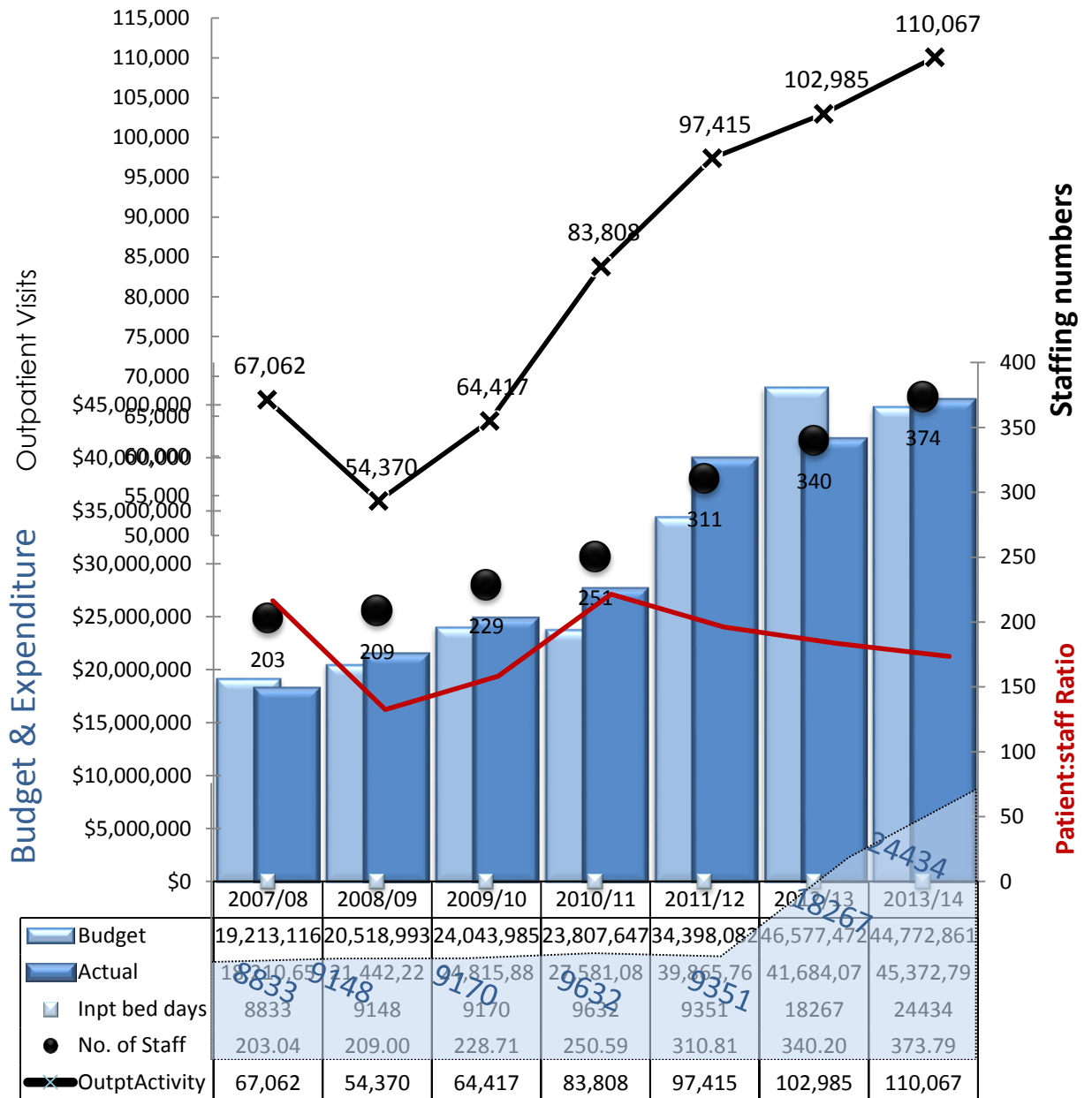
There has been significant growth throughout the year, with the largest centre for growth being the Liverpool Cancer Therapy Centre, which has doubled its chemotherapy delivery due to a combination of increasing patient numbers as well as the increasing complexity of chemotherapy treatments.

Substantial growth in our patient numbers is also due to increasing cancer incidence within the District, as well as the reversal of outflows. This year the Haematology Service at Liverpool Hospital agreed to take over running of the Bankstown Haematology Service (previously provided by the Concord Hospital Haematology Group, for which we acknowledge their contribution). Bankstown Haematology will have outpatient chemotherapy treatment and inpatient consultations on-site in the future.

Our annual review with the NSW Cancer Institute revealed that our LHD meets most KPIs very well. Some of the areas highlighted for further work including enhancing some of the data collections for the Clinical Cancer Registry (such as patient performance status), enhancing the documentation for some of the multi-disciplinary meetings and increasing the rate of breast screening in the target 50-69 year age range. In addition, the NSW Cancer Institute have encouraged LHDs to develop a model of partnership and support for low volume, high risk upper gastro-intestinal surgery and Josephine Chow and Professor Les Bokey are leading that project and investigating partnerships with the Illawarra and Shoalhaven Local Health District.



The following graph is an overall snapshot of our budget, staffing and activity across 7 years.







## **Future Projects/Expansion of Services**

In terms of future plans, we will continue to be work to progress the strategic plan. Some of the more significant projects that will require significant work will include the Wellness Centre projects and the Wellness Centre Building, the development of the Care Coordination Model, improving electronic data collection, including changing Mosaiq to better facilitate the collection of activity for Activity Based Funding and work on the redesign of the Cancer Therapy Centres at Liverpool, Campbelltown and Bankstown. This will also include an increase in inpatient beds for a number of specialties at both Bankstown and Campbelltown hospitals.

I would like to acknowledge all of the hard work that has been done and I thank all for contributing to a terrific services. I frequently get praised about the service we provide and research we perform across our LHD, so thank you for all of your efforts.

**Professor Geoff Delaney  
Director Cancer Services**

# **FACILITY REPORTS**

---





# BANKSTOWN CANCER THERAPY CENTRE (BCTC) DIRECTOR'S REPORT

---

## Highlights

---

Bankstown Cancer Therapy Centre (BCTC) provides multidisciplinary cancer care to residents of Bankstown area both at outpatient and inpatient (for medical oncology) settings; Haematology and Palliative care department also provide medical care for some non-cancer patients. BCTC has undergone significant expansion and development during last few years and this has continued over 2013-2014 year.

Last year, we had more than 5000 visits to outpatient clinics, approximately 2000 instances of chemotherapy, 3600 instances of treatment in the chemotherapy suite, and more than 200 direct admissions from outpatient clinics. BCTC has also gone through a very successful transfer of haematology services from Concord to SWSLHD from January 2014 and began implementing MOSAIQ (electronic health record and oncology information system) from early 2014 which is currently ongoing.

Bankstown hospital is planned to undergo major expansion during the next 12 years and hence, BCTC is currently planning for future expansion of services including inpatient palliative care, a radiation oncology bunker with capacity to deliver radiation treatment onsite, dedicated medical oncology ward, expansion of cancer therapy centre and chemotherapy suite as well inpatient haematology services and creation of a wellness centre.

## MOSAIQ

---

BCTC has now joined the rest of LHD with implementation of MOSAIQ that will have significant impact on quality of care, consistency across LHD, improvement in communication among health care professionals and creates excellent environment for research and education.

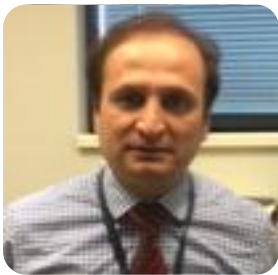
Dr Sandra Harvey and Thomas Tran (from oncology information system) led the implementation of MOSAIQ last year and have done a great job at bringing and incorporating MOSAIQ to BCTC which is still ongoing

## Medical Oncology

---

BCTC has three full time Medical oncologists who run subspecialised oncology clinics as well as MDT meetings for upper and lower GI, Breast and Pulmonary malignancies and Dr Harvey manages patients with gynaecological malignancies in collaboration with both LCTC and Lifehouse. BCTC also is now accredited for a full year of advanced trainee rotation, which currently is on six monthly rotations with other hospitals in the LHD.

*Dr Ray Asghari  
Director*



*Dr Sandra Harvey  
Led the implementation  
of MOSAIQ*





*Dr Nagendraprasad  
Sungala  
Haematologist*



---

*Bankstown hospital is  
planned to undergo  
major expansion  
during the next 12  
years*

---

## **Haematology services**

---

Concord hospital (from previous SSWAHS), as the main provider of haematology services at Bankstown hospital (from 2007 till 2013) for a period of seven years, delivered excellent care for patients, however, we believed, it was more desirable to transfer that care to SWSLHD and the changeover occurred on the 1st January 2014.

With excellent communication and planning involving both SLHD and SWSLHD, the transfer was extremely successful. Currently, patients are seen at BCTC and have their chemotherapy at Liverpool hospital with the plan to treat a large proportion of those patients at Bankstown in the near future. Dr Sangala, is a haematologist currently spending three days a week at BCTC and runs two outpatient clinics; he also provides inpatient consultative services.

## **Radiation Oncology**

---

Three visiting radiation oncologists, and their respective advanced trainees, currently run clinics at BCTC; we saw 330 new patients with mainly GI, Breast, GU, pulmonary, and haematology malignancies with actual treatment delivered at Liverpool hospital. Our radiation oncologists provide excellent outpatient services as well inpatient consultative services and also actively participate in MDT meetings and educational activities.

## **Palliative care services**

---

The department of palliative care is one of the busiest and most rapidly expanding departments at Bankstown hospital, the demand is increased significantly, and we expect the number of referrals and inpatient consultative referrals also for non-oncology patients to increase.

## **Nursing and care coordination**

---

We had an enhancement by 2 FTE in our nursing staff which will provide BCTC with capacity to cope with increasing demand for chemotherapy and the prospect of treating haematology patients onsite. We now have care coordinators in UGI, LGI, and breast at BCTC who are also involved in education, research and MDT meetings.

## **Overall Growth**

---

BCTC continued to grow over last twelve month and the demand for services compared to last year increased by 7%.

## **Administration**

---

Demand for administration support (especially in the context of implementation of MOSAIQ and change from a paper to electronic system), has increased significantly; we have successfully added one FTE administration position for chemotherapy booking and for increased palliative care demand.



Fida Hajar is our administration team leader and has done an excellent job of managing new demand, coordinating and training of new administration staff.

## Research and Education

---

BCTC clinical trial centre provides cancer centre as well some other departments (like colorectal group with La CaRt trial) with infrastructure and expertise to conduct research; we currently have 12 active clinical trials and some of trials we participated have been published in prestigious journals.

BCTCT provides rotation for palliative care and oncology medical students from UWS and nursing students at chemotherapy suite.

## Challenges

---

The main challenge for BCTC has been the continued increased demand for all of our services including palliative care, administering chemotherapy to haematology patients' onsite, and space at chemotherapy suite.

It is also important for our patients in the Bankstown region, to have radiation oncology facility onsite, which will enable them to receive treatment locally (specially concurrent chemo-radiotherapy for patients with GI and lung cancer) and we believe availability of radiotherapy onsite will have significant positive impact not only on quality of care for these patients but also on BCTC itself to become a fully integrated centre delivering comprehensive cancer treatment.

Space is one of our major challenges of BCTC, both at chemotherapy suite, clinics and also with the plan for future wellness centre, we will require significant enhancement in space and resources. We endeavour to continue working closely with hospital management and at LHD level to ensure our resources and workforce are maintained in order to cope with above challenges.

## Future of BCTC:

---

Bankstown hospital is planning to have significant expansion and at BCTC we are delighted with the exciting opportunity to plan for the increased demand over next twelve years (until 2026).

Briefly, BCTC is aiming to have 20 inpatient (IP) beds for Oncology/haematology and 12 beds for Palliative care, aphaeresis unit, 2 bunkers for radiation oncology, wellness centre, expansion of chemotherapy suite to 20 chairs, doubling of clinic space and research centre among others.

**Dr Ray Asghari, Director  
Bankstown Cancer Therapy Centre**

---

*Space is one of our major challenges of BCTC, both at chemotherapy suite, clinics and also with the plan for future Wellness Centre*

---

*Fida Hajar,  
Administration  
Team leader &  
administration staff  
member*





# LIVERPOOL CANCER THERAPY CENTRE

## DIRECTOR'S REPORT

---

### Highlights

---

As in previous years, 2013/2014 has been a year of steady growth and consolidation of the cancer service. Professor Geoff Delaney has focused on his role as LHD Cancer Service Director and therefore resigned his dual role as Director of Liverpool Cancer Therapy Centre and the SWSLHD Cancer Service. Prof. Delaney is to be sincerely thanked for his role in the ongoing development of the Liverpool Cancer Service over the past 6 years.

One of the highlights for LCTC this year was moving of the medical and administrative staff back from their off-site Elizabeth Street offices to a refurbished Level 2 Alex Grimson building. This has allowed the different cancer disciplines closer proximity and interaction. This has seen a significant boost in morale within the service. The clinic space remains tight and with many clinicians seeing patients at the same time the waiting area is at times seriously overloaded. There are plans underway with the Local Health District to redesign and expand the Cancer Therapy Centre to meet the increasing demand for services.

Substantial amounts of research are currently being conducted in the Liverpool Cancer Therapy Centre. There has been an increase in personnel in the Clinic Trials Unit, under the leadership of Michael Harvey, and Professor Paul DeSouza is leading plans to redevelop a space within the Liverpool Hospital for a dedicated area for Phase 1 Clinical Trials. The Australian Magnetic Resonance Imaging (MRI) Linac Programme continues to progress with preliminary research being conducted prior to the delivery of the magnet that should be delivered late in 2014. This is a very exciting time for the LCTC research teams.

The Radiation Oncology Department has commenced their MRI simulator project and this has led to significant benefits to some patients undergoing radiotherapy for tumours where MRI has been shown to be superior to other imaging modalities. It has also led to a significant increase in the research being done around treatment planning and delivery. This includes collaborative research links being maintained and strengthened with a number of other groups including the University of Western Sydney, University of Sydney, University of Newcastle, University of Wollongong and Stanford University, California.

I would like to take this opportunity to thank all of the staff, volunteers and donors for their ongoing support of our service. Particular thanks go to all who participated and donated to our 'Dry July' fundraising efforts. Funds from the 2013-2014 campaign went towards a refurbishment of part of the Cancer Therapy

*Dr Eugene Moylan  
Director, Liverpool  
Cancer Therapy Centre*





Centre to commence our Cancer Wellness program. We would particularly like to thank Peter Durrington and his wife Donna, who remain the highest donors in Australia for Dry July, in dedication of their friend Scott Tully who passed away during this period.

## **Key Performance Indicators**

---

As will be seen within this annual report, the Liverpool Cancer Therapy Centre continues to observe increasing growth in activity in terms of inpatients, outpatient activity, chemotherapy delivery and radiotherapy. Chemotherapy occasions of service have doubled over the past five years. Recent redevelopments in the chemotherapy suite have been able to accommodate the increased activity, although we are starting to already reach capacity within the constraints of conventional working hours.

In terms of service delivery, there has been significant growth in personnel, particularly in Palliative Care Staff Specialists, Haematology Staff Specialists and Chemotherapy Nurses.

## **Future Projects/Expansion of Services**

---

The major challenge for the Liverpool Cancer Therapy Centre will be managing the growth of the service within the restricted clinical space. We need to seek funding and plan for an expanded Cancer Centre to meet future demand. In the meantime we need to work with the oncology clinicians and the patients' general practitioners on developing a sustainable model for survivorship care and reduce the numbers of times that cancer patients need to physically return to the Centre.

**Dr Eugene Moylan**  
**Director**  
**Liverpool Cancer Therapy Centre**



# MACARTHUR CANCER THERAPY CENTRE

## DIRECTORS REPORT

---

A/Prof Stephen Della-  
Fiorentina  
Director, MCTC



### Highlights

---

2014 saw the start of the second decade of the Macarthur Cancer Therapy Centre [MCTC] with capacity now being reached in clinics and treatment units, however efficient planning and management of the clinical need have avoided significant waiting lists. Increased inpatient activity has continued leading to a planned increase of 16 additional inpatient beds at Campbelltown Hospital in 2015 for oncology, palliative care and haematology. Funding has been received to commence the planning process for further development of the cancer service out to 2021 with increased treatment and consulting services for the growth in population and increased incidence of cancer in the community

### Key Performance Indicators

---

Our service continues with high levels of patient satisfaction with over 20 staff members being nominated by patients and staff as Employees of the Month. The inpatient unit has demonstrated high levels of satisfaction on the Patient Experience Trackers and achieving above benchmark targets for inpatient length of stay allowing our patients to stay at home longer or transfer to the Palliative Care Unit sooner. All staff strive for excellence in patient centred care, customer service, provision of education, treatment information and teamwork and it is gratifying that so many individuals and teams have been recognised. Our award winning Nurse Assessment Unit model has been adopted for rapid assessment units in surgery, cardiology and medicine. Excellent results in regular hand hygiene audits and above benchmark measurements in the National Medication Chart and Institute for Safe Medication Practice audit on chemotherapy continue.

The Centre has seen increased activity in the medical and radiation oncology services to the Southern Highlands Cancer Centre in Bowral. Clinical Trial Research activity has increased and satisfactory activity has been achieved to ensure ongoing funding support from the Cancer Institute NSW.

Our commitment to education continues with attachment of nursing, radiation therapy and allied health students. Education of students in all years of the University of Western Sydney School of Medicine course continues. Dr Tognola has been appointed as a Senior Lecturer in Medical Oncology recognising the increased student numbers and the large amount of work required to provide the cancer curriculum and supervising student research projects.

---

*Increased inpatient activity has continued leading to a planned increase of 16 additional inpatient beds at Campbelltown Hospital in 2015 for oncology, palliative care and haematology.*

---





I would like to thank all staff involved in teaching the principles of cancer care and being exceptional role models for students of all the health disciplines.

The “24 Hour Fight Against Cancer, Macarthur” event was held again in October 2013, raising \$290,000, supporting the MCTC, Camden Palliative Care, Paediatric Ambulatory Care, the inpatient oncology unit as well as surgical services. This group has raised more than \$1.8 million in 8 years, an outstanding effort from the local community reinvesting in their cancer service, where every dollar raised stays in the Macarthur and Wollondilly region.

Our volunteers continue to support our service and their dedication is greatly appreciated by patients, families and staff. I am thankful for the generosity of our donors and was pleased to be accepted as a beneficiary of the Dry July programme for the second time raising over \$65,000, a 30% increase over last year. Our continued Therapy Pets programme and free exercise programme and massages shows our ongoing commitment and innovation in complementary therapy at MCTC and we look forward to the commencement of our Wellness Centre at Camden to further grow this service.

The centre cannot provide the excellent service it does without the commitment and dedication of all of our staff in providing patient focused service and the strong teamwork commented on by our patients.

Their continued drive for quality, safety and excellence in cancer care allows the Macarthur and Southern Highlands Cancer Centres to deliver our goal of delivering the best possible care to the patients, their carers and families of Macarthur, Wollondilly and Wingecarribee.

***Associate Professor Stephen Della-Fiorentina, Director  
Macarthur Cancer Therapy Centre***



# COLLABORATION FOR CANCER SERVICES, RESEARCH & EVALUATION

---

## Highlights

---

The following major studies are being conducted by CCORE Research Project Managers:

### **A population-based model of local control and survival benefit of radiotherapy for selected cancers (RT benefit model)**

---

*Dr Jesmin Shafiq (CCORE Research Project Manager) and Dr Timothy Hanna (Radiation Oncology Fellow)*

The previously developed Optimal Radiotherapy Utilisation model is being further expanded to estimate the measurable value of benefit such as the increase in local control and survival proportion, for each individual cancer site commonly treated with radiotherapy using indication-specific outcomes data. This is the first study to estimate the population-based survival and local control benefit of radiotherapy, and the incremental benefits of concurrent chemotherapy for potentially curable cancers if the whole cancer population are treated according to evidence-based guidelines.

Population-based quantitative estimates of benefit from application of guideline-recommended radiotherapy remains largely unknown; it provides useful information for economic analysis, assessment of impact of gaps in service provision and of investment in radiotherapy services. The radiotherapy local control and survival benefit estimation applied to the cancer patient population can be used by the health service planners to evaluate a treatment modality for a particular population of patients and is adaptable to other populations with known epidemiological parameters. It also allows estimation of the shortfall in survival expected with underutilisation of radiotherapy. Policy driven evidence-based estimates demonstrated in this investigation could facilitate the planning of efficient, equitable radiotherapy services for a population with a rational estimate of demand and outcome.

### **Factors affecting radiotherapy utilization in NSW and ACT [2004-06], a data linkage and GIS experience**

*Dr Gabriel S Gabriel*

*The objectives of this study were:*

To calculate the actual Radiotherapy Utilization (RTU) rates in NSW & ACT directly from patient treatment records that matched to the Central Cancer Registry records in NSW & ACT

- To identify factors affecting radiotherapy utilization with special emphasis on the effect of geographic variation on RTU.

*Head of Department  
Michael Barton OAM  
Professor, Radiation  
Oncology, UNSW  
Medicine*



*Research Director  
The Ingham Institute  
for Applied Medical  
Research (IIAMR)  
Collaboration for  
Cancer Outcomes  
Research & Evaluation  
(CCORE)*



Radiotherapy treatment data was collected from all 17 radiotherapy departments (RTD) in NSW and ACT for the period January 2004-June 2007. Through Centre for Health Record Linkage the radiotherapy data and Central Cancer Registry records in NSW & ACT were linked. All patients' residential addresses were geocoded by the cancer registry. Geographic Information System software was used to calculate the road distance between patients' residential addresses and the closest RTD. Patients were excluded from the study if their nearest RTD was outside NSW or ACT.

The overall RTU rate was 26%. This represents 54% of the estimated optimal radiotherapy utilization of 48%

Radiotherapy utilization rates decreased with increasing distance from patient residence to the nearest RTD. RTU ranged from 27% for those who lived <100 km from the nearest RTD to 21% for those who lived 300+ km from the nearest RTD. Older patients were less likely to receive RT and female younger patients were more likely to receive RT than younger males.

This is the first study to use data linkage to match radiotherapy treatment data to all CCR records in NSW and ACT. It is also the first study to calculate the road distance between patient residence and the nearest RTD and to quantify the effect of distance on the likelihood of receiving radiotherapy.

### **Modelling Demand for Radiotherapy**

During April 2013 an international meeting, Health Economics in Radiation Oncology (HERO), was arranged to precede the 2<sup>nd</sup> ESTRO Forum in Geneva, Switzerland.

