Liverpool Cancer Therapy Centre

Ten Years of Achievement

1995-2005
In memory of Bernadette Donovan
12 September 1945 – 20 June 2000

Bernadette was one of the original Cancer Therapy Centre nurses. She tragically died as a result of cancer. Bernadette epitomised everything that is good about the Cancer Therapy Centre. She had a good sense of humour, was hard-working, kind-hearted and cared a lot about her job. She was well-respected. We thought it appropriate to have this report dedicated to the memory of Bernadette.
This decade of achievements by the Liverpool Cancer Therapy Centre is nothing short of outstanding. It shows what people can achieve by working together and an achievement far beyond that which will occur if individuals proceed in isolation.

The beneficiaries are the patients. The well documented Patterns of Care Studies in the USA and more recently documentation in other countries demonstrates the importance for good patient outcomes of grouping the speciality activities together. Aggregation of care permits the development of sub-speciality tumour programs; and ensures the level of professional activity that maintains skills and expertise at a high level.

The importance of training others – the next generation of professionals; and the need for research activities – the increase in the sum of human knowledge; are core activities of a tertiary health service that can only evolve satisfactorily once the professionals have come together in this way.

It is with great pride that I commend you this report, and ask you to enjoy the successes of our centre.

Dr Diana Horvath
Chief Executive
Sydney South-West Area Health Service
Over the past ten years I have enjoyed many rewards and challenges as the Director of Liverpool Cancer Therapy Centre. The Centre was established as a greatly needed focal point for cancer patients and services in south western Sydney. It brought together a wide range of diagnostic, treatment and support professionals and volunteers in a modern building and specialised environment. This anniversary celebrates the aspirations and achievements of the numerous people who have played a part in these formative years.

Medical Oncology services were established at Liverpool in 1988, but it was not until 1995 that a comprehensive cancer centre accommodating medical and radiation oncology, allied health and palliative care was built and officially opened by the Honourable Ron Phillips. The Liverpool Cancer Therapy Centre was one of the first purpose-built multidisciplinary cancer centres in NSW. The new model of cancer care, based on the experience of established centres, provided a framework within which we could be innovative in designing a service to meet local needs. Many of the pioneering staff across different disciplines continue to work in the Centre. They have contributed to a work culture that recognises the importance of management, research, teaching and personal development in addition to patient service.

In 2000 the scope of the cancer service was formally broadened to include the whole south western region of Sydney with my appointment as Director of the SWS Cancer Service. An important organisational change was the setting up of site-specific Tumour Programs for the ten major cancer groupings. A Tumour Program consists of a multidisciplinary team (nursing, medical specialties, community, palliative care, and allied health) whose focus is on the treatment, support and care of patients with a particular type of tumour during their entire experience following a diagnosis of cancer.
This was necessary to better address the specific needs of patients with different cancers and to give them certainty that they would have access to the right clinicians when they needed them. A locally developed care coordination service is now operating in six Tumour Programs to support patients by providing them with a single point of contact.

Over the past two years the fight against cancer has received an unprecedented boost from the NSW government. The appointment of a special Minister for Cancer, Chief Cancer Officer and the foundation of the Cancer Institute NSW has given state-wide direction for coordinating and creating better cancer services, research, patient and professional support.

In January 2005 the Liverpool Cancer Therapy Centre became part of an amalgamated service with the former Central Sydney Area Health Service. This has opened up many opportunities to share experiences and benefit from an expanded resource base that will lead to better patient care. We are about to enter a new era of high growth driven by the rapidly expanding population in Sydney’s south west and the political imperative to maintain services to match the population demand.

Despite many changes, after ten years the Centre can lay claim to its own traditions in service innovation, technical excellence, research and patient focussed care for which all those who have taken part in its development can share a sense of pride.

Martin Berry
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I am pleased to present the report of 10 years of the medical oncology service within the Liverpool Cancer Therapy Centre. Medical Oncology services at Liverpool actually commenced with clinics and chemotherapy administration in 1988 provided by Dr Eugene Moylan, the current director of Medical Oncology at Liverpool Hospital. This was a significant improvement in the service delivery of patients requiring medical therapy for early and advanced cancers, reducing travelling time, cost and inconvenience to patients. Eugene had the vision and drive to argue for a comprehensive cancer centre on site at Liverpool as the hospital moved from District Hospital to Teaching Hospital status.