This meeting was convened by Professor Michael Barton, Research Director, CCORE and the Ingham Institute, in conjunction with Prof Yolande Lievens of the European Society for Radiotherapy & Oncology (ESTRO), Belgium. The meeting was attended by participants from Australia, England, Belgium, Austria, Canada and Scotland to discuss modelling demand for radiotherapy. The aim of the meeting was to present a range of approaches to radiotherapy modelling and to develop a new collaborative project that would integrate demand modelling for radiotherapy with cost estimates.

Future aims will be to unify and shape a template for radiotherapy in different countries using consistent methodology, thereby allowing the analysis of cost and demand comparisons between countries.

---

*Future Aims to Unify  
and Shape  
Radiotherapy  
Template continues*

---

---

*Extensive study into  
Factors affecting  
Radiotherapy  
Utilization in NSW and  
ACT completed in  
2014*

---



## Southern NSW Radiation Oncology Training Network

The Southern NSW Radiation Oncology Training Network was established in 2007 via a Cancer Institute NSW Health Services Innovation Grant. The aim is to develop and maintain a network for training Radiation Oncology registrars and for rotating them through a number of different Radiation Oncology Centres throughout their training. The Network has been established with the co-operation of the Hospitals associated with the University of New South Wales as well as The Wollongong Hospital and Canberra Hospital. Five registrars commenced their training in January 2008 and now has 27 trainees within our Network.

The Network has developed a common teaching programme for all the registrars within the group and in 2014 we combined the Phase I teaching programme with the Northern Alliance and this is held monthly at RANZCR. This will provide continuity in registrar education and as such will ensure the quality of the teaching programme. The goals of the Network are to: Demonstrate feasibility of a rotational Radiation Oncology Network; Identify resources, governance procedures and organisational issues; Identify and overcome barriers; Enhance the educational environment for Radiation Oncology registrars; Facilitate rotation between Network hospitals and departments; Create a template for roll-out of Networks in other parts of Australia and NZ.

### The following CCORE staff continue their PhD studies during 2013/14:

- Dr Jesmin Shafiq, Research Project Manager, CCORE. PhD thesis: 'Model of estimation of local control and survival benefit of external beam radiotherapy for selected cancers'. (2011-2014).  
Supervisors: Professor Michael Barton, Professor Geoff Delaney. Commenced 2011.
- Dr Timothy Hanna, Clinical Research Fellow Radiation Oncology, CCORE - PhD Thesis- 'The Overall Survival and Local Control Benefit of External Beam Radiation Therapy for Selected Cancers'.  
Supervisors: Professor Michael Barton, Professor Geoff Delaney. Commenced 2011
- Dr Gabriel S Gabriel, Project Manager, CCORE. PhD Thesis 'The effect of geographic variations on radiotherapy utilization rates in NSW.'  
Supervisors: Professor Michael Barton, Professor Geoff Delaney  
Submitted: June 2014
- Dr Viet Do, Radiation Oncologist Westmead Hospital, PhD Student UNSW  
'The overall survival benefit of chemotherapy for selected solid cancers.'  
Supervisors: Professor Michael Barton, Professor Geoff Delaney, Dr Weng Ng  
Commenced 2012



- Dr Jacqueline Veera, Clinical Research Fellow Radiation Oncology. Masters Degree.  
'Evaluating whether dedicated MRI simulation for cervical cancer radiotherapy results in reduced variability in target volume delineation compared to conventional imaging modalities.  
Supervisor: A/Professor Shalini Vinod.

### PhD Commenced 2013

---

- Dr Mei Ling Yap – Research Project : 'Global cancer burden and access to radiotherapy'. Supervisor: Professor Michael Barton. Commenced Jan 14

### Journals Publications

---

- Windsor AA, Koh E-S, Allen S, **Gabriel GS**, Yeo AET, Allison R, van der Linden YM, **Barton MB**. Poor outcomes after whole brain radiotherapy in patients with brain metastases: Results from an international multicentre cohort study. *Clinical Oncology* Nov 2013 Vol 25:674-680
- Spigelman Allan D, Pascoe Shane W, Harris Mark F, Beilby JJ, Crossland LJ, Gett RM, **Barton MB**, Jayasinghe Upali W. Referral pathways in colorectal cancer: an audit of surgeons records. *Australian Health Review* Sept 2013, Vol 37:449-452
- Metcalfe P, **GP Liney, L Holloway**, A Walker, **M Barton, GP Delaney, S Vinod**, W Tomé. The potential for an enhanced role for MRI in radiation-therapy treatment planning. *Technology in Cancer Research and Treatment*. 2013 (Oct) Vol 12 (5): 429-446.
- **Barton MB, Jacob SJ, Shafiq J, Wong K, Thompson SR, Hanna TP, Delaney GP**.
- Estimating the demand for Radiotherapy from the evidence: A review of changes from 2003 to 2012. *Radiotherapy and Oncology*. Epub ahead of print 12 May 2014.
- **Barton MB**, Williams M. 'Assessing needs and demand for radiotherapy' **in: Radiotherapy in Cancer care: facing the global challenge**. Editor: E Rosenblatt International Atomic Energy Agency, Vienna. (in press)
- **Barton MB**, Williams M, **Shafiq RJ**. 'Radiotherapy in the context of cancer control' **in: Radiotherapy in Cancer care: facing the global challenge**. Editor: E Rosenblatt International Atomic Energy Agency, Vienna. (in press)



## Conference Presentations

---

- **Viet D; Weng N; Delaney GP; Barton MB.** An estimation of the population survival benefit of first-line chemotherapy for upper gastrointestinal cancer' Asia-Pacific Journal of Clinical Oncology. 2013 Vol 9 (Suppl 3):148
- *presented at COSA Annual Scientific Meeting, Adelaide, 12 - 14 November 2013*
- Sitas F; Nair-Shalliker V; Revius M; Christou C; Yap S; Armstrong K; Salagame U; Christian K; Cottrill A; Delaney G; Haydu L; Kaandan N; Sara T; Thompson J; Banks E; **Barton M**; Canfell K; O'Connell D. 'The New South Wales Cancer, Lifestyle and Evaluation of Risk Study (CLEAR): a resource for cancer research'
- Asia-Pacific Journal of Clinical Oncology. 2013 Vol 9 (Suppl 3):134(Presented at COSA Annual Scientific Meeting, Adelaide, 12 - 14 November 2013)
- **Shafiq J; Delaney G; Barton M.** 'An evidence-based estimation of local control and survival benefit of radiotherapy for colorectal cancer'
- Asia-Pacific Journal of Clinical Oncology. 2013 Vol 9 (Suppl 3):127 (presented at COSA Annual Scientific Meeting, Adelaide, 12 - 14 November 2013)

# **CLINICAL CANCER SERVICES**

---





## Highlights

---



*Dr Felix Chan  
Director  
Gynaecologic  
Oncology*

In March 2014, Dr. Chan attended the AGES Annual Scientific Meeting in Melbourne. Titled " Tomorrow's Theatre Today – Robotics. Instrumentation. Vision", Dr. Chan was invited to perform "live surgery" which was teleconferenced to the audience.

In September, 2014, Dr. Chan was invited to attend the "Robotic Advances in Gynaecology Conference at the MD Anderson Conference Centre in Houston, Texas.

Dr. Chan, Tin Chiu (Pelvic Fellow) & Rosemary Craft (CNC) have conducted a "Review of Cervical Cancer presentations 2005-2011" which will be submitted for publication by the end of 2014.

Tin Chiu was appointed to the position of Pelvic Fellow for 2014, & has been a valuable asset to the team.

## Key Performance Indicators

---

The Gynaecology Oncology Outpatient clinic had 208 new patients & 732 follow-up patients pass through the clinic.

There were 289 theatre cases for the year & 167 inpatients.

There were 134 new cancer patients presented for discussion at our Multi-disciplinary Tumour Board Meeting, which is held weekly.





## SWSLHD HAEMATOLOGY

---

*Assoc Prof David  
Rosenfeld  
Director of  
Haematology*



---

*Haematology Clinics  
at both Bowral and  
Bankstown Hospitals  
were initiated by our  
unit during 2014*

---

On 1<sup>st</sup> January 2014, the Haematology Department took over responsibility from Concord Hospital for haematology clinics and the consultative services at Banktown Hospital responsibility from Concord Hospital for haematology clinics and the consultative services at Banktown Hospital. During 2014, haematology clinics were also established at Bowral Hospital. The clinics and consultative services at Campbelltown Hospital continue to expand.

An ambulatory service for the treatment of venous thromboembolism was established at Liverpool Hospital in October 2013 which has helped to avoid unnecessary hospital admissions. The allogeneic stem cell transplantation program is an important new part of the service since its inception three years ago and continues to expand.

Six of our seven advanced trainees sat either the first or the second part of the examinations for the Fellowship of the Royal College of Pathologists of Australasia (FRCPA) during 2014 and all were successful.

The clinical trials unit has expanded its activity with 2.5 full time staff currently.

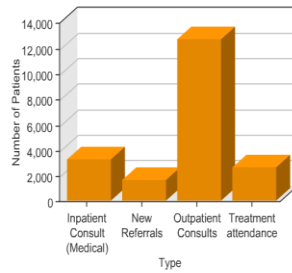
Using the functionality of the Ambulatory Haematology Unit, there has been a gradual shift of some of the treatment protocols that would have previously only delivered to inpatients into the clinic setting, thus reducing pressure on hospital beds.



## Key Performance Indicators

### DATA (TYPE DETAILS) FOR LIVERPOOL HAEMATOLOGY (2013)

Show / Hide Data Table



■ Inpatient Consult (Medical)  
■ New Referrals  
■ Outpatient Consults  
■ Treatment attendance



Inpatient Consult (Medical)	3,255 patients
New Referrals	1,616 patients
Outpatient Consults	12,673 patients
Treatment attendance	2,672 patients

**Total:** 20,216 patients

[Print this page](#)

## Future Projects/Expansion of Services

The establishment of clinics at Bankstown, Campbelltown and Bowral Hospitals have been important enhancements of LHD Haematology services.

Chemotherapy and transfusion support for patients with haematological disorders are still centralised at Liverpool Hospital and we would hope to extend these to the Macarthur and Bankstown campuses, as resources become available.

The Ambulatory Haematology Unit has become a very important part of our service delivery and is pivotal in reducing the number of patients requiring admission. We hope to further develop this service to allow for the delivery of an increasing number of treatment protocols.

A seven day per week service will assist in the support of patients outside of hospital particularly those receiving more intensive chemotherapy or some of the transplantation regimens. Clinical trials are central in the advancement of care for our patients and we will strive to improve our capacity in this important area.

**Associate Prof David Rosenfeld**  
**Director of Haematology**



# MEDICAL ONCOLOGY - MACARTHUR

---

## Highlights

---

The Department of Medical Oncology, Macarthur Cancer Therapy Centre, has continued to grow. The service saw 643 new patients, a similar amount to the previous year, 6624 follow-ups in clinics and the Oncology Ward and 6879 chemotherapy occasions of service, an increase of 8%. We welcomed new medical oncologists, Dr Aflah Roohullah and Dr Deme Karikios to provide additional services in gastrointestinal and genitourinary cancers and Dr Annette Tognela, Senior Lecturer in Medical Oncology, to coordinate the medical student teaching and manage brain tumours.

2014 saw the continuation of the four hospital advanced training network of Liverpool, Campbelltown, Bankstown and St Vincents Hospitals. It is always pleasing to see our previous ward physician trainees join our advanced training programme indicating the quality of teaching provided by our senior medical staff. 2014 saw the continuation of a clinical gastrointestinal cancer fellow working also at the Clinical Trials Centre in Sydney, Dr Chantrill has led this important clinical position to enhance training in these malignancies. We have seen increased clinical trial recruitment as a result. Dr Diana Adams leads the programme of lifestyle changes after cancer diagnosis, especially in reducing obesity related malignancies. Dr Belinda Kiely is leading research in breast cancer at the ANZ Breast Cancer Trials Group and Dr Po Yee Yip is progressing translational research into lung cancer and attracting new clinical trials in this disease.

---

*2014 saw the continuation of the four hospital advanced training network of Liverpool, Campbelltown, Bankstown and St Vincent's Hospitals*

---

## Key Performance Indicators

---

The Southern Highlands Cancer Centre in Bowral saw 226 new patients and 1845 follow-up patients seen and 1510 chemotherapy occasions of service delivered, a sustained increase over previous years with more patients able to receive treatment locally independent of health insurance.

The medical oncologists continue to be strongly involved in University of Western Sydney Medical School with many of their graduates working as our interns. We lecture to Year 1 and 2 students, co-ordinate the 4-week clinical placement of Year 4 students within the Macarthur Cancer Centre and have Year 5 pre-intern ward attachments. Dr Kiely and A/Prof Stephen Della-Fiorentina supervise honours projects.

Dr Tognela commenced as a clinical senior lecturer in 2014. Publications, presentations and invitations to lecture have increased.



## **Future Projects/Expansion of Services**

---

The innovation and efficiency of the department has been recognised with the unit showing leadership in the Whole of Hospital Programme looking at improving efficiencies in inpatient care and building on the hospital avoidance and early discharge that the Nurse Assessment Unit provides.

The teamwork and integration of the medical, nursing, allied health and pharmacy staff in education, quality, service planning has led to a quality service to our patients, their families and carers and created a desirable and dynamic place to work.

***Associate Professor Stephen Della-Fiorentina  
Director of Medical Oncology  
Macarthur Cancer Therapy Centre***



# MEDICAL ONCOLOGY - LIVERPOOL

---

Medical Oncology  
Team



## Highlights

---

Medical oncology continues to go from strength to strength. By April 2013, we had appointed our seventh and eighth Medical Oncologists (making up a total of 5.6FTE), four Advanced Trainees, and a Fellow in the department. All types of cancers are now managed in our department. We now see approximately 1000 new patients, and supervise over 10000 chemotherapy treatments each year.

In 2013, we were able to attract national funding through the College of Physicians (STP) for an extra trainee who contributes to the care of patients in Bathurst Hospital, as well as South West Private Hospital. A comprehensive training program is undertaken by our advanced trainees, and many are able to conduct research projects and present their work at national conferences. One previous advanced trainee is currently enrolled in a PhD program at the Ingham Institute, and we are planning to enroll two more recently graduated (FRACP) medical oncologists in our PhD track. The department continues to contribute to both UNSW and UWS undergraduate teaching and assessment, including key roles in conducting oncology examinations at Liverpool Hospital.

Our research is gaining momentum, with increasing numbers of clinical trials and in particular, Phase I trials, being offered to our patients. Together with researchers from the Ingham Institute, we have been able to set up the first (and currently only) circulating tumour cell facility in the state. This technology is likely to play an increasing role in management of patients in the future.

Our quality assurance programs were given a boost last year by undergoing a Lean Thinking analysis of outpatient flows. Continuing changes in processes will improve efficiency and ensure our patients are assessed and treated promptly.

## Key Performance Indicators

---

New patients: Approximately 1000 (10% growth per annum)  
Chemotherapy treatments: Over 10000 each year

## Achievements

---

- CINSW (TCRU) Grant awarded to Prof De Souza (CI) – over \$6.5 million dollars
- Total of over \$9 million dollars in research grants in the past 12 months
- Initiated quality improvement with 'unsafe-hands' inpatient rounds to reduce LOS

---

Total of over \$9 million  
dollars in research  
grants in the past 12  
months

---



- Dr Moylan appointed as the Director of Cancer Therapy Centre (Liverpool)
- SWSLHD wide neuroendocrine tumour multidisciplinary board
- meetings established
- Development of the Medical Oncology Advanced Trainee Network teaching program

## **Future Projects/Expansion of Services**

---

Recently, the hospital has granted us space on the ground floor of the Alex Grimison wing to establish a Phase I trials unit. This is an exciting opportunity to further enhance our department functions, with increasing ability to offer personalized medicine for cancer patients, as well as enhancing our research capabilities. We hope our PhD tracks will also highlight the ability of our trainees to undertake further training in our LHD.

In the future, we plan to increase collaboration with our medical oncology colleagues at Bankstown and Campbelltown Hospitals by sharing protocols, trials and trainee projects, as well as educational opportunities.

Our needs will rapidly increase, in concert with improved survival in many of our patients, as well as increased population density in south-west Sydney. This will of course require more senior staff, chemotherapy nurses, junior medical staff, and clinical trials to cope with the demands.

**Dr Weng Ng**  
**Director Medical Oncology**  
**Liverpool Cancer Therapy Centre**



Janeane Harlum,  
Manager, Service  
Development



---

*Liverpool continues to lead the way with significant review and improvements to the care plan which will now be used LHD wide.*

---

## Highlights

---

**PEACH (Palliative Care Home Support Packages)** for end of life care was launched in December 2013. These packages are funded by MoH and aim to improve services for palliative care patients in the last 7 days of life for end of life care at home and include all LGAs with the exception of Wingecarribee who already have access to some additional after hours nursing. The packages build on existing services and work in partnership with Silver Chain Nursing service to provide after hours RN visits for personal care and ability to videoconference with carers overnight. SWSLHD was awarded the funding to “roll out” these packages across the 5 LHDs: SWSLHD, ISLHD, SLHD, WSLHD and NBMLHD up to 2016.

The SWS packages have included 121 completed packages from 82 referrals for the period Dec 2013 – June 2014. The variation between totals is a result of some packages being extended for those patients still in terminal phase at 7 days. There were 61 deaths at home, 8 discharges and 14 patients admitted to an inpatient facility, usually a Palliative Care Unit. Governance for the inter-district program lies with SWSLHD Executive and each LHD has a steering committee and local clinical lead. A research and evaluation committee led by Associate Prof Meera Agar with representatives from each participating LHD and Silver Chain are setting the evaluation agenda. To ensure the commitment of all staff to promote, utilize packages and work with Silver Chain to enable patients to die at home through care planning, clinical handover and ongoing clinical review is key to the success of the program. This program has provided further opportunities to improve our relationships with GPs and the Medicare Local and most importantly is supporting patients who choose to die at home and their families/carers.

**The Bi-annual SWSLHD palliative awards** were held in May 2014 as part of National Palliative Care week to acknowledge staff and volunteers and the work they do in SWSLHD. Award winners included:

- Volunteers supporting palliative care – Milan Malunec and Jo-Anne Craik-Cooper
- Excellence in the provision of primary care to palliative care clients: Noemir Gonzalez, Community health nurse Hoxton Park
- Excellence in the provision of support to palliative care service and clients: Kate Partington, NUM Wingecarribee CHC
- Outstanding contribution and commitment to providing quality clinical care at specialist level: Val Weller, Specialist nurse Hoxton Park CHC



- Quality Improvement Project in palliative care: Wingecarribee CHN and palliative care team/s for the implementation of the Karnofsky scale
- Outstanding contribution and commitment to providing quality clinical care at specialist level by a team: Liverpool hospital palliative care team/s – consultative team and Ward 4C (multidisciplinary team)

**LHD work on Care Plan for the Dying Patient** has seen significant work at each facility to improve care of the dying. Every facility now has a steering committee for end of life care and an executive sponsor who also attends the LHD Advance Care Planning and Care of the Dying committee. Liverpool continues to lead the way with significant review and improvements to the care plan which will now be used LHD wide. A carer resource has been developed on symptoms at end of life. Bankstown, Liverpool and Campbelltown Hospitals have designated end of life coordinators, Fairfield Hospital received a small grant this year that allowed the project to commence while Bowral Hospital has commenced recruitment for a permanent CNS2 part time position that will contribute to this program.

---

*The LHD palliative care senior nurses group has developed several key clinical policies that have been ratified as district policies.*

---

#### **Development of LHD Policies**

---

The LHD palliative care senior nurses group has developed several key clinical policies that have been ratified as district policies.

#### **Liverpool Service:**

---

- 4C palliative care ward at Liverpool commenced using their full 20 beds from February 2014. The ward celebrated its first birthday on 16 April 2014.
- Commencement of the Arts/Health partnership with Groundswell will bring creative opportunities to support patients & carers.
- The inaugural memorial service was held earlier in the year and was well attended.
- The service has commenced a renal supportive care clinic and service as well as an adolescent and young adult clinic/service. Planning is currently underway for an MND integrated clinic which will include palliative care, neuro, respiratory and gastro services.
- The service welcomed new staff specialists Dr Eve Lyn Tan 0.8FTE and Dr Desi Seccombe 0.8FTE

#### **Campbelltown**

---

- February saw the commencement of new staff Specialists Dr Kristen Turner 0.6FTE and Dr Kasia Chmiel 0.6FTE to Campbelltown Hospital. Up until February, Liverpool staff specialists had been assisting with outpatient clinic and consult service.
- Campbelltown also welcomed Carol Hicks into a new 1FTE CNS2 position





- The use of EMR consult requests has been implemented and the medical staff are now using a management plan to send to patients GPs.

## Camden:

---

- Pilot trial of music therapist program for 3 months on PCU which was warmly received by patients, families and staff. A memorial service was held with positive feedback from families and is a result of the dedication of staff and volunteers who worked tirelessly to put this event on.
- The palliative Care unit contributes to PCOC Palliative Care Outcome Collaboration data collection. The latest report 2013/14 shows that 90% of all admissions were for cancer diagnosis, 10% non cancer, 4% of all admissions were from CaLD background. The age group demographic reflects that 34% of all admissions were for patients under the age of 65yrs (28% national average). The data also shows that 83.8% of all admissions die in the unit (national av. 54.8%)

## Bankstown

---

- The service welcomed Sveta Mickovska to new admin position and Naomi McLaughlin to the new permanent 0.6FTE CNS2 position.
- The team used Palliative Care week to work with community health colleagues to promote Palliative Care within Bankstown Hospital to staff and visitors.

## Braeside

---

- Development of nurse led clinic model
- Ongoing development of Lavender Suite at Hammondville Aged Care which has 10 designated RACF beds.
- The clinical trials team continues to work on trials within Braeside, other SWS facilities including some studies in the community setting.

## Community Specialist Palliative Care

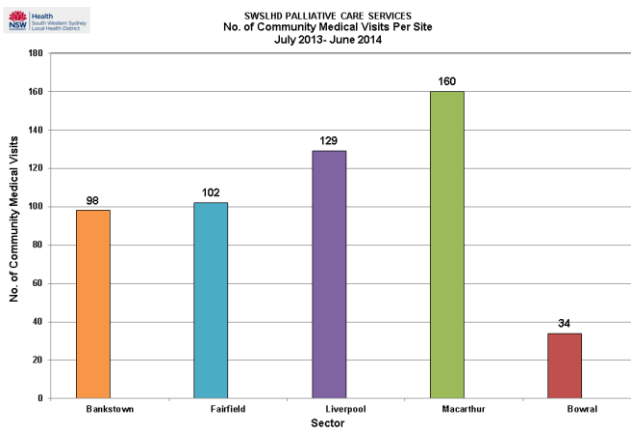
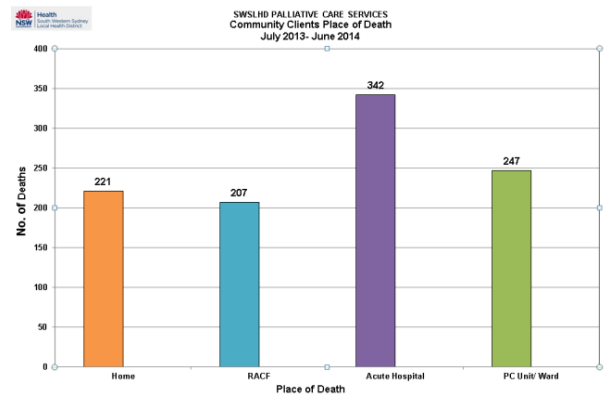
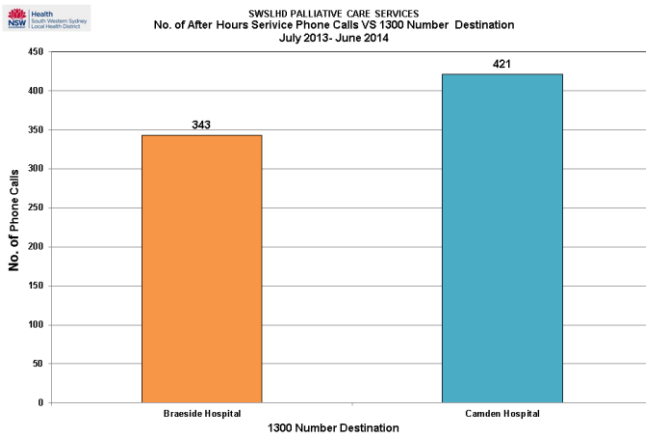
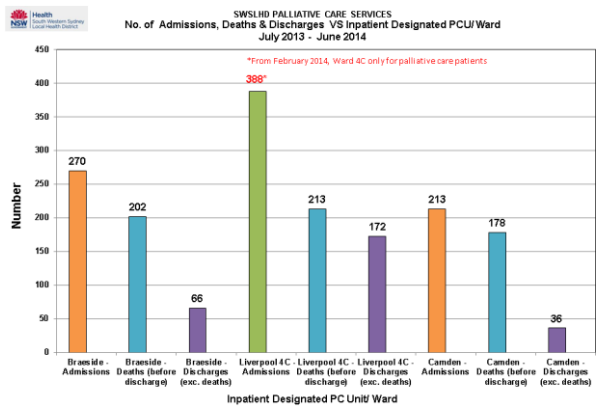
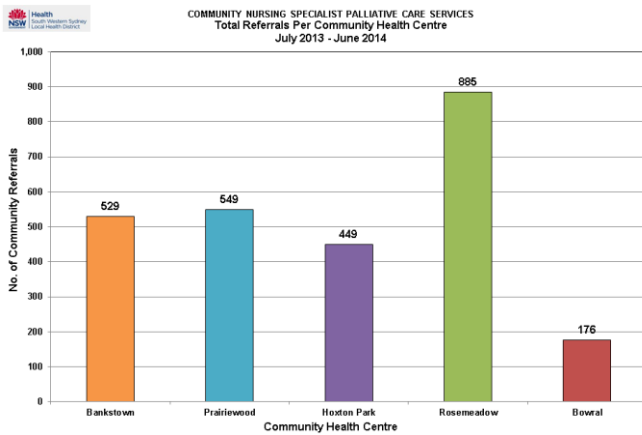
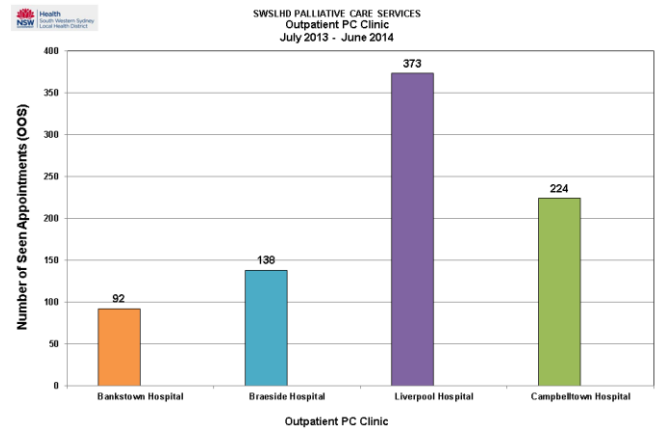
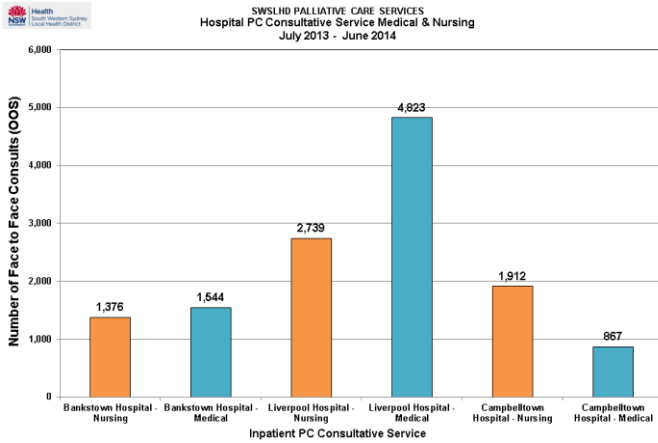
---

- Welcomed new acting CNC at Bankstown CHC, Donna Berry, and new permanent CNC Ann Perey at Prairiewood CHC.

**Community Quality Project:** Completed (100) patient/carer interviews across the 5 community sites that reinforced the services provided are valued by consumers, that overall staff (specialist and primary care) are skilled and compassionate. Consumers raised concerns of out of hours care, weekend limited services and limited counseling and social support services for assisting carers to access other services, completing applications and additional support for carer fatigue. Consumers value having a 1300 number to call for support and advice and talked positively around the communication between all of their Doctors (cancer, palliative care & GP)



# Key Performance Indicators





*Some of the Palliative Care team*



---

*The LHD palliative service has requested a strategic plan be developed for SWS.*

---

## Staffing:

---

- Liverpool Hospital currently recruiting a CMO position. Once recruited, the entire senior medical profile across the LHD will fully staffed for the first time in many years.
- The recruitment of palliative care CNS2 (part time) position at Bowral Hospital will allow the timely and on-site review of patients, referral to PC staff specialists, education and commencement of the Care Plan for the Dying Patient.

## EMR:

---

- Community Health planning towards training and rollout across all sites, Liverpool 4C, Braeside PCU and Bankstown Hospital consult service will follow.

## Planning:

---

- Currently staff are involved in the master planning process at both Bankstown and Campbelltown where discussions are occurring for proposed 10 palliative care beds.
- The LHD palliative care service has requested a strategic plan be developed for SWS and this is currently being considered by LHD executive. This plan is critical to future service developments across specialist and primary provision of palliative care.

### • Braeside:

---

- Planning for the development of a fresh cook kitchen. This project is engaging community groups and involves key fundraising.
- Participation and integration in the LHD survivorship care development with particular focus on the needs of those with advanced cancer

## Liverpool:

---

- The CMO position will focus on the timely review of patients discharged from Liverpool Hospital through home visits, outpatient clinics and avoidable hospital admissions and ED presentations through rapid response reviews. This position will enable improved and more regular support of primary care clinicians, in particular, GPs



## Highlights

---

A highlight of the past 12 months has been the clinical and research implementation of the MRI Simulator (MRI Sim). In August 2013 a dedicated 3Tesla MRI scanner was commissioned at Liverpool Cancer Therapy Centre. This is the first dedicated radiotherapy planning MRI scanner in the country. We are assessing the most appropriate MRI sequences and patient set-up for the purpose of radiotherapy as well as undertaking a number of studies where we are assessing the potential of serial MRI scans throughout treatment to enable adaptive radiotherapy and predict individual patient outcomes. The MRI Sim has integral links with the Australian MRI Linac Programme based at Liverpool. The MRI-Linac Programme has also progressed over this period and by December 2014, we will have reached the exciting point where all of the hardware components will be in place for this programme. In December 2013 we received the first of the hardware components for the project and we are currently planning for the commissioning phase of the linear accelerator component of the MRI-Linac. The magnet will arrive shortly after this. We are looking forward to being able to start our experimental investigations comparing both the in-line and perpendicular design.

*Dion Forstner  
Director Radiation  
Oncology  
Liverpool & Macarthur  
Cancer Therapy  
Centres*



The implementation of MRI has led to the appointment of several staff in 2014 whose area of work is focused on MRI Simulation radiation therapy. Drs Trang Pham and Myo Min are both oncology fellows and have enrolled to undertake PhDs in the area of MRI Simulation.

In 2013 and into 2014 we were able to further expand the capacity of patients treated with Intensity Modulated Radiotherapy (IMRT), which is highly conformal radiation that allows sparing of critical structures (such as salivary glands in Head & Neck cancer patients, rectal sparing in prostate cancer patients to reduce side effects). This treatment is more resource intensive and it is a credit to our physicists and radiation therapists that we have achieved this.

We also commenced treating with Intensity Modulated Arc Therapy (IMAT but also known as VMAT). This is a rotational form of IMRT which allows faster treatment and also in some cases a better distribution of the radiation dose within the patient. There was a major upgrade to our Pinnacle treatment planning system.

We commenced an extracranial stereotactic programme in lung and liver allowing treatment of small lesions in these organs (primary and metastatic) to an ablative dose in just a few treatments.



We have seen an increase in imaging programmes to achieve improvements in accuracy of treatment locations but also the introduction of more patient immobilisation equipment to improve patient comfort and treatment. Therefore, with these improvements, we have seen an up skilling by all groups to improve the department standards.

Over the past year, we have also focused on maintaining a true patient focus perspective, not only offering the best technology and radiation therapy techniques, but as well making the patient experience better in order to improve patient outcomes. Programmes like Dynamic Patient Scheduling to minimise waiting room waiting times as well as constant consultation with patients via the use of patient surveys (PET tracker) has been key to achieving this goal. The department has had in excess of 25 abstracts accepted for presentation at the RANZCR/AIR/ACPSEM Combined Scientific Meeting in Melbourne in September 2014. This is an amazing achievement and highlights the wonderful staff and their output not just in terms of clinical service provision but in terms of development and research.

Prof Michael Barton, Professor Geoff Delaney and Dr Mei-ling Yap are members of the Global Taskforce for Radiotherapy in Cancer Control set up by the Union for International Cancer Control (UICC). GTFRCC <http://gtfrcc.org> is estimating the cost of meeting the gap between current supply of radiotherapy services around the world and the demand for radiotherapy now and over the next 20 years. Prof Barton chairs the committee examining burden of demand and outcomes. This work depends on the large body of work CCORE has produced over the last 15 years which is recognised as the leading authority in assessing demand for cancer services. Dr Yap is also involved with the advocacy site <http://globalrt.org> which aims to turn radiotherapy service delivery into a global health priority.

Dr Dion Forstner was elected Dean of the Faculty of Radiation Oncology at The Royal Australian & New Zealand College of Radiologists. The Faculty is the peak body in Australia and New Zealand representing radiation oncology. Professor Michael Barton was awarded the Rouse travelling fellowship to New Zealand by RANZCR.

Two Radiation Oncology advanced trainees – Dr Jeremiah de Leon and Dr Dominique Lee successfully completed their final exams.

In Radiation Therapy Daniel Moretti completed a Master of Business administration (Health Management) and Reyna Stanzione completed her Certificate IV in frontline management.

In Medical Physics Jarrad Begg competed his MSc and passed Part A & B ACPSEM Accreditation exams. Similarly, Michael Jameson passed his Accreditation exams and met other requirements to obtain his ACPSEM Certification.

---

*Programmes like Dynamic Patient Scheduling to minimize waiting room waiting times as well as constant consultation with patients via the use of patient surveys (PET tracker) has been key to achieving this goal.*

---



The Medical Physics department was also assessed by ACPSEM and Accredited by them to enable Medical Physics Registrar training under the TEAP (Training Education and Accreditation Programme) structure.

During 2013/2014 Medical Physics have enjoyed having an established research group at the Ingham Institute, including senior research staff, a number of postdoctoral researchers funded through grants, clinical staff who are involved in both in research projects with a focus towards longer term patient benefits and clinical implementation projects with the goal of translating research work to our clinical practice and a number of research students. We have strengthened a number of on- going collaborations with the University of Wollongong, University of Sydney, University of New South Wales, University of Western Sydney, University of Queensland, University of Newcastle, CSIRO, University of Hull, UK, University of Leeds, UK and Stanford University, USA and have enjoyed establishing a collaboration with the Mastro clinic in the Netherlands.

---

*We have recently been successful in obtaining a NSW cancer council grant to support continued work in the assessment of radiotherapy delivery uncertainties for the coming 3 years enabling us to employ to a postdoctoral position. This work will initially focus on lung.*

---

Through collaboration with the Institute of Medical Physics at the University of Sydney, we were fortunate to have Professor Andre Dekker from the Mastro group join us in 2013 to undertake some initial pilot investigations on rapid learning approaches. This rapid learning work is assessing the potential to use the large clinically collected datasets to model likely treatment outcome for future patients, better informing clinical decision processes. We have also recently received a NSW Health bioinformatics 'proof of concept' grant to further this work, which will provide support for dedicated postdoctoral positions to consider this approach utilising data from a number of NSW centres. We have recently been successful in obtaining a NSW Cancer Council grant to support continued work in the assessment of radiotherapy delivery uncertainties for the coming 3 years enabling us to employ to a postdoctoral position. This work will initially focus on lung.

Dr Phil Vial has continued to lead development of a novel electronic portal imaging dosimeter prototype which enables treatment verification including both imaging and dosimetry and investigations into the impact of variation in radiotherapy target volume delineation. Dr Vial was invited to present at the EPI2k14 meeting in Sweden and Dr Lois Holloway will present at the combined scientific meeting in Melbourne, both in September 2014.



## Radiation Oncology Interest Groups

---

### Breast Interest Group

---

Over the past year, the group has developed contouring guidelines which will allow us to move from traditional field-based planning to contour based planning. This will allow us to better define the relevant anatomical target tissues and organs at risk, as well as being a necessary stepping-stone to more sophisticated treatment delivery methods, such as intensity-modulated radiotherapy (IMRT).

The group has also been actively engaged in various research projects and continues to collaborate in several multicentre clinical trials (including TROG STARS). Department led research projects which have recently been completed include the Breast Set-up Study, Breast Survey Project and Volume Based Planning.

Progress continues on the large multicentre NHMRC funded project which aims to compare MRI to CT scans for breast contouring. We are also currently in the process of taking part in two new TROG led trials, one which explores the feasibility of 'breath-hold' in minimising toxicity and the other exploring the role of regional nodal therapy in patients with positive sentinel nodes. Improving radiotherapy planning, delivery and ongoing participation in research will be a major focus for our group in the coming year.

*Gary Goozee  
Director,  
Medical Physics*



### CNS Interest Group

---

The CNS group over the past 12 months has developed a strong TOMOTHERAPY programme and an IMRT programme that utilises our hexapod couch. The group has worked to develop two new treatment techniques that include Stereotactic Radiotherapy Treatments and Wholebrain Radiotherapy with Integrated boost. We have in this time also finalised two research projects which have been presented at nationwide conferences. Our plan for the next 12 months includes a novel MRI study, 3 way planning comparison of IMRT, VMAT and Tomotherapy and a set-up study looking at a new mask system that has the potential to provide us with a frameless stereotactic treatment option. We look forward to another prosperous year of development within the CNS group.

### Gastro-intestinal Interest Group

---

Over the past year the gastro-intestinal group has started use of 3-D image guidance and highly conformal treatment with IMRT and Tomotherapy treatments for patients with GI cancers, ensuring the lowest risk of side effects of patients and accurate delivery of radiotherapy treatment.



The introduction of the MRI SIM has allowed the introduction of a multi-disciplinary trial for rectal cancer to evaluate the use of imaging with MRI and FDG-PET scans as well as circulating tumour cells for predicting treatment outcomes with curatively treated rectal cancers which will hopefully benefit a large group of patients in the future. The MRI sim work is forming the basis of Dr Trang Pham's PhD "Magnetic Resonance (MR) Biomarkers for Therapeutic Response Prediction in Rectal Cancer". Additionally stereotactic ablative liver radiotherapy has been successfully clinically implemented for patients with isolated liver metastases and primary liver cancer.

The following 12 months will see the further development of highly conformal radiotherapy treatments including the institution of IMAT that will hopefully reduce the time required for patients to be on the treatment linear accelerator.

### Genitourinary Interest Group

*Lynette Cassapi  
Director,  
Radiation  
Therapy*



2014 has been an exciting and active year for the genitourinary interest group. We commenced a collaborative "virtual HDR" prostate stereotactic body radiotherapy (SBRT) "Prometheus" trial, with Liverpool being the first site to recruit to the trial. The definitive prostate IMRT protocol comprehensively updated to standardize treatment approaches and reflect ICRU 83 recommendations. IMAT was implemented. We commenced treatment with a new hypofractionated protocol developed to treat elderly or borderline performance patients with a shorter course of treatment. MRI sim is used for all definitive prostate cancer patients. There is ongoing recruitment to RAVES and Coping Together trials and there is a trial to investigate the utility of pre-simulation and treatment bladder scanning to assess bladder filling. Future development includes commencing recruitment to ENZARAD trial – International phase III trial investigating role of enzalutamide in the management of high risk prostate cancer patients and exploring options to develop hydrogel spacer insertion programme for prostate cancer patients

### Gynaecological Interest Group

The commissioning of our MRI sim has allowed MR based planning to be implemented for all cervix brachytherapy patients. Along with the MRI sim and individualised treatment plans we are ensuring the highest quality of brachytherapy treatment. The team follows GEC- ESTRO guidelines and undertakes quality assurance of brachytherapy contouring with second radiation oncologist or radiologist review of contours. We have appreciated the increased nursing resources with the appointment of Michelle Roach as Radiation Oncology CNC.





We have optimised sequences for use of routine MRI sim for external beam treatment and are evaluating the value of MRI sim in contouring for external beam radiotherapy.

We are also comparing different radiotherapy planning techniques for this. The group is active in research and has had 6 abstracts accepted for the International Gynaecological Cancer Society Meeting later this year.

### **Head & Neck Interest Group**

---

The focus has been on the integration of MRI simulation into our planning, refining Tomotherapy planning (used for majority of our H&N cancer treatment) and moving towards implementation of IMAT implementation on our C arm linear accelerators. We introduced a clinically more effective immobilisation device. A large MRI H&N research programme, as part of the PhD work of Dr Myo Min postgraduate fellow, has commenced. The title of Dr Min's PhD is "The Role of Magnetic Resonance Imaging (MRI) in Prediction of Treatment Response and Post-treatment Evaluation in Mucosal Primary Head and Neck Cancer (MPHNC)". Our significant data for on-treatment PET scans was presented at the Tri-Society (ANZ, Hong Kong & Singapore) Head and Neck Conference in August 2014. We reviewed our 10-year outcome data for nasopharynx cancer that showed extremely good outcomes compared with other published series from Asia and North America. This study is the largest single institution ANZ study for nasopharynx cancer since we moved to treating with IMRT. Our group meets monthly with the Head & Neck surgeons to review our research and develop strong collaborative research with our surgical colleagues.