Dr David Goldstein was appointed Director of Medical Oncology in 1994 just prior to the commissioning of the Cancer Therapy Centre in 1995. Dr Amanda Goldrick was also appointed as a Medical Oncologist and palliative care physician in 1994. I joined the service in 1996 upon Dr Goldstein leaving for Prince of Wales Hospital. Dr Eva Segelov was appointed as a Senior Lecturer (1998-2003) and Dr Elizabeth Hovey was appointed in 2000. Dr Richard Eek commenced work in March 2005.

Recognising the enormous geographical area of South West Sydney and the need to provide services as close as possible to patients we commenced a consulting clinic at Campbelltown Hospital in 1996 and in Bowral in 2000. Extensive consultation and planning led to the commissioning of the comprehensive Macarthur Cancer Therapy Centre at Campbelltown Hospital in February 2003.

The strength of our unit lies in the people and the commitment they show to high quality patient care. This is achieved by implementing current best practices, participating in patient-centred multidisciplinary care and contributing to new cancer knowledge through an extensive clinical trials programme. We have a high quality clinical trials unit with Liverpool being a leading site for enrolment of patients into landmark studies of new treatments of breast, colorectal, lung and prostate cancers. We have been awarded grants for clinical trials staff from the NSW Cancer Council and the NSW Cancer Institute. Our ability to work as a team of doctors, nurses and pharmacists has seen us implement a safer method of chemotherapy prescribing using the Lantis® application, oral antinausea medications and improved hydration methods for chemotherapy administration.
These quality improvements in the delivery of chemotherapy have led to reductions in errors and costs as well as improved efficiencies.

We are proud of the registrars that we have trained and are privileged to see them commence their careers around the world. We have contributed to the teaching of the principles of medical oncology to radiation, palliative care and general medical registrars and the range of students through the University of NSW. Teaching nurses, pharmacists, allied health, patients and their carers has been a major achievement for the department.

The expanding role of chemotherapy, hormonal and targeted antibody treatments during this decade has created a challenge to provide medical oncology services to the rapidly growing south-western metropolitan region of Sydney. The opening of the second linear accelerator at Macarthur and the announcement of additional positions including a Professor of Medical Oncology will allow our workforce to grow and meet the needs of our population and continue to add to cancer research and education.

The commitment and dedication that all of our staff have shown over this period has prepared us for our future challenges of further population growth, new technologies and cancer education and prevention. Without their energy, innovation and dedication we would not be where we are now. We have come a long way since Dr Eugene Moylan first established the department in 1988.

The Medical Oncology Executive

Dr Eugene Moylan MBBS, FRACP

Chair of Medical Oncology Executive, Director of Medical Oncology Liverpool

Dr Moylan is a senior staff specialist in Medical Oncology and has been the Director of the Medical Oncology service since 1997. He commenced at the Liverpool Hospital in 1988 after training and working at Concord and Prince Of Wales Hospitals. His main interests are breast, gastrointestinal (upper and lower) and genitourinary cancers as well as keeping an interest in the management of lymphomas and sarcomas.

He has been the chair of the Cancer Therapy Centre Education Committee and a member of many other planning and management committees. He has a conjoint appointment as Senior Lecturer with the University of NSW.

When not at work, Dr Moylan’s main interests are his family of 8 children, cycling, gardening and crossword puzzles.

Dr Stephen Della-Fiorentina MBBS (Hons), FRACP

Interim Area Director Medical Oncology, Director of Macarthur Cancer Therapy Centre

Dr Stephen Della-Fiorentina is a senior medical oncologist and Director of the Macarthur Cancer Therapy Centre, which opened in 2003. In 2004, with the planned amalgamation of the Area Health Service he was appointed as Interim Area Director of Medical Oncology in South West Sydney. His clinical interests are lung and breast cancer.
Dr Richard Eek MBChB (SA), MMed (Int), FCP (SA) – Medical Oncologist

Dr Richard Eek commenced work at the Cancer Therapy Centre in March 2005, relocating from South Africa. He completed pre-graduate training in 1988 (Cum Laude) in Pretoria, and received the medal for Internal Medicine and Ophthalmology. He qualified as Specialist Physician (Cum Laude) in 1995, and received the SA National Suzman medal during completion of physician training in South Africa.