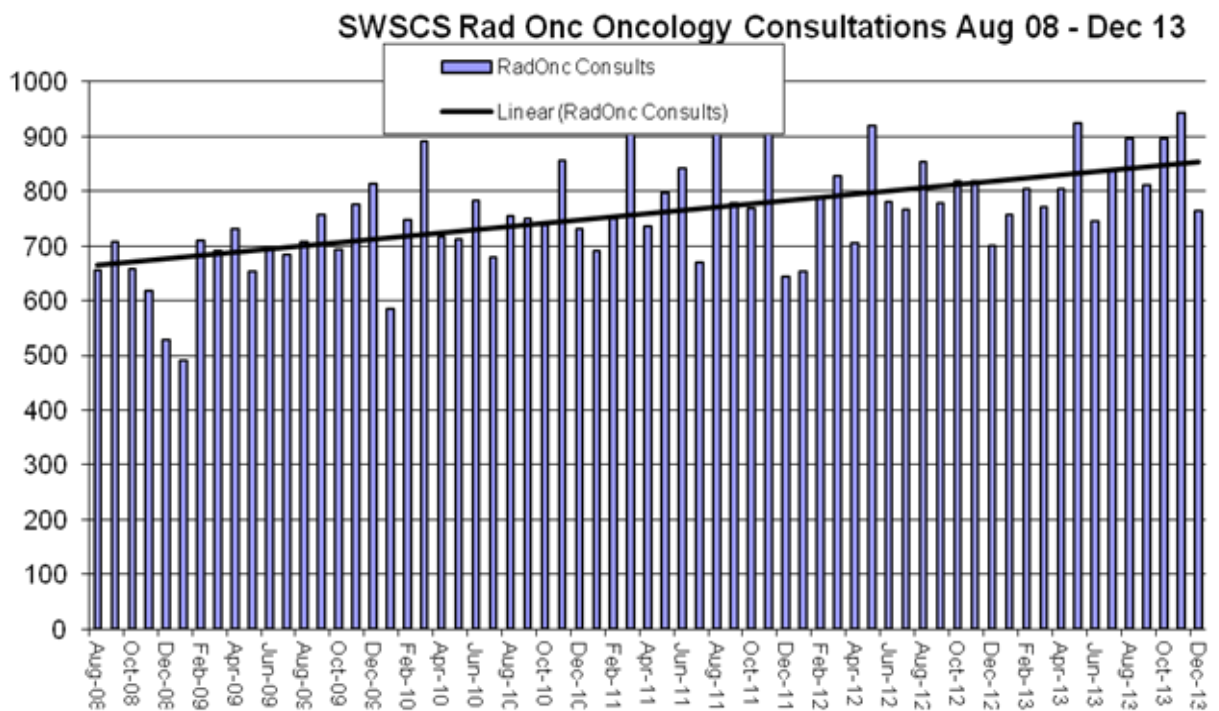
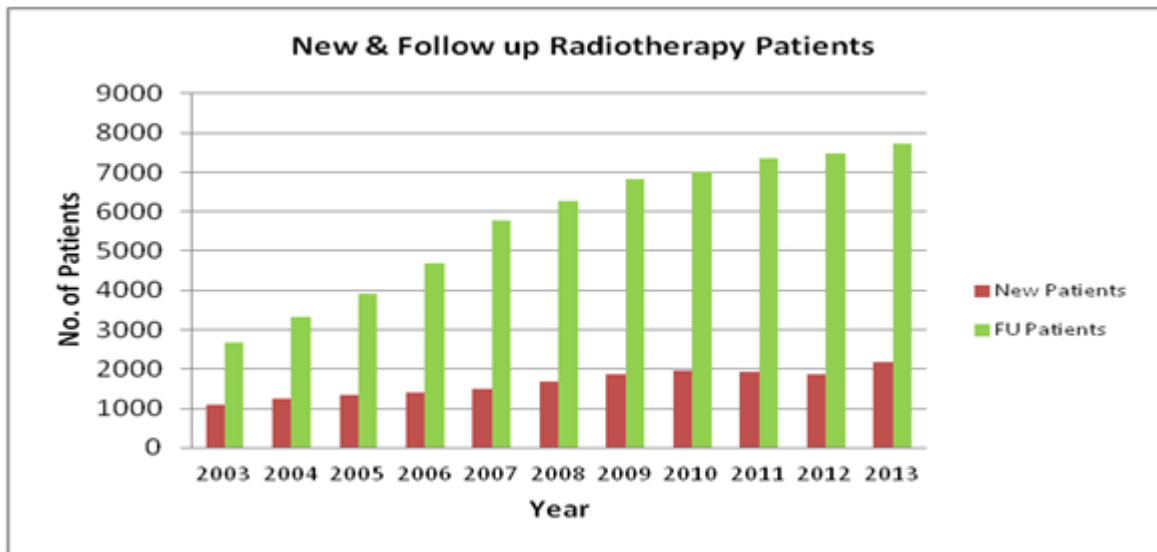
### **Thoracic Interest Group**

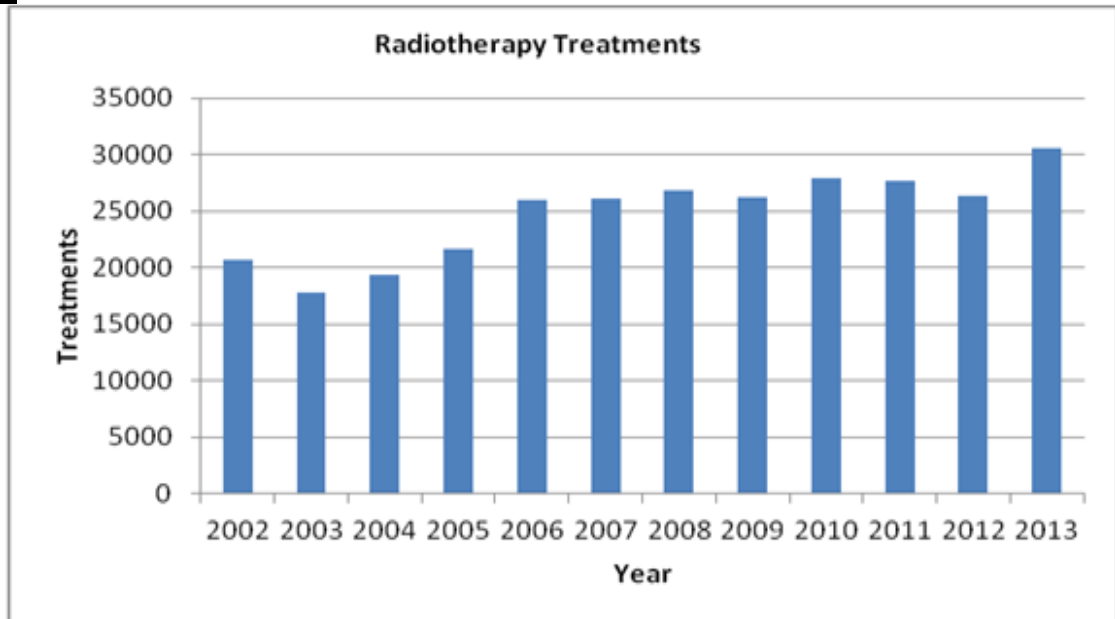
---

This year the Thoracic interest group has focused on developing and improving patient target delineation and treatment delivery. The main highlight has been the implementation of the four dimensional computer tomography scanners at both Liverpool and Macarthur Cancer Therapy Centres. This has allowed the creation of patient specific internal target volume delineation. Radical lung patients are now planned and treated with full IMRT for better conformity and minimising doses to organs at risk. There has been a rise in stereotactic ablative lung patient numbers at Liverpool Cancer Therapy Centre and will soon be implemented at Macarthur Cancer therapy.



## Key Performance Indicators





RANZCR National Waiting Times Survey – Wait to Start Treatment

<b>Waiting Time (Days)</b>	<b>Liverpool &amp; Campbelltown</b>	<b>All other centres</b>
Waiting time <= 28 days	96%	85%
Waiting Time > 28 days	4%	12%
Missing Start Date	0%	2%
Total	100%	100%

This report shows that 96 % of our patients wait less than 28 days compared with national average of 85%



## **Future Projects/Expansion of Services**

---

Currently the Macarthur Cancer Therapy Centre (MCTC) linear accelerators are being replaced. The oldest of the treatment machines M4 was decommissioned and removed in April 2014. The replacement machine is currently being installed and commissioned and it is expected the first patients will be treated on it in October 2014. It is a very advanced machine capable of the most advanced treatment and on treatment imaging. It will significantly enhance the radiation therapy treatment techniques available at Macarthur Cancer Therapy Centre and improve efficiency thereby effectively increasing treatment capacity. The second linear accelerator (M5) will be decommissioned and removed from service in December 2014 and replaced with the same advanced linear accelerator as M4. Although there has been some inconvenience to patients during the reduced treatment capacity at MCTC this has been kept to a minimum thanks to staff being prepared to work altered hours so the centre has been operating at extended hours.

***Dr Dion Forstner***  
***Director***  
***LCTC & MCTC Radiation Oncology***

# PEAK COMMITTEES

---





# CANCER INFORMATION PROGRAMME

---

## Highlights

---

*Clinical Cancer Registry  
Team 2014*



---

*The Cancer Information Program team continue their strong ties with research groups within Cancer Services. As the collection of patient cancer information continues to grow and the high quality is maintained or improved, more opportunities will arise to showcase our achievements.*

---

- NSW Cancer Institute has gone live with the NSW Cancer Registries application which combines both Central and Clinical Cancer Registries.
- Presentation at World Conference on Lung Cancer, Sydney Oct 2013 "Clinical guideline adherence in locally advanced non-small cell lung cancer: A South Western Sydney perspective". Duggan K, Vinod SK, Descallar J
- Incidence and extent of disease at diagnosis of cancer in the CALD Population in SWSLHD. Kaadan, N., Farrugia, S., Sharmin, M., Vinod, S., Descallar J. (2012) (Poster Presentation at the Innovations in Cancer Services and Care NSW Conference August, 2013 in Sydney, NSW) won Best Poster Abstract.
- Bankstown Cancer Centre is now operational with Mosaiq.
- There was an upgrade to Mosaiq Oncology Information System allowing connectivity to the linear accelerators.
- Winscribe Voice Recognition was piloted successfully.
- Successful appointment of a new Cancer Services IT Manager.
- Patient Check-In Kiosk was a project undertaken in collaboration with UWS Computer Science students and was completed successfully.
- Activity Base Funding reporting from Mosaiq has been implemented.



## Key Performance Indicators

The SWSLHD Cancer Information Program continues quality assurance and improvement projects, to review and audit data in Cancer Services information systems, ensuring an accurate and comprehensive patient record. This improves accessibility to critical information at the point of care and to the information management team requiring this information for Cancer Notification and for collaborative research projects.

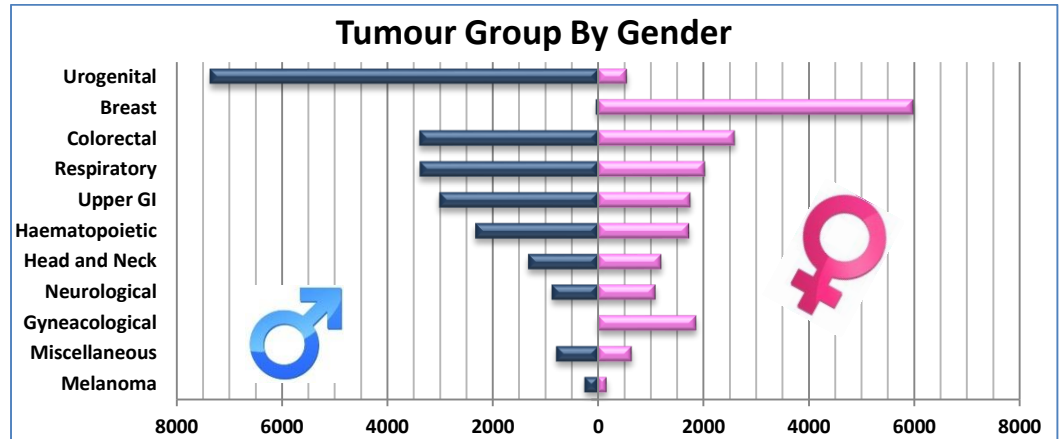


Figure 1 – Break down of cancer cases documented in the Clinical Cancer Registry 2006 - 2014

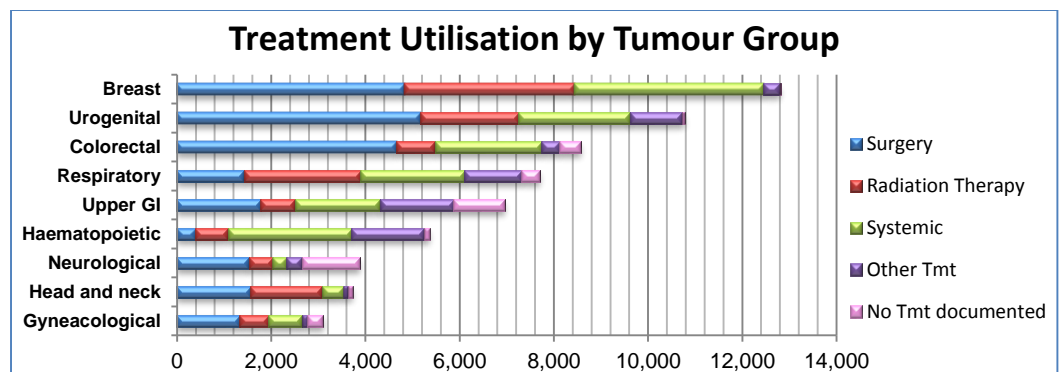


Figure 2 Break down of cases diagnosed that had cancer directed treatment. Cases may be counted in more than one treatment group.

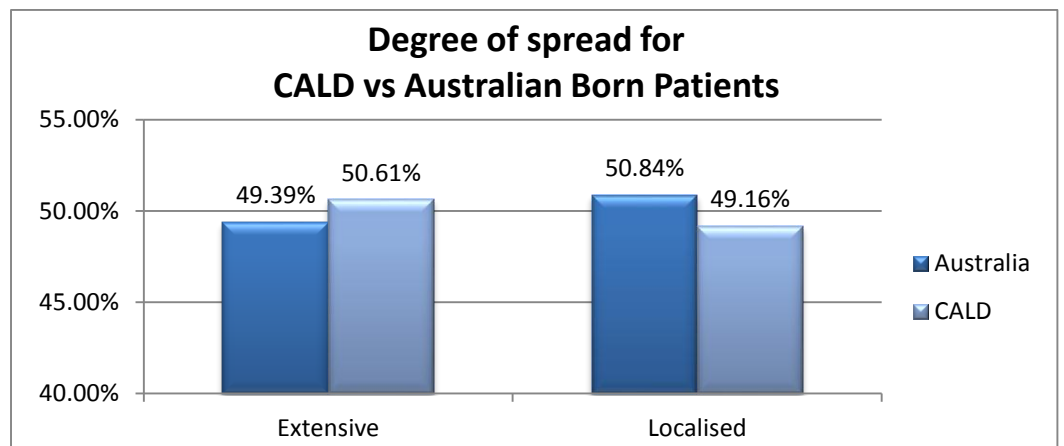


Figure 3 Degree of spread for CALD vs Australian born patients diagnosed and/or treated in SWSLHD facilities



## Future Projects/Expansion of Services

---

*Cancer Services IM&T  
Team 2014*



- SLHD/SWSLHD Clinical Cancer Registry will transition completely over to NSW Cancer Registries application by the end of 2014.
- Automated reporting of Radiation Therapy and Systemic Therapy to the NSW Cancer Registries is planned and underway.
- Move of Cancer Services IT infrastructure to a new home is planned in the next 12 months.
- Another Mosaiq upgrade is planned in Mid 2015.
- Cancer Services will pilot a Patient Reported Outcome Measures tool (The PROMPT project) that interfaces with Mosaiq. This is a major undertaking in collaboration with Illawarra Local Health District and is led by Prof Afaf Girgis.
- GP Communication project will see improved
- Communication between SWSLHD Cancer Services and General practitioners in the community.
- Wscribe Voice Recognition implementation across Cancer Services.





## Highlights

SWSLHD continues to develop a leadership and governance structure around trials, and increase the uptake of trials across the district. Individual trials units are working towards increasing staffing, to enable greater recruitment to trials and better methods of exposure.

Work continues to establish a dedicated Phase 1 Clinical Trials Unit, established under the leadership of Professor Paul DeSouza, and collaboration with the Ingham Institute for Applied Health Research.

CINSW conducted statewide reviews of clinical trials unit performance, and found that SWSLHD were progressing satisfactorily. They have an established reporting portal, and community of practice meetings continue.

ClinTrial Refer apps are available for free download from itunes or google play, haematology trials in NSW, and ClinTrial Refer TROG are two apps that can be used to find site trials by disease and criterion (ANZCTR)



## Staffing

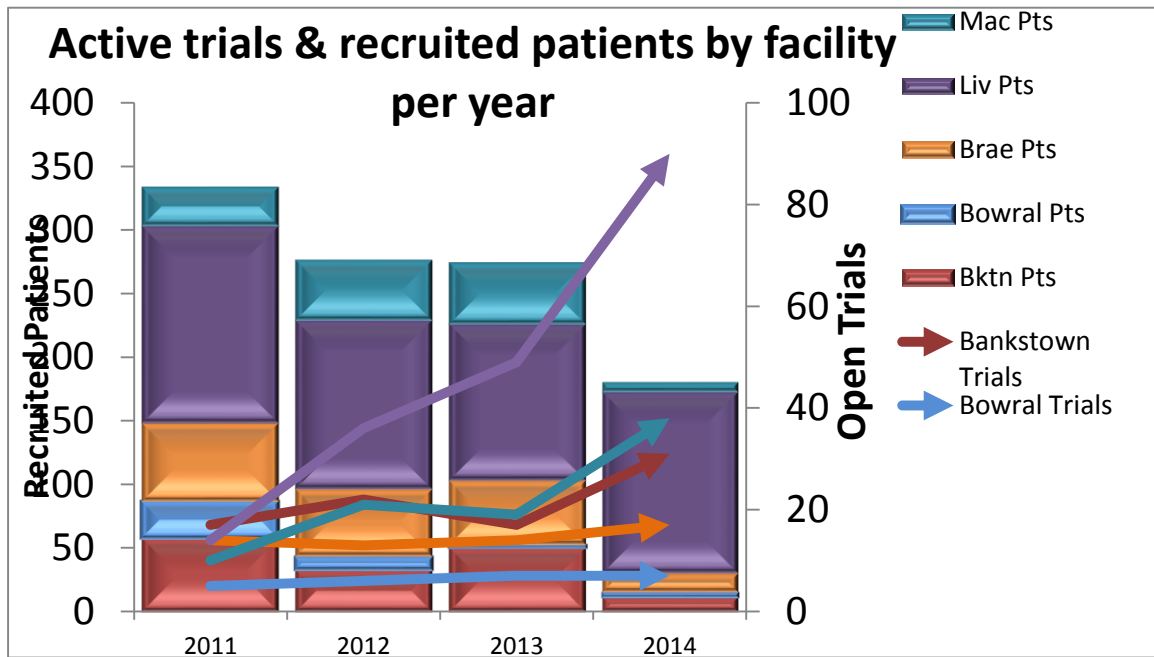
Trials Unit	FTE	Staff	Director of Clinical Trials
Bankstown	2.0	Mafizul Hoque Shuet Oi Wong	Dr Sandra Harvey
Bowral	0.5	Isabell Davis	A/Prof Stephen Della-Fiorentina
Braeside	1.0	Marjorie Hunt Julie Wilcock Nichole Petrie	Prof Meera Agar
Liverpool	2.6	Pinky Patel	Dr Michael Harvey
Haematology		Mona Asghari	
Radiation	1.0	Sheela Subramani	Dr Karen Wong
Medical	3.0	Jennifer Aung Aura Serrano	Dr Wei Chua
Macarthur	2.6	Anne Whatman Debra Vandine Kelsey Dobell-Brown Suma Santos	Dr Lorraine Chantrill

Liverpool Staff





## Key Performance Indicators





# SWSLHD CANCER EDUCATION

The Patient Education Committee continues to work toward our goal to ensure that *'the right information is provided at the right time in the right format'*. We are proud of the progress that has occurred over the past year to ensure that the information available to SWSLHD cancer patients and/or carers is both current and evidence based.

## Highlights

2013 was focused on utilizing the SWSLHD Cancer services website as the central repository for current patient and carer information.

Responding to our consumers needs has prompted additional information being made readily available e.g. costs incurred for medications and increasing access to CALD specific information.

The development of the SWSLHD General Treatment Information booklet has come to fruition and is now available in both paper and electronic formats

[http://www.swslhd.nsw.gov.au/cancer/pdf/Gen\\_treatInfo.pdf](http://www.swslhd.nsw.gov.au/cancer/pdf/Gen_treatInfo.pdf)

The cancer patient information survey used on 2012 was expanded to include carers and repeated across the district in 2013. 93% of patients and 100% of carers surveyed felt that the information they received was suitable for their specific needs.



---

*"100% of carers surveyed felt that the information they received was suitable for their specific needs."*

---

Engagement with the SWSLHD Cancer Consumer Advisory Committee has provided valuable feedback regarding the development of new information sheets/brochures. They have assisted us to refine the:

- General Treatment Information Booklet
- PVC Chemotherapy Information sheet
- DVT Information leaflet

## Future Projects

In 2014/15 the Patient Education Committee will have a general focus on improving the access and range of CALD information available for both our patients and carers. We will continue to promote the use of information available on the website, both internally and externally, and will conduct audits on this information to ensure its relevancy.



# INGHAM CANCER RESEARCH STEERING COMMITTEE

---

This group was established in 2011 following a strategic planning day, with the following terms of reference:

1. To establish and maintain a centralized research steering committee with representation by all key stakeholders including Surgery, Radiation Oncology, Medical Oncology, Haematology, Palliative Medicine, Medical Physics, Imaging, General Practice, Laboratories, Biobanks and the Clinical Cancer Registry
2. To develop and implement a strategic direction for Cancer Research in SWSLHD
3. To identify and foster research collaborations (both internal and external to SWSLHD) that maximize the output from any cancer research project
4. To identify and support collaborative funding opportunities
5. To focus research resources in areas of greatest priority
6. To review progress of research and provide advice on achievement of the desired project endpoint/s
7. To overview and encourage collaborative research projects both internal and external to the cancer service
8. To foster mentorship and staff development in Cancer Research
9. To assist in information exchange regarding all aspects of SWSLHN Cancer research activity
10. To liaise with other clinical trials and research groups as needed
11. To establish and maintain a centralized system to monitor current and future research projects output with in-built accountability/ reporting systems to help ensure timely project completion and output.
12. Identify and attempt to rectify barriers preventing researchers from efficient, high-quality research

## **Progress this year includes:**

---

1. The Australian Radiation Research Bunker Project – a project led by Professor Paul Keall, University of Sydney. This is an exciting project that received a \$5M NHMRC programme grant to develop a system where an MRI scanner and a radiation linear accelerator work together to allow better targeting of tumours for radiation treatment. This is one of only three such facilities that have been developed internationally and the only one of its type in the Southern Hemisphere. This project is complemented by the MRI simulation project team who are examining and developing the role of MRI in tumour imaging and radiotherapy delivery.



2. The MRI simulator was installed last year and there has been a significant increase in MRI research being performed. The magnet for the MRI linac has been unfortunately delayed due to construction problems but we are hopeful that it will now be delivered early 2015.
3. Translational Cancer Research– this is a programme of work to ensure that research is translated from the laboratory to the bedside and from bedside to laboratory. It started as the South West Sydney Translational Cancer Research Unit (SWS TCRU), supported by funding from the NSW Cancer Institute. This programme of work is being led by Professor Paul DeSouza. The flagship project of routinely collecting patient information, patient reported outcomes, tumour tissue and patient blood and linking these data with outcomes has commenced, with Colorectal Cancer being the first tumour site studied. The success of SWS TCRU led to joined forces with the Illawarra and Shoalhaven Local Health District and the ACT to form a translational research consortium called CONCERT (Centre for Oncology and Research Translation). The CONCERT group was successful in winning a grant from the NSW Cancer Institute for \$6.5M over 5 years, along with additional supplementary funding from the Ingham Institute of Health Research, the University of NSW Australia, University of Western Sydney, University of Wollongong and the Illawarra and Shoalhaven Local Health District.
4. Patient Reported Outcomes Measures for Personalised Therapy (PROMPTCare) – a project developing IT methods of data collection of patient reported outcomes and for that data to be available at the time the patient is seen is a new project, recently funded by the NSW Cancer Institute for funding. This project is led by Professor Afaf Girgis and this project is in partnership with the NSW Cancer Institute and the Illawarra and Shoalhaven LHD Cancer Service. The pilot project commences patient recruitment in late 2014.
5. The Collaboration for Cancer Outcomes Research and Evaluation, led by Professor Michael Barton, have a diverse range of projects related to health service delivery in Cancer. Several members of this group have been working with the Global Taskforce for the Control of Cancer in developing a UICC vision for radiotherapy services globally.
6. Circulating Tumour Cells (CTC) this is a newer addition to our suite of research groups and has expanded rapidly (infrastructure and staff), examining the feasibility and possibly utility of detecting and measuring circulating tumour cells in the blood of patients with a cancer diagnosis. Measuring levels of CTC over time and analyzing the genetic & cellular profile of CTC has huge potential for improving prognosis and treatment of cancer patients. The Translational CTC facility was established at the Ingham Institute in early 2013 due to successful funding by various sponsors (UNSW, Cancer Institute NSW, PCFA and UWS), with infrastructure now amounting to nearly one million dollars of state-of-the art equipment.



7. The Translational CTC facility is unique to NSW and one of the key programs of SWS-TCRU/CONCERT.
8. Tumour biobanking – under Professor Soon Lee's leadership, a programme of work has been developed to store cancer specimens and use them for molecular research to examine issues such as linking certain molecular markers to tumour outcome. This type of research helps identify what the possible targets are for more effective drug development. In addition, Dr Kevin Spring has received a NSW Cancer Institute grant to develop a database strategy to link biomarkers with patient outcomes.
9. Pancreatic laboratory research – this group of projects is led by Professors Jeremy Wilson and Minoti Apte, investigating biological mechanisms for the development and growth of pancreatic cancer.
10. General practice – Professor Siaw-Teng Liaw et al. is running a series of projects examining the needs of general practitioners with respect to information to assist them in treating patients in the community. In addition, Dr Andrew Knight from the Academic GP Unit at Fairfield and Sandra Avery are working on improving communication between GPs and the cancer service.
11. Colorectal cancer research – this area of research is being led by Professors Les Bokey and Pierre Chapuis. Colorectal cancer specimens are being examined and correlated with patient outcome.
12. Clinical Cancer registry – this is being led by Ms Nasreen Kaadan – this is a programme of work collecting data on every cancer patient from South Western Sydney. These data are used to facilitate outcomes-based research.
13. Cancer Clinical Trials – this is led by Dr Michael Harvey, co-ordinating all of the clinical trials that are being done for cancer patients in South-Western Sydney. We currently have 42 clinical trials open for patients. The Clinical trials department is still under-developed compared with our needs and we will continue building this group. The Ingham Research Institute plans to consolidate clinical trials staff into a single co-operative group.
14. Cancer Imaging – with the assistance of Dr Peter Lin, and in conjunction with the Radiation Oncology department, a series of imaging-based projects are currently being conducted to better use imaging for the targeting of tumours for safe radiation delivery.
15. The Head and Neck Cancer group has joined the steering committee. They have a number of diverse projects including biobanking and nerve graft research.

In the past 12 months there have been many significant research achievements as listed in the section on awards, grants, publications and presentations. Congratulations in particular to those people who gained higher degrees or significant grant funding this year.



# SWSLHD CANCER QUALITY

---

The SWSLHD Cancer Services Quality Committee was formed in 2013 and aims to provide a forum for quality activities to be reported, discussed and communicated. The membership represents a range of disciplines, facilities and services and continues to work together to promote quality cancer services across the district.

## Highlights

---

One of the major achievements for 2013/14 has been the successful development of the Quality Newsletter. Issue 4 is currently in production and all issues are available on the Cancer services website under the new 'Cancer Quality Initiatives' tab: <http://intranet.sswahs.nsw.gov.au/sswahs/cancer/news.html>

The newsletter has provided opportunity for local quality projects to be showcased and shared with colleagues and has stimulated discussion related to projects, educational opportunities and accreditation processes.

The members also developed a quality action plan for 2014 based on the objectives that underpin the committee's focus. Progress against this plan is reported quarterly to the SWSLHD Cancer Governance Committee and will be updated annually.

## Quality Activities

---

Some examples of the quality projects completed, continued or commenced in 2013/14 include:

- Ongoing monitoring of consumer satisfaction across the district via the PET's- average score of 90.3%
- Ongoing support for the 'patient assessment units' at both Campbelltown and Liverpool cancer therapy centres resulting in ED avoidance and reduced hospitalizations for cancer patients
- OPD DVT management project- *reduces the need for patient admission*
- Service delivery review e.g. chemotherapy
- Standardization of chemotherapy accreditation processes
- Model of care reviews e.g. care coordination
- Evaluation of survivorship support groups for haematology and breast cancer patients
- Studies on nutrition requirements, supplements and barriers for cancer patients

---

*"721 patients were treated in the first year of ASSESSMENT UNIT operation."*

---



- Projects specific to the CALD populations e.g. Chinese support groups and information days, increased documentation of patients identifying as ATSI, website language translation options
- Policy update and standardization

## **Future Directions**

---

The Quality Committee will continue to meet on a quarterly basis to discuss quality activity across the district. One of the goals for the next 12 months will be to develop a user friendly system for the recording of quality projects. Engaging in quality activities need not be an arduous task and often the documentation requirements can be daunting for staff. Conversation from front line staff about changes they have made to a process or task that has resulted in efficiencies are enthusiastically relayed but seldom formalized. Recording and showcasing these activities will recognize the local staff and hopefully inspire others to follow.





# CONSUMER ADVISORY COMMITTEE

---

## Highlights

---



The SWSLHD Cancer consumer group has continued to be involved in 'road testing' many initiatives before they are put into practice. Some of these include the newly revamped website, fundraising campaign materials and branding, patient feedback questions and patient educational materials that are provided locally. One of the most exciting projects this group have offered assistance with is the new Wellness centre – where we anticipate a new model will be established to provide integrative medicine in a research - governed environment. As we embark on a new patient co-ordination model, consumer advice on our operations remains important to us, and we seek further engagement in our service improvements.

## Thanks to our members

---



Sandy Avery (Chair)  
Melissa Carmagnola (Minutes)  
Geoff Delaney  
Brian Rope  
Elaine Crockett  
Janet Harrison  
Janice Low  
Jayne Robinson  
Jenny Chau  
Joan Lewis  
John Newsom  
Laurel Peel  
Leanne O'Grady  
Maureen O'Sullivan

# **ACKNOWLEDGEMENTS**

---





# FUNDRAISING AND DONATIONS

---

We would sincerely like to thank those individuals and organisations who have made donations to the Cancer Services throughout the year, without support from our community, we could not provide the additional patient comfort and programs that make their journey easier. Our main focus throughout 2013/2014 and going forward into 2014/2015 is to raise funds for the building of our Wellness Centres at both Liverpool and Camden.

## Liverpool Donations

---

Lawrence Callan	Liverpool Hospital Volunteers
Kim Loan Luu	Valerie Drew
Hang Thuy Tran	Liverpool Lions Club
Mark King	Operation Espresso
Mary Crampton	Lourdes Tid-Ang
Alexander Ginnane	Thi My Anh Ngo
Dry July Foundation	Patrick Rogan
Kerrie Smith	IKEA
Cabra -Vale Ex-Active Servicemen's Ladies Auxiliary	
Amy Leary, Amanda Ahearn, Renee Cavanagh, Krista Waters	

## Macarthur Donations

---

Ronan Kilgannon	Felicity Allen
Campelltown Craft Society	P&J Cowan
Campbelltown Public School	Rosemary Batten
Joy Robson	Geraldine Smyth
Barbara Byrne	Mr & Mrs Ostrowski & Family
Dale Horn	Jan Bytheway
Ron & Sue Anderson	Graeme Mitchell
Emanuelle Vella	Lyn Morris
Robert and Carol Black	William Carter
Habib Bros Pty Ltd	Peter and Jan Lyons
Bargo Womens Bowling Club	Nicki Meris
Camden Womens Bowling Club Inc	Theo & Leila Pitsikas
Janice Fowler	Chirstine Clissold
Norma Hughes	Christine Proudford
Dry July Foundation	Lyn Moore & Taryn Roebuck
Steve & Jenny Smallwood	Les and Lee Walters
Kim McIndoe	Gwenyth Noakes
Highlands Golf Club Mittagong	Campbelltown Craft Society
Spoilt Rotten Hair & Beauty Studio	Farieda Peck
George Boldison	Macarthur Ladies Night Out
P & H Ciscoato	Sydney H20 Blasting Pty Ltd
Macarthur Older Women's Network	Max Hill
Agnes Featherstone	CGU Foundation Pty Ltd





Mr & Mrs Brouwer  
24 hour fight against cancer - Macarthur  
Virginia Lukins in Memory of Suzanne Rapley  
Campbelltown City Womens Bowling Club  
Barry Tombs (in memory of Jean Tombs)  
Camden Lakeside Country Club Lady Members (in memory of Penny Kelly)  
Kerrie-Anne Smith (in memory of Peter Garry Smith)

## Bankstown Donations

---

Kanesol Pty Ltd	Matt P Balogh
Claudia Hardie	J Judd
Bourne Family	Maxine Summers
Joyce Aldridge	Jeanette Henderson
Nancy Lam	Mrs B Bourne
Bankstown District Cricket Club	Mrs and Mrs Higgins

## Palliative Care Donations

---

Arie Van Der Mast	Costco Casula
Leanne Blaker	Rebecca Sheely
Ben Leighton	Danielle Belle
Luke Zancanaro	Sally Walker
Bing Lee - Villawood	Flora International Leppington
Macarthur Line Dancers	St Johns Park Bowling Club
Bunnings - Crossroads	Sue Challoner-Edwards
Frances & Harry Warner	Marilyn Lawlor
Stuart Bocking	Mary Carey
Bunnings - Hoxton Park	Furniture One - Camden
Bunnings - Narellan	Gladys Nielsen
Subway Liverpool Hospital	Chicken Mart - Wetherill Park
Karim Hayek	Nash Family
Thornton Brother Roses Thirlmere	Cory Crammond
Katie Carr	Olivia Clark
Ulysees Bike Club - Macarthur	Cookie Man Westfields Liverpool
Katie Reeve	Pamela Bocking
V N Noodles - Liverpool	Coles - Westfields Liverpool
Landon Maxwell	Parkview Café - Liverpool Hospital
Woodlands Family and Tandoori Restaurant, Liverpool	
Michels Patisserie, Westfields Liverpool	



## VALUED EMPLOYEES

---

### Macarthur Cancer Therapy Centre

---

July 2013	Sue Rochfort
August 2013	Christine Box
September 2013	Cindy Hills
November 2013	Suma Santhosh
January 2014	Erica Carlsen
February 2014	Erica Carlsen
March 2014	Som Rattanaovong
April 2014	Sarah Payne
May 2014	Bernadette de Souza
June 2014	Kim Caines

Please also congratulate the following staff who were nominated by patients for the Campbelltown Hospital Employee of the month :

Gail Bell (Administration), Sarah Payne (Radiation Therapy), Fahim Siddiqi (Radiation Therapy), Sandie Watt (Radiation Therapy)

### Liverpool Cancer Therapy Centre

---

July 2013	Sonya Green
August 2013	Ida Ravindraraj
September 2013	Djie Zhou
October 2013	Caryn Knight
November 2013	Therese McCabe
December 2013	Cheatta Rumble
January 2014	John Birch
February 2014	Melissa Carmagnola
March 2014	Ewa Juresic
April 2014	Carrie Van Der Weyden
May 2014	Cesar Ochoa
June 2014	Kirily Cloak

### Bankstown Cancer Therapy Centre

---

Bankstown Cancer Centre underwent transition from the Cerner Patient Administration System to MOSAIQ in January 2014. Whilst all members of the Centre worked hard in enabling a smooth transition, special thanks should be extended to members of the project team; [Dr Sandra Harvey](#), [Sharelle Ioannou](#) and [Fida Hajar](#) for their contribution and ongoing involvement in staff training. Furthermore the administrative team should be acknowledged for their significant efforts in transferring all patient information from Cerner into MOSAIQ.



## Bankstown Hospital Volunteers

---

Claudia Hardy  
Ruth Rendall  
Gloria Worthington

Tanya Wall  
Leonie Pacitti

## CanRevive

---

### Living with Cancer – Information and Support for Chinese Consumers

This project was led by CanRevive in collaboration with Cancer Council NSW and Cancer Therapy Centre – Liverpool Hospital and funded by Cancer Australia from July 2012 to June 2014. Services provided in the last 12 months are as follows:

### To provide prompt information & emotional support by extending hospital visits & telephone support by volunteers

---

- The CR Liverpool Hospital Visit Team is set up and 4 trained volunteers continue to provide visits on weekly basis. In the last 12 months, 77 visits were made by the team and the total number of hours spent was 168.25. A total no. of 358 client contacts was made (240 patients and 118 carers).
- Volunteers may have the chance to contact the same patient/carer. Last year, 58 clients (40 patients, 18 carers) were happy to release their contacting details for following up services including telephone support, support group & newsletter.
- Clients contacted were happy to chat with our volunteers and received information, including CR service flyers, CR service cards, and CR newsletters.
- Under the reporting period, 23 patients and 5 carers received CR telephone support service. 14 patients & 7 carers attended the Living with Cancer Program, 16 patients & 7 carers attended the Chinese Support Groups, 1 patient & 1 carer received CR Home Visit Service.
- The hospital visit service has been well received by the staff of the LHCTC. Thanks to our volunteers: a) Janice (Jian Ai), Ying b) Jenny Chau c) Jan, Tran d) Ann Ngo (Thurs)



### **Provide opportunities for patients/carers to share their emotions, develop coping skills through mutual support and survival experience via support groups conducted in relevant Chinese dialects**

---

- A 4-session 'Living with Cancer Programs' was held in February 2014. Topics included: 1) Understanding cancer and its treatment 2) Chemotherapy & Radiotherapy- Side Effects and Aftercare 3) Cancer & Diets 4) Emotion & Community Resources. Guest speakers were the health professionals of Liverpool Hospital, including oncologist, dietitian, nurse and the social clinical psychologist. 24 participants (11 patients & 13 carers; 16 Cantonese & 8 Mandarin; 15 female & 9 male) attended the program in Feb 2014. The range of attendance was 13 – 18. 61.5% participants rated the program was good and 38.5% excellent and also no negative rating was found.
- Support Group for Patients/Carers: Two 8-session Mandarin Patient/Carer Support Group were commenced in June – July 2013 and March – May 2014 respectively. A total of 20 patients and 13 carers attended the support groups and the range of attendance was 6 – 13. Group members actively participated in the group programs including doing exercise, sharing their survival experience, supporting each other and learning new coping skills. At the final group meeting in May 2014, members requested to have an ongoing monthly meeting support group which will be started in August 2014.

### **To raise awareness and understanding of cancer and related issues in the Chinese community**

---

- The following information sessions were held for the Chinese community in South Western Sydney in last year:
  - Lung Health Information Day: Partnership with The Australian Chinese Descendants Mutual Association and the Australian Chinese Nursing Home Foundation Ltd. 42 participants attended the program & 21 survey forms were received. The information day was well received by the participants. 66.67% was very satisfied and 28.57% was satisfied with the program. No negative rating was found.
  - Bowel Cancer Information Day: The program, which was collaborated with The Australian Chinese Descendants Mutual Association and the Australian Chinese Nursing Home Foundation Ltd was held on 27 June 2014. 57 participants attended the information sessions. Feedback from participants was very positive



## **To improve access of cancer related information & resources (produced in Chinese) & promote the range of CR support services.**

---

- The development of the Chinese Cancer Information & Resource List can improve the Chinese cancer patients/carers in SW area to access CR resource material. The feedback from hospital visit volunteers is positive because the information list can be used as a means for them to start the conversation when they met new clients for the first time.

## **CanRevive Volunteers**

Ann Ngo  
Janic Ying

Jenny Chau  
Jan Tran

## **Cancer Council**

---

Since Cancer Council (CCIC) opened the Information Centre in 2009, the volunteers have grown to 23 CCIC volunteers from 17 CCIC volunteers in 2012-13 providing support to patients, carers and family, more than 36,700 booklets were ordered for the patients and carers, recorded 1,102 contact records and an average of 3,600 refreshments handed out to patients. The service not only provide information to patients, the volunteers enjoy interacting with the patients by offering tea and coffee which also puts those patients at ease talking to friendly volunteers while waiting for their appointment or treatment.

## **Cancer Council Volunteers**

---

June Harrison  
Judith Rose Poultons  
Kamal Hadid  
Joan Lewis  
Pilar Maloney  
Berenice Elston  
Joan Hilton  
Suzanne Wong  
Kath Bailey  
Ghazala Wahab  
Lisa McCulloch  
Danny Tran

Lorraine Mahoney  
Gillian Tindale  
Pronita Karki  
Robyn McNamara  
Shanti Premji  
Betty Eggleston  
Vinh Nghi Ma  
Sandra Livingstone  
Joe Attard  
Vicki Chaney  
Lisa Le





## Liverpool Hospital Volunteers

---

Elizabeth (Betty) Bell  
Janine Hannaford  
Carol Keogh  
Elizabeth Lowe  
Joy Maloney

## Wig Library Volunteers

---

Fiona Gould  
Robyn Cavan  
Roberta Turnbull

## Look Good Feel Better

---

Look Good...Feel Better (LGFB) is a beauty workshop available to women diagnosed with cancer to teach them beauty techniques to help those feel confident about their image and self esteem.

The workshops are free of charge and run by experienced volunteers from the Beauty and Cosmetic Industry. With donations from Cosmetics Industries, women are taught about skin care, makeup technique that helps minimise the appearance related to side effects of treatment.

Look Good Feel Better held 20 workshops across Liverpool in 2013-2014, Bankstown and Campbelltown with 210 people in attendance. Liverpool Hospital held 6 workshops with 69 attendances, Bankstown held 6 workshops with 55 people attending while Campbelltown held 8 workshops with 86 attendances. To see more with LGFB visit [www.lgfb.org.au](http://www.lgfb.org.au)

## Look Good Feel Better Volunteers

---

Christine Sanford  
Lyn Georgeson  
Kim Cawthorne  
Donna Pethybridge  
Merrilyn Usher  
Pieta Papp  
Sandra Pinkerton  
Susan Hardy

Judy Freney  
Dianne Amey  
Mandy Dolan  
Maureen Thackeray  
Jessica Finn  
Rhonda Theuma  
Sandria Savage  
Yvonne Hosking



*Arlene Roache  
SWSLHD Palliative  
Care Volunteer  
Coordinator*



*Pamela Bocking and  
Judith Smith assist  
Colleen Carter with  
promoting Palliative  
Care in Campbelltown  
Hospital*



*Jillian Skinner,  
Minister for Health  
acknowledged the  
contribution of the  
Palliative Care  
Volunteers*



## Palliative Care Volunteers

The extremely dedicated patient and carer services provided by the 30 Palliative Care volunteers across the Local Health District in hospitals and communities is highly respected and valued by the service. The volunteers undertake a comprehensive training program, which enables them to extend to the patient and their carers, practical caring and support. The service welcomed 9 new volunteers to the program.

The Volunteer Coordinator provides local supervision at each facility. The service is divided into two sectors covering both hospital and community – The Northern Sector covers Bankstown, Fairfield and Liverpool, and the Southern Sector covers Macarthur and Wingecarribee.

The Minister for Health and Medical Research, Jillian Skinner, acknowledged the contribution of the Palliative Care volunteers at the formal opening of the Palliative Care Ward 4C in Liverpool Hospital. The program has further extended to provide support to palliative care patients and their loved ones on Ward 4C.

This year also saw the launch of the pilot project for volunteers supporting carers and significant others of patients on the End of Life Care Plan in Liverpool Hospital. The project operates 7 days from 10am – 8pm.

Community referrals for volunteers to support patients and their loved ones at home have also increased significantly.

Apart from providing the direct patient support volunteers assist in writing bereavement cards, collating bereavement envelopes, jolly trolley activity, provide assistance with promoting palliative care during National Palliative Care Week and memorial services. An educational program has commenced for hospital and community staff on the Palliative Care Volunteer Service. This will be ongoing.

Volunteers raised a total of \$7630 through fundraising initiatives and donations. All monies raised are used towards patient related activities as well as to help make some dying wishes come true.

Statistics

<b>June 2013 – May 2014</b>	<b>Northern Sector</b>	<b>Southern Sector</b>
Occasions of service provided for palliative care patients/carers in Liverpool/Bankstown Hospitals, the Camden Palliative Care Unit and Ward 4C Liverpool Hospital	1055	2271
Total no of hours in face to face visits	380	666



June 2013 – May 2014	Northern Sector	Southern Sector
(Hospital)		
Total No of Visits in the Community	90	101
Total no of hours in face to face visits (Community)	118	81
Other (includes attendance at meetings, Fundraising, activities, writing bereavement cards, memorial service and attendance at other palliative care committees working parties)	46	327
Total no of hours (other)	101	527
Total kms travelled to provide the service	2771	8345

Heather Parkes provides direct patient support in the community



Recruitment/Training for 2014 has commenced. Plans to commence the Jolly Trolley Activity in Ward 4C Liverpool Hospital are in progress as well as launching of the Volunteer Support for carers of patients on the End Of Life Care Plan as a permanent addition to the service.

## Palliative Care Volunteers

Anna Muscatello  
 Diana Popovic-Brankovic  
 Helia Palma-Olivares  
 Janet Perry  
 Jo-Anne Craik-Cooper  
 Judith Smith  
 Kaylene Love  
 Leanne Blaker  
 Lynn Harris  
 Margaret Fecht  
 Milan Malunec  
 Patricia Frutos  
 Roman Skarsky  
 Sandra Skarsky  
 Susie Thomas  
 Yvonne Kerr

Bibi Farida  
 Heather Parkes  
 Isabella Albiston  
 Janice Spinley  
 Joan Casey  
 Karisha Khalil  
 Kerry Wheatley  
 Luci Rossi  
 Mary Carey  
 Maureen Miller  
 Pamela Bocking  
 Peter Teng  
 Rebecca-Anne Sheely  
 Sandra Wales

Margaret Fecht giving gentle hand massage





## Macarthur Cancer Therapy Centre Volunteers

The Macarthur Cancer Therapy Centre (MCTC) Volunteers consistently provide an invaluable support service to the patients, carers, visitors and staff of MCTC. They assist patients to complete relevant paperwork at their initial visit to MCTC and where possible they provide a 'Meet and Greet' Patient Orientation to our centre. The volunteers offer refreshments to patients and their carers and provide the opportunity for that ever important 'chat'. Where appropriate, our volunteers are available to escort patients and carers to other areas of the hospital.

The MCTC Volunteers enthusiastically organise and participate in Cancer Council events including Australia's Biggest Morning Tea, Daffodil Day and Pink Ribbon Day. They pride themselves on decorating our centre and the MCTC Christmas Tree each year in preparation for the Patient and Carers Christmas Party which is held in December.

Our volunteers assist in the collection of data for our centre by offering patients a Patient Experience Tracker (PET) or hard copy of the MCTC Patient Satisfaction Survey to complete.

The Look Good Feel Better (LGFB) Workshops have been conducted in MCTC since 2004. The workshops were relocated to a larger venue at Campbelltown RSL Club In February 2014 to accommodate the increasing numbers of workshop participants.

The MCTC Wig Library is open on alternate Tuesday mornings and continues to provide a comprehensive service to our patients. Patients are offered a wide range of wigs, hats, scarves and other headwear to assist with managing the side effects of treatment.

Our Complementary Therapy Service has had no in-house therapies offered this year, however massage therapy and exercise physiology has been offered off-site and with the financial support of the 24hr Fight Against Cancer Macarthur.

Two massage chairs were purchased from funds raised from Dry July 2013 and have been placed in our MCTC Wellness Room for use by patients and/or their carers.

Delta Dogs - Demon, Shadow and MacGyver provide a regular visiting service to MCTC and are enthusiastically greeted by patients, carers and staff.

Noelene Wright  
Paulette Medbury  
Grant O'Donnell

Arelin (Rell) Hodgson  
Denise Madden

---

# RESEARCH AND ACHIEVEMENTS

---





## Awards 2013/2014

---

### **Apte M**

Medal of the Order of Australia (OAM) for Services to Medicine, Education and Local Community

Award : Medal of the Order of Australia (OAM) in the Queen's Birthday Honours List, Queen's Birthday Celebrations, Sydney, Australia

### **Barton MB**

Rouse Travelling Fellowship

Award : Rouse Travelling Fellowship  
RANZCR

### **Collier A**

Thesis: Deleziens of Patient Safety: A Video Reflexive Ethnography of End of Life Care

Award : 2013 Atlas.ti 11QM PhD Level Dissertation Award  
International Institute for Qualitative Methodology

### **Delaney GP**

Australia Day Award for Health Research

Award : Australia Day Award for Health Research (Liverpool Council)  
Liverpool Council  
Liverpool, NSW. Australia

### **Delaney GP**

NSW Premier's Department Commissioner's Award for Outstanding Service or Achievement,

Award : Outstanding Service or Achievement Award  
NSW Premier's Department  
Sydney, Australia

### **Gabriel G**

Radiotherapy utilisation rates in NSW and ACT (2004-06), a data linkage and GIS experience

Award : One of 20 for the ESTRO Best Poster Award.  
ESTRO, Geneva, Switzerland

### **Kaadan N, Farrugia S, Sharmin S, Vinod S, and Descallar J**

Incidence and Extent of Disease at Diagnosis in the CALD population in SWSLHD

Award : Best Poster  
Cancer Institute NSW, Sydney, Australia

### **Yap ML., Delaney GP., Shafiq J., Jacob S., Wong K., Thompson S., Hanna T., Barton M**

Estimating the global need for radiotherapy: A study as part of the Global Task Force on Radiotherapy for Cancer Control

Award : Winner of Chris Atkinson Award for best scientific presentation in radiation oncology  
Combined Scientific Meeting, Melbourne, Australia



## Book Chapters 2013/2014

---

### **Mackillop W.J, Vinod SK, and Lievens Y**

The Role of health services research in improving the outcomes for patients with Lung Cancer

The IASLC Multidisciplinary Approach to Thoracic Oncology 2014 2014, IASLC

## Conferences 2013/2014

---

### January 2014 to June 2014

---

#### **Arumugam, Sankar, Xing, Aitang, Vial, Philip, and Holloway, Lois**

A decision support tool to optimize IMRT QA workflow in a multi-vendor equipment environment, IOP Publishing, 2014

#### **Arumugam, Sankar, Xing, Aitang, Pagulayan, Claire, and Holloway, Lois**

A comprehensive tool to analyse dynamic log files from an Elekta-Synergy accelerator, IOP Publishing, 2014

#### **Batumalai V, Lo Q, Hee L, Allman C, Delaney GP, Lonergan D, and Thomas L**

Subclinical Cardiac Dysfunction Detected by Strain Imaging after Radiotherapy to the Left Breast, *Oral Presentation*

RANZCR, Melbourne, Australia 2014

#### **Batumalai V, Holloway L, Phann P, Choong C, and Delaney GP**

To compare the differences in setup errors measured with the cone-beam computed tomography (CBCT) and electronic portal image (EPI) in tangential breast radiotherapy, *Oral Presentation*

RANZCR, Melbourne, Australia 2014

#### **Cho, G. A., Ebert, M. A., Holloway, L., Kuncic, Z., Baldock, C., and Thwaites, D. I.**

Radiation treatment dose optimisation using Poisson tumour control probability parameters, IOP Publishing, 2014

#### **Dekker A, Vinod SV, Holloway L, George A, Goozee G, Delaney GP, Oberije D, Lambin P, and Thwaites D**

Rapid Learning in Practice. A lung cancer survival decision support system in routine patient care data, *Oral Presentation*

ESTRO, Vienna, Austria 4-4-2014

#### **Della-Fiorentina S**

Practice Changing Papers, *Oral Presentation*

COSA, Bowral, NSW 2-4-2014

#### **Disalvo D, Davidson P, Luckett T, Bennett S, and Agar M**

Inappropriate medication prescribing in aged care residents with advanced dementia, *Abstrast*

The Society for Hospital Pharmacists, NSW Branch, NSW, Australia 2014



**Do V, Ng W, Delaney GP, and Barton MB**

An estimation of the population survival benefit of first-line chemotherapy for gastrointestinal cancer, *Poster*  
European Society for Medical Oncology, Madrid, Spain 26-9-2014

**Dundas K, Pogson E, Batumalai V, Yap ML, Boxer MB, Koh ES, Delaney GP, Metcalfe P, and Holloway L**

Semi-automated selection of gantry angle for tangential breast radiotherapy, *Poster*  
RANZCR, Melbourne, Australia 14-9-2014

**Dundas K, Delaney GP, Batumalai, Condos G, Pogson E, Yap E, Metcalfe P, Holloway L, and Boxer M**

Survey on current practices for breast radiotherapy in Australia, *Oral Presentation*  
RANZCR, Melbourne, Australia 14-9-2014

**El Hgar Y, Pillay S, Cuganesan R, Hall SC, DeSouza P, Jaeger M, Descallar J, and Koh ES**

Utility of the response assessment in neuro-oncology (RANO) imaging criteria in high grade glioma in routine clinical practice: a multi-reader concordance study, *Oral Presentation*  
RANZCR, Melbourne, Australia 14-9-2014

**Girgis A, Delaney GP, Arnold A, Miller A, Carolan M, Della-Fiorentina S, Kaadan N, Avery S, Van Domberg N, Ng W, Spring K, Jacob J, and Maher A**

Translating evidence into practice through the PROMPT-Care Project: Utilising patient reported outcome measures for personalised cancer treatment and care, *Abstract and Oral Presentation*  
IPOS (International Psycho Oncology Society), Lisbon, Portugal 2014

**Girgis A, Delaney GP, Arnold A, Miller A, Carolan M, Della-Fiorentina S, Kaadan N, Avery S, Van Domburg N, Ng W, Spring K, Van Demenade C, and Maher A**

The PROMPT-Care Project: eHealth system utilising patient reported outcomes to inform personalised cancer treatment and care, *Abstract and Oral Presentation*  
Sydney, Australia 2014

**Holloway L, Batumalai V, and Liney G**

An assessment of signal lost with radiotherapy set-up position for supine breast MRI, *Poster*  
RANZCR, ACPSEM, AIR, Melbourne, Australia 2014

**Hosie A, Davidson PM, Agar M, Lobb E, and Phillips J**

Barriers and enablers to palliative care nurse recognition and assessment of inpatients' delirium symptoms: a qualitative study, *Oral Presentation*  
Sydney, Australia 6-4-2014

**Hosie A, Davidson PM, Agar M, Lobb E, and Phillips J**

Palliative Care Nurse perceptions of barriers and enablers to recognition and assessment of patient care inpatients' symptoms of delirium: a qualitative study, *Oral Presentation*  
Delirium Clinical and Research Day, Melbourne, Australia 2014





**Hosie A, Davidson PM, Agar M, Lobb E, and Phillips J**

Palliative Care Nurse Perceptions of Barriers and Enablers to Recognition and Assessment of Patients' Delirium symptoms: A Qualitative Study, *Poster* American Delirium Society, Baltimore, United States of America 1-6-2014

**Khasraw M, West L, Duan W, Mukaro V, Harvey S, Spokes R, Brandt C, Mitchell G, Prince K, Hayes TM, Baron-Hay SE, Woollett AM, Olesen I, White K, Bowles S, Wong SF, Ashley DM, and Patil S**

Tailored neoadjuvant epirubicin and cyclophosphamide and nanoparticle albumin bound (nab)-paclitaxel for newly diagnosed breast cancer, *Abstract* ASOC, Chicago, United States of America 11-6-2014

**Knight A, Delaney GP, Girgis A, and McDonald K**

Fostering integration of general practices with cancer services through improved communication pathways, *Abstract* Cancer Institute NSW, Sydney, Australia 17-10-2014

**Knight A, Delaney GP, Girgis A, and McDonald K**

Fostering integration of general practices with cancer services through improved communication pathways, *Abstract* Ingham Institute, Sydney, Australia 2014

**Kok P, Ng W, Chua W, and Lin M**

The role of neutrophil lymphocyte ratio at predicting response to neoadjuvant treatment in gastric/gastro-oesophageal cancers as evaluated by FDG PET scans, *Poster* MOGA, Sydney, Australia 2014

**Lawlor P, Bush S, Ansari M, Kanji S, Momoli F, Hartwick M, Pereira J, Marchington K, Barnes C, Bratjman S, Wright D, Gagnon P, Nekolaichuk C, Agar M, and Bruera E**

Pursuing knowledge synthesis, consensus and collaboration regarding delirium research: An overview of the SUNDIPS (Studies to understand delirium in palliative settings) program. *Palliative Medicine*. 2014, *Abstract* European Association for Palliative Care, Lleida, Spain 4-6-2014

**Lawlor P, Davis D, Ansari M, Hosie A, Kanji S, Momoli F, Fush S, Watanabe S, Currow D, Gagnon B, Agar M, Bruera E, Meagher D, De Rooij S, Adamis D, Caraceni A, Marchington K, and Steward D**

An analytic framework for delirium research in palliative care settings: integrated epidemiological, clinician-researcher, and knowledge user perspectives, *Abstract* European Association for Palliative Care, Lleida, Spain 4-6-2014

**Lim S, Descallar J, Sayaloune P, Delaney GP, Papadatos G, and DeSouza P**

Outcomes of Ethnic Minority Groups with Node-Positive, Non-Metastatic Breast Cancer in a Tertiary Referral Centre in Sydney, *Abstract* European Society for Medical Oncology, Madrid, Spain 26-9-2014

**Lim S, Descallar J, Sayaloune P, Delaney GP, Papadatos G, and DeSouza P**

Outcomes of Ethnic Minority Groups with Node-Positive, Non-Metastatic Breast Cancer in a Tertiary Referral Centre in Sydney, *Abstract* Clinical Oncology Society of Australia, Melbourne, Australia 2-12-2014



**Lim SH, Tut TG, Shin JS, Dissanayake IU, Chua W, Spring KJ, Ng W, DeSouza P, and Lee CS**

Polo-like kinase 1 as a biomarker in rectal cancer, *Poster*  
Lorne, Victoria, Australia 2014

**Liney GP, Xing A, and Holloway L**

Seeing is believing - MRI with Ultrashort echo times, *Oral Presentation*  
RANZCR,ACPSEM,AIR, Melbourne, Australia 2014

**Liney GP, Al Harthi TH, Juresic E, Cassapi L, Holloway L, Sidhom M, Gibbs P, and Manton DJ**

Quantitative evaluation of diffusion weighted imaging techniques for radiotherapy planning of prostate cancer, *Poster*  
ISMRM, Milan, Italy 2014

**Liney GP, Al Harthi TH, Juresic E, Cassapi L, Holloway L, Sidhom M, Gibbs P, and Manton DJ**

Quantitative evaluation of diffusion weighted imaging techniques for radiotherapy planning of prostate cancer, *Poster*  
MR in RT, St Louis, USA 2014

**Moretti D**

Development of a dynamic scheduling tool to reduce waiting room times at Liverpool and Macarthur Cancer Therapy Centres, *Oral Presentation*  
CSM, Melbourne, Australia 2014

**Parry JL, Della-Fiorentina S, Yip PY, Bray V, Kiely BE, and Bell J**

Survival times of patients with metastatic non-small cell lung cancer (NSCLC) starting first-line chemotherapy in routine clinical practice versus contemporary randomised trials, *Oral Presentation*  
COSA, Melbourne, Australia 2-12-2014

**Roohullah, A., Wong HL, Sjoquist KM, Field K, Tran B, Shapiro J, McKendrick J, Yip D, Nott L, Gibbs P, and Chantrill L**

Safety and efficacy of bevacizumab and systemic therapy in metastatic colorectal cancer patients with peritoneal disease in the Treatment of Recurrent and Advanced Colorectal Cancer (TRACC) database, *Poster*  
ASCO, Chicago, USA 2014

**Roohullah, A., Wong HL, Sjoquist KM, Field K, Tran B, Shapiro J, McKendrick J, Yip D, Nott L, Gibbs P, and Chantrill L**

Safety and efficacy of bevacizumab and systemic therapy in metastatic colorectal cancer patients with peritoneal disease in the Treatment of Recurrent and Advanced Colorectal Cancer (TRACC) database, *Poster*  
AGITG, Brisbane, Australia 2014

**Roohullah, A., Sjoquist KM, GebSKI V, Ng W, Chua W, Price T, Tebbuff N, and Chantrill L**

The efficacy and safety outcomes of bevacizumab and systemic therapy in metastatic colorectal cancer patients with peritoneal disease in the AGITG MAX clinical trial and in non-trial patients in two cancer centres, *Poster*  
ASCO, Chicago, USA 2014



**Sitas F, Nair-Shalliker V, Revius M, Christou C, Rodgers J, Yap S, Armstrong K, Salagame U, Christian K, Cottrill A, Delaney GP, Haydu L, Kaadan N, Sara T, Thompson J, Banks E, Barton MB, Canfell K, and O'Connell D**

The New South Wales Cancer, Lifestyle and Evaluation of Risk Study (CLEAR): A resource for cancer research, *Poster*  
UICC, Melbourne, Australia 3-12-2014

**Sitas F, Nair-Shalliker V, Revius M, Christou C, Yap S, Armstrong K, Salagame U, Christian K, Cottrill A, Delaney GP, Haydu L, Kaadan N, Sara T, Thompson J, Banks E, Barton MB, Canfell K, and O'Connell D**

The New South Wales Cancer, Lifestyle and Evaluation of Risk Study (CLEAR): a resource for cancer research, *Oral Presentation*  
COSA, Adelaide, Australia 2014

**Speight R, Stensmyr F, Pogson E, Liney G, Holloway L, Sykes J, and Thwaites D**

Assessment of commercially available deformable image registration (DIR) software for CT-MRI registration in breast radiotherapy patients, *Poster*  
RANZCR, ACPSEM, AIR, Melbourne, Australia 2014

**Thwaites D, Dekker A, Holloway L, Vinod SV, Delaney GP, Goozee G, Bailey M, and Miller M**

The potential impact of datamining and rapid learning in radiotherapy: A Lung Cancer Survival Decision Support System in Routine Clinical Practice, *Oral Presentation*  
Institute of Physics & Engineering in Medicine, Glasgow, Scotland 31-8-2014

**Tognela A, Lumba S, Kao S, Van Zandwijk N, Vardy J, Bray V, and Ng W**

Estimation of chemotherapy utilisation rate for malignant pleural mesothelioma: An evidence based benchmark for patient care, *Poster*  
IASLC, Sydney, Australia 2014

**Viet D, Weng N, Delaney GP, and Barton MB**

An estimation of the population survival benefit of first-line chemotherapy for upper gastrointestinal cancer', *Abstract and Oral Presentation*  
COSA, Adelaide, Australia 2014

**Vinod SK, Holloway L, Juresic E, Cassapi L, Veera J, Rai R, Xing A, Goozee G, and Liney G**

MRI simulation for radiotherapy planning, *Poster*  
RANZCR, Melbourne, Australia 4-9-2014

**Vinod SK, Holloway L, Delaney GP, Goozee G, George A, Bailey M, Miller A, Dekker A, and Thwaites**

Rapid learning in practice: a lung cancer survival decision support system in routine patient care data, *Oral Presentation*  
RANZCR, Melbourne, Australia 4-7-2014

**Walker A, Batumalai V, Dundas K, Delaney GP, Boxer MB, Koh ES, Yap ML, Metcalfe P, Liney G, Dowling J, and Holloway L**

Impact of MRI geometric distortion on tangential IMRT breast plans, *Oral Presentation*  
RANZCR, Melbourne, Australia 14-9-2014



**Walker A, Batumalai V, Dundas K, Delaney GP, Boxer MB, Koh ES, Yap ML, Pogson E, Metcalfe P, and Holloway L**

Comparison of breast planning techniques for whole breast supine treatments, *Poster*  
RANZCR, Melbourne, Australia 14-9-2014

**Walker A, Holloway L, Metcalfe P, Dowling J, and Liney G**

An assessment of continuous table acquisition for reducing MRI distortion in radiotherapy imaging using a new 3D volumetric phantom, *Poster*  
Melbourne, Australia 2014

**Wang D, Koh ES, Descallar J, Pramana A, Vinod SK, and Ho Son I**

Assessing linearity in the relationships between quantitative FDG-PET/CT parameters and prognosis in patients with non-small cell lung cancer treated with radical radiotherapy, *Oral Presentation*  
European Association of Nuclear Medicine, Gothenburg, Sweden 2014

**Wang D, Koh ES, Descallar J, Pramana A, Vinod SK, and Ho Shon I**

Application of Novel Quantitative Parameters for FDG-PET/CT in Non-Small Cell Lung Cancer Patients Receiving Curative Radiotherapy, *Oral Poster*  
ANZ Society of Nuclear Medicine, Adelaide, Australia 2014

**Xing A, Arumugam S, Jameson M, Deshpande S, Holloway L, George A, and Goozee G**

SU-ET-407: Evaluation of Four Commercial Dosimetry Systems for Routine Patient - Specific Tomotherapy Delivery Quality Assurance, *Poster*  
AAPM, Austin, USA 2014

**Xing A, Arumugam S, Jameson M, Deshpande S, Holloway L, George A, and Goozee G**

SU-E-T-503 Development of a Software Tool for Verification of Delivered Tomotherapy Plans Using the Tomo Log File, *Poster*  
AAPM, Austin, USA 2014

**Xing, Aitang, Arumugam, Sankar, Holloway, Lois, and Goozee, Gary**

PyCMSXiO: an external interface to script treatment plans for the Elekta-CMS XiO treatment planning system, IOP Publishing, 2014

**Xing, Aitang, Deshpande, Shrikant, Arumugam, Sankar, George, Armia, Holloway, Lois, and Goozee, Gary**

Commissioning of SharePlan: The Liverpool Experience, IOP Publishing, 2014

### **July 2013 to December 2013**

---

**Arumugam S, Xing A, and Holloway L**

Development and validation of an in-house seed tracking software tool for online target positional verification, *Oral Presentation*  
ACPSEM, Perth, Australia 2013

**Arumugam S, Xing A, Holloway L, and Young T**

Validation of the Octavius 4D Dosimetric System for VMAT Verification, *Oral Presentation*  
ACPSEM, Perth, Australia 2013



**Arumugam, S., Xing, A., Vial, P., Scotti, A., Stirton, R., Goozee, G., and Holloway, Lois**

Impact of patient rotational errors on target and critical structure dose in IMRT: A 3D simulation study, IOP Publishing, 2013

**Arumugam, S., Xing, A., Goozee, G., and Holloway, L.**

Detecting VMAT delivery errors: A study on the sensitivity of the ArcCHECK-3D electronic dosimeter, IOP Publishing, 2013

**Barber J, Foo J, Yau S, White S, Luo J, Phan J, Sykes J, and Holloway L**

How fast is flattening filter free in practice? VMAT FFF beams for hypo and conventional fractionation, *Oral Presentation*  
ACPSEM, Perth, Australia 2013

**Batumalai V, Phan P, Choong C, Holloway L, and Delaney GP**

Is cone-beam computed tomography better than electronic portal image in tangential breast radiotherapy?, *Oral Presentation*  
AIR, Sydney, Australia 2013

**Batumalai V, Lo Q, Hee L, Allman C, Delaney GP, Lonergan D, and Thomas A**

Acute Radiation induced changes in cardiac function after radiotherapy to the left breast, *Poster*  
RANZCR, Cairns, Queensland 2013

**Bawazeer O, Gray A, Arumugam S, Vial P, Thwaites D, and Holloway L**

Can 2D dosimeters detect systematic delivery errors in IMRT plans?, *Oral Presentation*  
IPEM, Brighton, United Kingdom 2013

**Bell L, Pogson E, Metcalfe E, and Holloway L**

Assessing whole breast inter-observer delineation uncertainty in spherical coordinates, *Oral Presentation*  
ACPSEM, Perth, Australia 2013

**Boxer M, Duggan K, Descallar J, and Vinod S**

Do patients discussed at Lung Cancer Multidisciplinary team Meetings receive guideline-recommended treatment?, *Poster*  
International Association for the study of lung cancer, Sydney, Australia 27-10-2013

**Carolan M, Miller M, George A, Goozee G, Holloway L, Thwaites D, and Dekker A**

Rapid Learning in practice: Australian validation of a European prediction model for H&N Cancer, *Oral Presentation*  
ACPSEM, Perth, Australia 2013

**Chose S, Holloway L, Lim K, Chan P, Veera J, Vinod S, Liney G, Greer P, and Dowling J**

A survey of cervix segmentation methods in magnetic resonance images, *Poster*  
MICCAI, Nagoya, Japan 2013



**Correy E and Tilde L**

Dying Well in Residential Aged Care - Affirming the role of Residential Aged Care and changing community perceptions, *Poster and Oral Presentation*  
Palliative Care Australia, Canberra, Australia 2013

**Deshpande S, Armia G, Xing A, Holloway L, Metcalfe P, Vial P, and Geurts M**

Sensitivity of three commercial dosimeters to delivery errors in helical tomotherapy, *Poster*  
ESTRO, Geneva, Switzerland 2013

**Dinsdale G, Franji I, Koh ES, and Ochoa C**

A comparison of Helical Tomotherapy and Static Field Intensity modulated radiation therapy (IMRT) for primary brain tumours: a comparative dosimetric planning study, *Oral Presentation*  
AIR, Sydney, Australia 2013

**Dinsdale G, Franji I, Koh ES, and Ochoa C**

A comparison of Helical Tomotherapy and Static Field Intensity modulated radiation therapy (IMRT) for primary brain tumours: a comparative dosimetric planning study, *Oral Presentation*  
AIR, Noosa, Queensland, Australia 2013

**Do V, Ng W, Delaney GP, and Barton MB**

An estimation of the population survival benefit of first-line chemotherapy for gastrointestinal cancer, *Poster*  
Clinical Oncology Society of Australia, Adelaide, Australia 2013

**Do V, Ng W, Delaney GP, and Barton MB**

An estimation of the population survival benefit of first-line chemotherapy for gastrointestinal cancer, *Poster*  
Australasian Gastro Intestinal Trials Group, Melbourne, Australia 2013

**Dowling J, Greer, P. B., Pichler P, Sun J, Rivest-Henault D, Ghose S, Martin J Wratten C, Parker J, Patterson J, Stanwell P, chandra S, Holloway L, Liney G, Lim K, Chan P, Veera J, Vinod S, Savado O, and Fripp J**

Progress toward MRI alone radiation treatment planning, *Oral Presentation*  
Engineering and Physics Sciences, Perth, Australia 2013

**Duggan K, Vinod S, and Descallar J**

Clinical guidelines adherence in locally advanced non-small cell lung cancer: A South Western Sydney perspective , *Poster*  
International Association for the study of lung cancer, Sydney, Australia 27-10-2013

**Girgis A**

The role of E-Health in facilitating needs-based patient-centred care?  
Paving the future of Supportive Cancer Care: Is E-Health the Way Forwards,  
*Oral Presentation*  
Association of Support Care in Cancer, New York, USA 28-6-2013



**Girgis A, Webber K Bennett B Bonaventura A Boyle F Koh E-S Friedlander M Segelov E Goldstein D**

How can eHealth support selfdirected and shared survivorship care? *Oral Presentation*

The Flinders Centre for Innovation in Cancer , Adelaide, Australia 2013

**Gray A, Bawazeer O, Arumugam S, Vial P, Thwaites D, and Holloway L**

Evaluation of the ability of three commercially available dosimeters to detect systematic delivery errors in IMRT plans, *Oral Presentation*

AAPM, Indianapolis, USA 2013

**Hall SC, Duggan K, Jaeger M, Darwish B, Sheridan M, Yanagisawa W, Do A, DeSouza P, Descallar J, and Koh ES**

Surgical Patterns of Care and Outcomes in High Grade Glioma - a modern cohort from South West Sydney, *Poster*

Cooperative Trials Group for Neuro Oncology, Sydney, Australia 25-10-2013

**Hanna TP, Delaney GP, and Barton MB**

The Population Benefit of Radiotherapy for Head and Neck Cancer: Local Control and Survival Estimates for Optimally Utilized Radiotherapy and Chemoradiation, *Abstract*

The Canadian Association of Radiation Oncology, Montreal, QC, Canada 18-9-2013

**Ho G, Kumar S, Arumugam S, Jameson MG, DeGruyter S, Holloway LC, and Vinod SK**

Non-small cell lung cancer (NSCLC): Changes in volume during radiotherapy and potential adaptive radiotherapy planning: *Poster*

International Association for the study of lung cancer, Sydney, Australia 27-10-2013

**Holloway L, Batumalai V, and Liney G**

An assessment of signal loss with changes in coilposition for supine breast MRI, *Poster*

AAPM, Indianapolis, USA 2013

**Holloway L, George A, Bailey M, Carolan M, Miller A, Thwaites D, and Dekker A**

Data Mining for Prediction of outcomes in lung cancer patients treated with radiotherapy, *Oral Presentation*

ACPSEM, Perth, Australia 2013

**Kaadan N, Farrugia S, Sharmin M, Vinod S, and Descallar J**

Incidence and extent of diagnosis of cancer in the CALD populations in SWSLHD, *Poster*

Cancer Institute NSW, Sydney, Australia 23-8-2013

**Kiely BE, Veillard AS, Davidson JA, Trinkaus ME, Briscoe KP, Hughes BGM, Begbie S, Pavlakis N, Millward M, Boyer M, Brown C, Muljadi N, Coskinas X, and Stocker MR**

Prognostic significance, accuracy and usefulness of oncologists' estimates of survival time for patients starting first line chemotherapy for advanced non-small cell lung cancer (NSCLC), *Oral Presentation*

Clinical Oncology society of Australia, Adelaide, Australia 12-11-2013



**Kiely BE, Veillard AS, Davidson JA, Trinkaus ME, Briscoe KP, Hughes BGM, Begbie S, Pavlakis N, Millward M, Boyer M, Brown C, Muljadi N, Coskinas X, and Stocker MR**

Prognostic significance, accuracy and usefulness of oncologists' estimates of survival time for patients starting first line chemotherapy for advanced non-small cell lung cancer (ANSCCLC), *Oral Presentation*  
International Association for the Study of Lung Cancer, Sydney, Australia 27-10-2013

**Koh ES**

Neuro-oncology care coordinator: a key role in facilitating complex care,  
*Poster*  
Society for Neuro Oncology, San Francisco, California, USA 21-11-2013

**Kok PS, Smith A, and Segelov E**

A Clinical audit of anal cancer in a single tertiary centre over 10 years,  
*Poster*  
COSA, Melbourne, Australia 12-11-2013

**Kumar S, Holloway L, Moses D, Liney G, and Vinod SK**

The potential use of MRI to delineate lung cancer volumes for radiotherapy,  
*Poster*  
International Association for the study of lung cancer, Sydney, Australia 27-10-2013

**Kumar S, Holloway L, and Vinod SK**

Utility of MRI in Lung Cancer Radiotherapy: a literature review , *Poster*  
International Association for the study of lung cancer, Sydney, Australia 27-10-2013

**Kumar S, Holloway L, Moses D, and Vinod SK**

Inter-observer variability of GTV delineation based on Lung MRI: impact of radiologist let workshop , *Poster*  
International Association for the study of lung cancer, Sydney, Australia 27-10-2013

**Kumar S, Holloway L, Moses D, Burgess N, and Vinod SK**

Quantifying the clinical benefit of MRI in Lung Cancer Radiotherapy, *Oral Presentation*  
ASIMMRT, Tasmania 2013

**Le Roy J, Despande S, Franji I, Forstner D, Vial P, Holloway L, and Thwaites D**

Evaluation of the Impact of Tomotherapy Planning Parameters on Plan Quality for Nasopharynx Cancers, *Oral Presentation*  
ACPSEM, Perth, Australia 2013

**Nair-Shalliker V, Revius M, Christou C, Yap S, Armstrong K, Salagame U, Christian K, Cottrill A, Delaney GP, Haydu L, Kaadan N, Sara T, Thompson J, Banks E, Barton MB, Canfel K, O'Connell D, and Sitas F**

The New South Wales Cancer Lifestyle and Evaluation of Risk Study (CLEAR): A growing resource for cancer related studies, *Oral Presentation*  
Australasian Epidemiological Association (AEA), Brisbane, Australia 20-10-2013





**Pagulayan C, Arumugam S, Xing A, Vial P, Holloway L, and Metcalfe P**  
**The sensitivity of ERB and non-ERB prostate bed IMRT treatments to random errors in treatment delivery: A simulation study, Poster**  
ACPSEM, Melbourne, Australia 2013

**Paugulayan C, Arumugam S, Xing A, Vial P, Holloway L, and Metcalfe P**  
Quantifying predicted dosimetric changes when random errors are introduced to IMRT and VMAT Linac, *Oral Presentation*  
ACPSEM, Perth, Australia 2013

**Pogson E, Bell L, Batumalai V, Koh ES, Delaney GP, Metcalfe P, and Holloway L**  
A comparison of coordinate systems for use in determining a radiotherapy delineation margin for whole breast, *Abstract*  
International Conference on the Use of Computers in Radiation, Melbourne, Australia 6-5-2013

**Pogson E, Jameson M, McNamara J, McDowall R, and Lim A**  
**An Evaluation of the Reproducibility of Radiotherapy Contouring Utilizing Multiple Institutions and Treatment Planning Systems, Poster**  
AAPM, Indianapolis, USA 2013

**Pramana A, Descallar J, and Vinod S**  
A decade of community-based outcomes of patients treated with curative radiotherapy (RT) +/- chemotherapy for Non-Small Cell Lung Cancer (NSLC), *Poster*  
International Association for the study of lung cancer, Sydney, Australia 27-10-2013

**Quinn, A., Holloway, L., and Metcalfe, Peter**  
Image guidance during breast radiotherapy: a phantom dosimetry and radiation-induced second cancer risk study, IOP Publishing, 2013

**Shafiq J, Delaney GP, and Barton M**  
An evidence-based estimation of local control and survival benefit of radiotherapy for colorectal cancer, *Oral Presentation*  
COASA, Adelaide, Australia 2013

**Shafiq J, Hanna T, Delaney GP, Vinod S, and Barton MB**  
An evidence-based estimation of survival and local control benefit of radiotherapy for lung cancer, *Poster*  
International Association for the study of lung cancer, Sydney, Australia 27-10-2013

**Speight R, Stensmyr F, Pogson E, Liney G, Holloway L, Sykes J, and Thwaites D**  
Assessment of deformable image registration (DIR) between planning CT and diagnostic MRI for H&N patients on an individual patient basis: Is qualitative clinical assessment acceptable or is quantitative, *Oral Presentation*  
Institute of Physics and Engineering in Medicine, Glasgow, Scotland 2013



**Tognela A, Lim S, Descallar J, Vinod S, Yip PY, and Bray V**

Patterns of care in patients receiving adjuvant chemotherapy for resected non-small lung cancer (NSCLC) in South Western Sydney Local Health District, *Poster*

International Association for the study of lung cancer, Sydney, Australia 27-10-2013

**Tognela A, Descallar J, Vinod S, Bray V, and Yip PY**

Patterns of care in elderly patients with resected Non-Small Cell Lung Cancer (NSCLC) in South Western Sydney Local Health District (SWSLHD), *Oral Presentation*

Clinical Oncology Society of Australia, Adelaide, Australia 12-11-2013

**Trad W, Simpson T, Wright K, Tran T, Choong C, Barton MB, Hovey E, and Koh ES**

Comparative longitudinal assessment of psychosocial distress between malignant and benign primary brain tumours in a patient-carer cohort, Cooperative Trials Group for Neuro-Oncology, Sydney, Australia 25-6-2013

**Trad W, Simpson T, Wright, K. M., Tran T, Choong C, Barton MB, Hovey E, and Koh ES**

The Neuro Oncology Care Coordinator: a key role in facilitating complex care, *Poster*

Society of Neuro-Oncology, San Francisco, USA 21-11-2013

**Trad W, Simpson T, Wright K, Tran T, Choong C, Barton MB, Hovey E, and Koh ES**

A longitudinal psychosocial distress assessment in malignant glioma patients and their carers: a comparative study, *Poster*

Clinical Oncological Society of Australia, Adelaide, Australia 12-11-2013

**Veera J, Vinod SK, Holloway LC, Pogson E, Borok N, Dimigen M, and Lim K**

External beam radiotherapy target volumes for cervical cancer: A multi-institutional study assessing contouring variability on magnetic resonance imaging (MRI) and computed tomography (CT), *Poster*

European Society for Medical Oncology, Amsterdam, Netherlands 27-9-2013

**Veera J, Vinod S, Holloway L, Pogson E, Borok N, Dimigen M, Khaw P, Do V, Sullivan L, Chan P, and Lim K**

A multi-institutional study assessing contouring variability for cervical cancer on MRT and CT, *Oral Presentation*

Royal Australian and New Zealand College of Radiologists, Auckland, New Zealand 17-10-2013

**Vinod S, Miller A, Hegi F, Thwaites D, and Dekker A**

Rapid Learning healthcare network for prediction of outcomes in lung cancer patients, *Oral Presentation*

Cancer Institute NSW, Sydney, Australia 23-8-2013



**W.Trad, T. Simpson K. M. Wright T. Tran C. Choong M. B. Barton E. J. Hovey E-S. Koh**

The Neuro oncology Care Coordinator: a key role in facilitating complex care., *Poster*

Society of Neuro-Oncology , San Francisco, USA 21-11-2013

**Walker A, Liney G, Metcalfe P, and Holloway L**

A comparison of MRI distortion between scanners and sequences for radiotherapy purposes, *Oral Presentation*

AAPM, Indiana, USA 2013

**Xing A, Arumugam S, Deshpande A, George P, Vial P, Holloway L, and Goozee G**

Planchecker: A software System for Comprehensive checking of radiotherapy plans, *Oral Presentation*

EPSM, Perth, Australia 2013

**Xing A, Liney GP, Holloway L, Arumugam S, and Goozee G**

Commissioning of a dedicated MRI Simulator in a Radiotherapy Department, *Poster*

ESTRO, Geneva, Switzerland 2013

**Xing, A., Arumugam, S., Holloway, L., and Goozee, G.**

Validation of an IMRT beam model using a secondary treatment planning system as a 3D dosimeter, IOP Publishing, 2013

## **Invited Expert 2013/2014**

---

**Chan F**

Topic "Tomorrow's theatre today - robotics, Instrumentation, Vision" "Live surgery" Teleconferenced to audience"

AGES Annual Scientific Meeting AGES 2014

**Kiely, BE.**

Topic "Knowing You're Dying (Episode of insight on terminal illness)"

SBS Network Television SBS Network Television 2014

**Barton M**

Topic "IAEA Co-ordinated Research Project Meeting"

International Atomic Energy Agency International Atomic Energy Agency

**Barton MB**

Topic "Evaluation of Cancer Services, Papua, New Guinea, 12-18 May 2013"

APROSIG Asia-Pacific Radiation Oncology Special Interest Group

(APROSIG) 1-5-2013

**Barton MB., Delaney GP., Yap ML**

Global task force on radiotherapy for cancer control (GTRCC), under the Union for International Cancer Control 2014

**Koh ES**

Topic "Brain Tumour Clinical Education Day - The Impact of neuro-oncology care coordination"  
Cancer Council Cancer Council 2013

**Vinod SK**

Topic "Multidisciplinary Decisions in Lung Cancer"  
Modelling Demand for Radiotherapy workshop, Health Economics in Radiation Oncology ESTRO 2013

**Vinod SK**

Topic "Gynaecological Brachytherapy. Lecture and Examiner"  
Brachytherapy Workshop Australasian Brachytherapy Group 2013

**Vinod SK**

Topic "Discussant of Oral Presentations"  
International Association for the study of Lung Cancer International Association for the study of Lung Cancer 2013

## Invited Speaker

---

### January 2014 to June 2014

---

**Agar M and Hosie A**

Topic "Recognising, assessing and managing delirium in palliative care populations"  
Palliative Care Nurses Australia Conference Palliative Care Nurses Australia 2014  
Sydney, Australia

**Delaney GP**

Topic "**A Multi-patient incident**"  
2014 Combined Scientific Meeting RANZCR 4-9-2014  
Melbourne, Australia

**Delaney GP**

Topic "**Minimising the impact of incidents in Radiotherapy**"  
2014 Combined Scientific Meeting RANZCR 4-9-2014  
Melbourne, Australia

**Delaney GP**

Topic "The current trends in breast cancer research"  
Beijing Think Tank UWS/National Institute of Complementary Medicine 2014  
Beijing, China

**Delaney GP**

Topic "The role of MRI in Radiation Oncology"  
Royal North Shore Hospital Radiation Oncology Royal North Shore Hospital 2014  
Sydney, Australia



**Delaney GP**

Topic "The role of MRI in Radiation Oncology"

2014 Combined Scientific Meeting RANZCR 4-9-2014  
Melbourne, Australia

**Delaney GP**

Topic "The role of imaging in the developments of Radiation Oncology"

Liverpool Hospital Grand Rounds SWSLHD 2014  
Liverpool, Australia

**Hose A, Bush S, Lawlor P, Weckmann M, Phillips J, and Agar M**

Topic "Interdisciplinary management of delirium in palliative care:  
collaboratively building the evidence base"

4th Annual Meeting of the American Delirium society American Delirium  
Society 1-6-2014  
Balimore, United States of America

**Kiely BE**

Topic "Discussing prognosis with patients with incurable cancer"

Advanced Trainees Oncology Meeting Roche 8-2-2014  
Sydney, Australia

**Kiely BE**

Topic "Metastatic Breast Cancer: Recent advances and case studies"

Advanced Trainees Oncology Meeting Roche 8-2-2014  
Sydney, Australia

**Liney G**

Topic "Physics of MRI"

Siemens ANZ Research Users Meeting Siemens 2014  
Sunshine Coast, Queensland, Australia

**Liney G**

Topic "MRI for radiation treatment planning"

TROG 2013 TROG 2014  
Sunshine Coast, Queensland, Australia

**Liney G**

Topic "Physics of MRI"

TROG 2013 TROG 2014  
Sunshine Coast, Queensland, Australia

**Patel V., Arumugam S., Vinod S., Ohanessian L., Dunning A., Scotti A**

Topic "HDR Radition Emergency Management"

2014 Conference of Australasian Brachytherapy Group, Adelaide, Australia  
February 2014

**Roohullah A**

Topic "Exploring key outcomes including gastrointestinal perforation in  
metastatic colorectal cancer patients with peritoneal metastases receiving  
bevacizumab and system chemotherapy in the AGITG MAX trial and  
community settings ""

Grand Rounds Liverpool Hospital 2014  
Liverpool, Sydney, australia



## July 2013 to December 2013

---

**Dowling J, Greer P, Pilcher P, Sun J, Rivest-Henault D, Ghose S, Wratten MC, Parker J, Stanwell P, chandra S, Holloway L, Liney G, Lim K, Chan P, Veera J, Vinod S, Salvado O, and Fripp J**

Topic "Progress towards MRI alone radiation therapy treatment planning"  
ACPSEM Perth, Australia 2013

**Girgis A**

Topic "Building research capacity at the individual level"  
Inaugural National Palliative Care Research Colloquium 18-7-2013  
The University of Melbourne

**Liney G**

Topic "MRI for radiation treatment planning"  
EPSM2013 ACPSEM 2013  
Perth Australia

**Liney G**

Topic "MRI for radiation treatment planning"  
Siemens User Meetings SIEMENS 2013

**Patel V., Cloak K**

34<sup>th</sup> National Conference of Association of Medical Physicists of India,  
Kolkata (India) 13 – 16 November 2013

**Vinod SK**

Topic "Gynaecological Brachytherapy"  
Clinical Brachytherapy Workshop Australasian Brachytherapy Group 2013  
Melbourne, Australia

## Journals 2013/2014

---

### January 2014 to June 2014

---

**Barton, M. B., Jacob, S., Shafiq, J., Wong, K., Thompson, S. R., Hanna, T. P., and Delaney, G. P.**

Estimating the demand for radiotherapy from the evidence: A review of changes from 2003 to 2012  
Radiother.Oncol. 2014 Volume 112 Issue 1 Pages 140-144

**Barton, M. B., Allen, S., Delaney, G. P., Hudson, H. M., Hao, Z., Allison, R. W., and van der Linden, Y. M.**

Patterns of retreatment by radiotherapy  
Clin.Oncol.(R.Coll.Radiol.) 2014 Volume 26 Issue 10 Pages 611-618

**Bawazeer, Omemh, Gray, Alison, Arumugam, Sankar, Vial, Philip, Thwaites, David, Descallar, Joseph, and Holloway, Lois**

Evaluation of the ability of a 2D ionisation chamber array and an EPID to detect systematic delivery errors in IMRT plans  
Journal of Physics: Conference Series 2014 Volume 489 Issue 1 Pages 012071-



**Becker, T. M., Caixeiro, N. J., Lim, S. H., Tognela, A., Kienzle, N., Scott, K. F., Spring, K. J., and de, Souza P.**

New frontiers in circulating tumor cell analysis: A reference guide for biomolecular profiling toward translational clinical use  
Int J Cancer 1-6-2014 Volume 134 Issue 11 Pages 2523-2533

**Begg, J., Taylor, M. L., Holloway, L., Kron, T., and Franich, R. D.**

Effect of light source instability on uniformity of 3D reconstructions from a cone beam optical CT scanner  
Australas.Phys.Eng Sci.Med. 28-9-2014

**Bush, S. H., Leonard, M. M., Agar, M., Spiller, J. A., Hosie, A., Wright, D. K., Meagher, D. J., Currow, D. C., Bruera, E., and Lawlor, P. G.**

End-of-Life Delirium: Issues Regarding Recognition, Optimal Management, and the Role of Sedation in the Dying Phase  
J.Pain Symptom.Manage. 2014 Volume 48 Issue 2 Pages 215-230

**Caixeiro, N. J., Kienzle, N., Lim, S. H., Spring, K. J., Tognela, A., Scott, K. F., de, Souza P., and Becker, T. M.**

Circulating tumour cells--a bona fide cause of metastatic cancer  
Cancer Metastasis Rev. 2014 Volume 33 Issue 2-3 Pages 747-756

**Clark, K., Lam, L., Currow, D. C., and Agar, M.**

A prospective study to investigate contributory factors that lead to constipation in palliative care patients  
J.Pain Symptom.Manage. 2014 Volume 47 Issue 6 Pages e1-e4

**Concha, O. P., Gallego, B., Hillman, K., Delaney, G. P., and Coiera, E.**

Do variations in hospital mortality patterns after weekend admission reflect reduced quality of care or different patient cohorts? A population-based study  
BMJ Qual.Saf 2014 Volume 23 Issue 3 Pages 215-222

**Constantin, D. E., Holloway, L., Keall, P. J., and Fahrig, R.**

A novel electron gun for inline MRI-linac configurations  
Med.Phys. 2014 Volume 41 Issue 2 Pages 022301-

**Coupe, N. A., Karikios, D., Chong, S., Yap, J., Ng, W., Merrett, N., and Lin, M.**

Metabolic information on staging FDG-PET-CT as a prognostic tool in the evaluation of 97 patients with gastric cancer  
Ann.Nucl.Med. 2014 Volume 28 Issue 2 Pages 128-135

**Dimigen, M., Vinod, S. K., and Lim, K.**

Incorporating a radiologist in a radiation oncology department: a new model of care?  
Clin.Oncol.(R.Coll.Radiol.) 2014 Volume 26 Issue 10 Pages 630-635

**Dong, S. T., Butow, P. N., Costa, D. S., Lovell, M. R., and Agar, M.**

Symptom Clusters in Patients With Advanced Cancer: A Systematic Review of Observational Studies  
J.Pain Symptom.Manage. 2014 Volume 48 Issue 3 Pages 411-450

**Goldstein, D., Bell, M. L., Butow, P., Sze, M., Vaccaro, L., Dong, S., Liauw, W., Hui, R., Tattersall, M., Ng, W., Asghari, R., Steer, C., Vardy, J., Parente, P.,**



**Harris, M., Karanth, N. V., King, M., Girgis, A., Eisenbruch, M., and Jefford, M.**  
Immigrants' perceptions of the quality of their cancer care: an Australian comparative study, identifying potentially modifiable factors  
Ann.Oncol. 2014 Volume 25 Issue 8 Pages 1643-1649

**Hill, Robin, Healy, Brendan, Holloway, Lois, Kuncic, Zdenka, Thwaites, David, and Baldock, Clive**  
Advances in kilovoltage x-ray beam dosimetry  
Physics in Medicine and Biology 2014 Volume 59 Issue 6 Pages R183-

**Hosie, A., Lobb, E., Agar, M., Davidson, P. M., and Phillips, J.**  
Identifying the Barriers and Enablers to Palliative Care Nurses' Recognition and Assessment of Delirium Symptoms: A Qualitative Study  
J.Pain Symptom.Manage. 12-4-2014

**Hosie, A., Agar, M., Lobb, E., Davidson, P. M., and Phillips, J.**  
Palliative care nurses' recognition and assessment of patients with delirium symptoms: A qualitative study using critical incident technique  
Int.J.Nurs.Stud. 2014 Volume 51 Issue 10 Pages 1353-1365

**Huang Y., Lim CED., Chong N., Cheng L., Wiltshire J., Strutt R., Zaslowski C**  
Specialty Trainees' Understanding of End-of-Life Care Symptom Management and End-of-Life Care Pathway: A Quantitative and Qualitative Pilot Study  
Journal of Geriatrics and Palliative Care 2014, Vol 2, Issue 1 Pages 1-9

**Jameson, M. G., Kumar, S., Vinod, S. K., Metcalfe, P. E., and Holloway, L. C.**  
Correlation of contouring variation with modeled outcome for conformal non-small cell lung cancer radiotherapy  
Radiother.Oncol. 19-5-2014

**Lawlor, P. G., Davis, D. H., Ansari, M., Hosie, A., Kanji, S., Momoli, F., Bush, S. H., Watanabe, S., Currow, D. C., Gagnon, B., Agar, M., Bruera, E., Meagher, D. J., de Rooij, S. E., Adamis, D., Caraceni, A., Marchington, K., and Stewart, D. J.**  
An analytical framework for delirium research in palliative care settings: integrated epidemiologic, clinician-researcher, and knowledge user perspectives  
J.Pain Symptom.Manage. 2014 Volume 48 Issue 2 Pages 159-175

**Leonard, M. M., Nikolaichuk, C., Meagher, D. J., Barnes, C., Gaudreau, J. D., Watanabe, S., Agar, M., Bush, S. H., and Lawlor, P. G.**  
Practical assessment of delirium in palliative care  
J.Pain Symptom.Manage. 2014 Volume 48 Issue 2 Pages 176-190

**Lim SH, Chua W, Chen C, Descallar J, Ng wL, Solomon M, Bokey L, Wong K, Lee MT, DeSouza P, Shin JS, and Lee CS**  
Effect of Neoadjuvant Chemoradiation on Tumour Infiltrating/Associated Lymphocytes in Locally Advanced Rectal Cancers  
Anticancer Research 2014 2014





**Lim, S. H., Becker, T. M., Chua, W., Ng, W. L., de, Souza P., and Spring, K. J.**  
Circulating tumour cells and the epithelial mesenchymal transition in colorectal cancer  
J.Clin.Pathol. 9-7-2014

**Lim, S. H., Delaney, G. P., Descallar, J., Sayaloune, P., Papadatos, G., and de, Souza P.**  
Outcomes of ethnic minority groups with node-positive, non-metastatic breast cancer in two tertiary referral centers in Sydney, Australia  
PLoS.One. 2014 Volume 9 Issue 4 Pages e95852

**Lim, S. H., Becker, T. M., Chua, W., Caixeiro, N. J., Ng, W. L., Kienzle, N., Tognela, A., Lumba, S., Rasko, J. E., de, Souza P., and Spring, K. J.**  
Circulating tumour cells and circulating free nucleic acid as prognostic and predictive biomarkers in colorectal cancer  
Cancer Lett. 28-4-2014 Volume 346 Issue 1 Pages 24-33

**Lim, S. H., Ardern-Holmes, S., McCowage, G., and de, Souza P.**  
Systemic therapy in neurofibromatosis type 2  
Cancer Treat.Rev. 2014 Volume 40 Issue 7 Pages 857-861

**Ling, M., Wong, T., Bui, C. D., Atlas, S., Li, J. J., Yang, T., Harvey, S., and Flack, J. R.**  
Tumor within Another Tumor: An Unusual Case of Metastatic Poorly Differentiated Thyroid Carcinoma within an Intracranial Meningioma  
J.Clin.Endocrinol.Metab 30-6-2014 Volume Pages jc20141310-

**Lovell, M. R., Lockett, T., Boyle, F. M., Phillips, J., Agar, M., and Davidson, P. M.**  
Patient education, coaching, and self-management for cancer pain  
J.Clin.Oncol. 1-6-2014 Volume 32 Issue 16 Pages 1712-1720

**Lockett, T., Phillips, J., Agar, M., Virdun, C., Green, A., and Davidson, P. M.**  
Elements of effective palliative care models: a rapid review  
BMC.Health Serv.Res. 2014 Volume 14 Pages 136-

**Lwin Z, Broom A, Cosman R, Livingstone A, Sawkins K, Good P, Kirby E, Koh ES, and Hovey E**  
Culturally and Linguistically Diverse patient participation in glioma research  
Neuro-Oncology Practice 2014

**Moylan, E. J., Connell, L. C., and O'Reilly, S.**  
Are dose-dense and triplet chemotherapy regimens optimal adjuvant therapy in the majority of women with node-positive early breast cancer?  
J.Clin.Oncol. 20-2-2014 Volume 32 Issue 6 Pages 605-606

**Nagrjal, A. M., Chang, D. K., Nguyen, N. Q., Johns, A. L., Chantrill, L. A., Humphris, J. L., Chin, V. T., Samra, J. S., Gill, A. J., Pajic, M., Pinese, M., Colvin, E. K., Scarlett, C. J., Chou, A., Kench, J. G., Sutherland, R. L., Horvath, L. G., and Biankin, A. V.**  
Adjuvant chemotherapy in elderly patients with pancreatic cancer  
Br.J Cancer 21-1-2014 Volume 110 Issue 2 Pages 313-319



**Nelson, V., Deshpande, S., Gray, A., Vial, P., and Holloway, L.**

Comparison of digitally reconstructed radiographs generated from axial and helical CT scanning modes: a phantom study  
Australas.Phys.Eng Sci.Med. 2014 Volume 37 Issue 2 Pages 285-290

**Pramana, A., Descallar, J., and Vinod, S. K.**

A decade of community-based outcomes of patients treated with curative radiotherapy with or without chemotherapy for non-small cell lung cancer  
Asia Pac.J.Clin.Oncol. 25-8-2014

**Quinn, A., Holloway, L., Begg, J., Nelson, V., and Metcalfe, P.**

Kilovoltage cone-beam CT imaging dose during breast radiotherapy: a dose comparison between a left and right breast setup  
Med.Dosim. 2014 Volume 39 Issue 2 Pages 190-193

**Rathkopf, D. E., Smith, M. R., de Bono, J. S., Logothetis, C. J., Shore, N. D., de Souza P., Fizazi, K., Mulders, P. F., Mainwaring, P., Hainsworth, J. D., Beer, T. M., North, S., Fradet, Y., Van, Poppel H., Carles, J., Flaig, T. W., Efstathiou, E., Yu, E. Y., Higano, C. S., Taplin, M. E., Griffin, T. W., Todd, M. B., Yu, M. K., Park, Y. C., Kheoh, T., Small, E. J., Scher, H. I., Molina, A., Ryan, C. J., and Saad, F.**  
Updated Interim Efficacy Analysis and Long-term Safety of Abiraterone Acetate in Metastatic Castration-resistant Prostate Cancer Patients Without Prior Chemotherapy (COU-AA-302)  
Eur.Urol. 6-3-2014

**Smith T, Agar M, Jenkins C, Ingham J, and Davidson P**

Non-Invasive Ventilation : Better Than You think-Insights from 'Behind The Mask"  
Respirology 2014 Volume 19 Issue S2 Pages 99-99

**Smith T, Dunford M, Clarke E, Agar M, Davidson P, Piza M, Jenkins C, and Ingham J**

Symptom Burden and Delirium Prevalence in Patients Undergoing Acute Non-Invasive Ventilation  
Respirology 2014 Volume 19 Issue S2 Pages 98-98

**Thompson, S. R., Delaney, G. P., Gabriel, G. S., and Barton, M. B.**

Patterns of care study of brachytherapy in New South Wales: cervical cancer treatment quality depends on caseload  
J.Contemp.Brachytherapy. 2014 Volume 6 Issue 1 Pages 28-32

**To, T. H., Agar, M., Yates, P., and Currow, D. C.**

Prescribing for nausea in palliative care: a cross-sectional national survey of Australian palliative medicine doctors  
J.Palliat.Med. 2014 Volume 17 Issue 9 Pages 1032-1036

**Vardy, J. and Agar, M.**

Nonopioid drugs in the treatment of cancer pain  
J.Clin.Oncol. 1-6-2014 Volume 32 Issue 16 Pages 1677-1690

**Virdun C, Brown N, Phillips J, Luckett T, Green A, Davidson PM, and Agar M**

Elements of optimal paediatric palliative care for children and young people: An integrative review using a systematic approach  
Collegian 2014 Volume Epub ahead of print



**Walker, Amy, Liney, Gary, Metcalfe, Peter, and Holloway, Lois**

MRI distortion: considerations for MRI based radiotherapy treatment planning

Australasian Physical & Engineering Sciences in Medicine 2014 Volume 37 Issue 1 Pages 103-113

**Wang D, Koh ES, Descallar J, Pramana A, Vinod SK, and Ho Shon I**

Application of novel quantitative techniques for FDG-PET/CT in patients with non-small cell lung cancer.

Journal of Thoracic Oncology 1-6-2014

**West, T. A., Kiely, B. E., and Stockler, M. R.**

Estimating scenarios for survival time in men starting systemic therapies for castration-resistant prostate cancer: a systematic review of randomised trials

Eur.J.Cancer 2014 Volume 50 Issue 11 Pages 1916-1924

**Wright KM, Whiting DL, Simpson GK, Koh ES, Simpson T, Firth R, and Gillett L**

Development and evaluation of information resources for patients, families and health care providers addressing behavioural and cognitive sequelae of adults with a primary brain tumour

Journal of Neuroscience Nursing 2014

**Xing, Aitang, Arumugam, Sankar, Deshpande, Shrikant, Armia, George, Holloway, Lois, Goozee, Gary, Gray, Alison, and Vial, Philip**

Streamlining EPID-based IMRT quality assurance: auto-analysis and auto-report generation

Journal of Physics: Conference Series 2014 Volume 489 Issue 1 Pages 012084-

**Yamaguchi, T., Kuriya, M., Morita, T., Agar, M., Choi, Y. S., Goh, C., Lingegowda, K. B., Lim, R., Liu, R. K., MacLeod, R., Ocampo, R., Cheng, S. Y., Phunggrassami, T., Nguyen, Y. P., and Tsuneto, S.**

Palliative care development in the Asia-Pacific region: an international survey from the Asia Pacific Hospice Palliative Care Network (APHN)

BMJ Support.Palliat.Care 10-7-2014

**Yap, M., Vinod, S., and Delaney, G.**

Minimally invasive techniques for medically inoperable stage 1 non small cell lung cancer: radiotherapy is still the gold standard

J.Med.Imaging Radiat.Oncol.2014 Volume 58 Issue 1 Pages 134-

**Yip, P. Y., Cooper, W. A., Kohonen-Corish, M. R., Lin, B. P., McCaughan, B. C., Boyer, M. J., Kench, J. G., and Horvath, L. G.**

Phosphorylated Akt expression is a prognostic marker in early-stage non-small cell lung cancer

J Clin Pathol. 2014 Volume 67 Issue 4 Pages 333-340

### **July 2013 to December 2013**

---

**Arumugam S, Young T, Xing A, and Holloway L**

What VMAT Delivery Errors Can Be Detected with Commercial Dosimetric Systems? A Comparison of Three Dosimetric Systems

Medical Physics 2013 Volume 40 Issue 6 Pages 432-432



**Arumugam, S., Xing, A., Jameson, M., and Holloway, L.**

An algorithm to calculate a collapsed arc dose matrix in volumetric modulated arc therapy  
Med.Phys. 2013 Volume 40 Issue 7 Pages 071724-

**Arumugam, S., Jameson, M. G., Xing, A., and Holloway, L.**

An accuracy assessment of different rigid body image registration methods and robotic couch positional corrections using a novel phantom  
Med.Phys. 2013 Volume 40 Issue 3 Pages 031701-

**Boxer, M. M., Delaney, G. P., and Chua, B. H.**

A review of the management of ductal carcinoma in situ following breast conserving surgery  
Breast 2013 Volume 22 Issue 6 Pages 1019-1025

**Boyes, A., D'Este, C., Carey, M., Lecathelinais, C., and Girgis, A.**

How does the Distress Thermometer compare to the Hospital Anxiety and Depression Scale for detecting possible cases of psychological morbidity among cancer survivors?  
Support.Care Cancer 2013 Volume 21 Issue 1 Pages 119-127

**Boyes, A. W., Girgis, A., D'Este, C. A., Zucca, A. C., Lecathelinais, C., and Carey, M. L.**

Prevalence and predictors of the short-term trajectory of anxiety and depression in the first year after a cancer diagnosis: a population-based longitudinal study  
J Clin Oncol 20-7-2013 Volume 31 Issue 21 Pages 2724-2729

**Cooper, W. A., Yu, B., Yip, P. Y., Ng, C. C., Lum, T., Farzin, M., Trent, R. J., Mercorella, B., Clarkson, A., Kohonen-Corish, M. R., Horvath, L. G., Kench, J. G., McCaughan, B., Gill, A. J., and O'Toole, S. A.**

EGFR mutant-specific immunohistochemistry has high specificity and sensitivity for detecting targeted activating EGFR mutations in lung adenocarcinoma  
J.Clin.Pathol. 2013 Volume 66 Issue 9 Pages 744-748

**Courneya, K. S., McKenzie, D. C., Mackey, J. R., Gelmon, K., Friedenreich, C. M., Yasui, Y., Reid, R. D., Cook, D., Jespersen, D., Proulx, C., Dolan, L. B., Forbes, C. C., Wooding, E., Trinh, L., and Segal, R. J.**

Effects of exercise dose and type during breast cancer chemotherapy: multicenter randomized trial  
J.Natl.Cancer Inst. 4-12-2013 Volume 105 Issue 23 Pages 1821-1832

**Dempsey, C., Smith, R., Nyathi, T., Ceylan, A., Howard, L., Patel, V., Das, R., and Haworth, A.**

ACPSEM brachytherapy working group recommendations for quality assurance in brachytherapy  
Australas.Phys.Eng Sci.Med. 2013 Volume 36 Issue 4 Pages 387-396

**Fox, P., Hudson, M., Brown, C., Lord, S., GebSKI, V., de Souza P., and Lee, C. K.**

Markers of systemic inflammation predict survival in patients with advanced renal cell cancer  
Br.J.Cancer 9-7-2013 Volume 109 Issue 1 Pages 147-153



**Holloway L, Batumalai L, Moran V, Liney C, Koh ES, Lazarus E, Dimigen M, Papadatos G, Boxer M, Chan C, and Delaney GP**

Comparison of Prone and Supine MRI Sequences for the Purpose of Radiotherapy Treatment Planning for Breast Cancer  
Medical Physics 2013 Volume 40 Pages 191-191

**Kim, M., Li, M., Intong, L. R., Tran, K., Melbourne, W., Marucci, D., Bucci, J., de, Souza P., Mallesara, G., and Murrell, D. F.**

Use of cetuximab as an adjuvant agent to radiotherapy and surgery in recessive dystrophic epidermolysis bullosa with squamous cell carcinoma  
Br.J.Dermatol. 2013 Volume 169 Issue 1 Pages 208-210

**Lim S., DeSouza P**

Imatinib in neurofibromatosis type 2  
BMJ Case Reports 2013 pii:bcr2013010274.doi 10.1136/bcr-2013-010274

**Motzer, R. J., Hutson, T. E., Cella, D., Reeves, J., Hawkins, R., Guo, J., Nathan, P., Staehler, M., de, Souza P., Merchan, J. R., Boleti, E., Fife, K., Jin, J., Jones, R., Uemura, H., De, Giorgi U., Harmenberg, U., Wang, J., Sternberg, C. N., Deen, K., McCann, L., Hackshaw, M. D., Crescenzo, R., Pandite, L. N., and Choueiri, T. K.**

Pazopanib versus sunitinib in metastatic renal-cell carcinoma  
N.Engl.J.Med. 22-8-2013 Volume 369 Issue 8 Pages 722-731

**Nelson, Vinod and Gray, Alison**

Electron beam energy monitoring using thermoluminescent dosimeters and electron back scattering  
Radiation Measurements 2013 Volume 56 Pages 213-216

**Ng RW., Lim CED, Chong N., Cheng L., Strutt R., Wiltshire J., Cigolin M., Zaslowski C**

Number and Necessity of Tests Performed In the Last Week of Life of a Cancer Patient  
Journal of Geriatrics and Palliative Care December 2013 Volume 1 Issue 1 Pages 1-4

**Paz-Ares, L., Balint, B., de Boer, R. H., van Meerbeeck, J. P., Wierzbicki, R., de, Souza P., Galimi, F., Haddad, V., Sabin, T., Hei, Y. J., Pan, Y., Cottrell, S., Hsu, C. P., and Ramlau, R.**

A randomized phase 2 study of paclitaxel and carboplatin with or without conatumumab for first-line treatment of advanced non-small-cell lung cancer  
J.Thorac.Oncol. 2013 Volume 8 Issue 3 Pages 329-337

**Roohullah, A., Moniwa, A., Wood, C., Humble, M., Balm, M., Carter, J., and Weinkove, R.**

Imipenem versus piperacillin/tazobactam for empiric treatment of neutropenic fever in adults  
Intern.Med.J. 2013 Volume 43 Issue 10 Pages 1151-1154



**Ryan, C. J., Smith, M. R., de Bono, J. S., Molina, A., Logothetis, C. J., de Souza P., Fizazi, K., Mainwaring, P., Piulats, J. M., Ng, S., Carles, J., Mulders, P. F., Basch, E., Small, E. J., Saad, F., Schrijvers, D., Van, Poppel H., Mukherjee, S. D., Suttman, H., Gerritsen, W. R., Flaig, T. W., George, D. J., Yu, E. Y., Efstathiou, E., Pantuck, A., Winkler, E., Higano, C. S., Taplin, M. E., Park, Y., Kheoh, T., Griffin, T., Scher, H. I., and Rathkopf, D. E.**

Abiraterone in metastatic prostate cancer without previous chemotherapy  
N.Engl.J.Med. 10-1-2013 Volume 368 Issue 2 Pages 138-148

**Suttle B, W., Duong, H. T., Lu, H., de Souza, P. L., and Stenzel, M. H.**

Folate conjugation to polymeric micelles via boronic acid ester to deliver platinum drugs to ovarian cancer cell lines

Biomacromolecules. 8-4-2013 Volume 14 Issue 4 Pages 962-975

**Ryan B, Hurwitz H, DeSouza P, and Arumugham T**

coupePazopanib-Induced Increases in Blood Pressure and transaminases  
The Journal of Clinical Pharmacology 2013 Volume 53 Issue 4

Pages 377-384

**Weber, M. F., Smith, D. P., O'Connell, D. L., Patel, M. I., de Souza, P. L., Sitas, F., and Banks, E.**

Risk factors for erectile dysfunction in a cohort of 108 477 Australian men  
Med.J.Aust. 22-7-2013 Volume 199 Issue 2 Pages 107-111

**Won, A. C., Gurney, H., Marx, G., de Souza P., and Patel, M. I.**

Primary treatment of the prostate improves local palliation in men who ultimately develop castrate-resistant prostate cancer

BJU.Int.2013 Volume 112 Issue 4 Pages E250-E255

**Yee, G. P., de Souza P., and Khachigian, L. M.**

Current and potential treatments for cervical cancer

Curr.Cancer Drug Targets. 2013 Volume 13 Issue 2 Pages 205-220

## **UNIVERSITY ACHIEVEMENTS 2013/2014**

---

**Alharthi T**

**Masters :2013 Evaluation of diffusion weighted imaged (DWI) techniques for prostate radiotherapy planning. 2014**

University of Sydney , NSW Australia

**Bartley J**

Masters in Clinical Nursing (Oncology)

University of Tasmania, December 2013

**Begg J**

Masters :Assessment of 2D and 3D Image Characteristics of an Optical CT Scanner for 3D Dosimetry RMIT, 2014

**Dr Annette Tognela**

Senior Lecturer Oncology

University of Western Sydney Sydney, 2014



**Forstner D**

Dean of the Faculty of Radiation Oncology  
The Royal Australian and New Zealand College of Radiologists Sydney

**Hajie J.**

Masters :**A Semi-automated Scripting Method for Breast Radiation Therapy Treatment Planning.**

University of Wollongong Wollongong, NSW, Australia 2014

**Hoppe M.**

Masters :**Assessment of a lung equivalent gel dosimeter**

University of Sydney, Australia 2014

**Herbst U**

Conjoint Appointment with UNSW  
UNSW Sydney, Australia, August 2013

**Ing L**

Masters of Cancer and Haematology Nursing  
University of Sydney June 2014

**Kaur M**

Graduate Certificate in Oncology Nursing December 2013  
University of Tasmania, 2013

**O'Connor C**

Masters of Palliative Care  
Flinders University South Australia, 2013

**Ponnam, N**

Graduate Certificate in Cancer Nursing  
University of Tasmania. December 2013

**Rajan S**

Graduate Certificate in Cancer Nursing  
College of Nursing, 2013

Shrestha A

Graduate Certificate in Cancer Nursing  
College of Nursing, 2013