He trained as a Medical Oncologist under Prof G Falkson, and is an active member of ECOG for 7 years. He has authored several publications, with a keen interest in breast cancer, colorectal cancer, plasma cell and lymphoproliferative disorders. Quality of life is an area of special interest in management of patients with cancer. In his spare time he enjoys playing his guitar, hiking, camping and jogging.

Dr Amanda Goldrick MBBS, FRACP – Medical Oncologist

Dr Amanda Goldrick, a specialist in Medical Oncology, joined the staff at Liverpool Cancer Therapy Centre in 1995. Her main clinical interests are the treatment of breast, gynaecological and head and neck malignancies. She has been an active participant in the Multidisciplinary Breast and Gynaecological teams and clinical trials in these tumour sites.

The 2005-year holds exciting prospects for Amanda, as she gains further expertise working for one of the world’s largest and most prominent cancer research and treatment organizations, the British Columbia Cancer Agency in Canada.

Dr Elizabeth Hovey MBBS, FRACP, MSc – Medical Oncologist

Dr Elizabeth Hovey is a staff specialist in Medical Oncology at Liverpool Cancer Therapy Centre, commencing in July 2001. She trained at Royal Prince Alfred Hospital and then for 3 years at Columbia-Presbyterian Medical Centre/Columbia University, New York. During that time she also received a full scholarship to complete a Masters of Science (in Biostatistics in Patient-Oriented Research) at the Columbia University School of Public Health.

Her clinical interests are genitourinary and neuro-oncology cancers. She is currently the secretary of NSW Neuro-Oncology Group and was instrumental in the development of a national Neuro-oncology Group for COSA.
Dr Elizabeth Hovey continued
Working in CCORE she has contributed a chemotherapy module for an international interactive CD-ROM designed for distance learning, as well as undertaken multicentre patterns of care studies and surveys reviewing the management of high grade gliomas and prostate cancer (presenting these findings at national meetings including COSA and MOG). She is a senior conjoint lecturer at UNSW, having developed a new syllabus for communication skills for medical students (including “Breaking Bad News”, “Informed Consent” and Masterclasses), in addition to being a tutor in Evidence-Based Medicine and Oncology.

She has participated in the development of the new UNSW Oncology Core Curriculum. She participates in post-graduate teaching including lecturing for the Basic Sciences of Oncology Course run by the NSW Cancer Institute. She is a reviewer for MJA (Medical Journal of Australia) reviewing oncology and epidemiology articles and has recently been invited to be on the neuro-oncology review panel for a new oncology journal: Asia Pacific Journal of Clinical Oncology. Her interests outside of work include directing for the theatre and travel.

Mr Vu Nguyen – Research Manager of Clinical Trials Unit
Vu Nguyen supervises the initiation, conduct and auditing of the clinical research program. He has a degree in Science (Bachelor of Biotechnology) and Graduate Certificate in Health Information Management (Clinical Data Management and Clinical Trials). The unit has achieved a high quality of work performed for international and national clinical trial groups.

Outside the workplace, Vu’s interests include tennis, soccer and reading.

Ms Fariba Khosravan – Oncology Pharmacy
Fariba Khosravan is the senior oncology pharmacist for the Cancer Services at Liverpool Hospital. She commenced at Liverpool in 2000. She has been a member of the project team for Lantis® electronic prescribing.

Outside the workplace, Fariba’s interests include attending the gym, watching nice movies and dining out.
Medical Physics Report

Mr Robin Hill, Dr Lois Holloway

The original medical physics group of Wayne Beckham, Robin Hill and Mario Perez were involved prior to the opening of the CTC, through to the commissioning of radiotherapy equipment. The first machine was installed in late December 1994 when the long task of commissioning began. From the hard work that was put in, the radiotherapy treatment and planning equipment were able to be used in clinical service at the required time. Since the first day, the physics staff has been actively involved in commissioning of new radiotherapy equipment including new linear accelerators, brachytherapy service and new treatment planning systems. The medical physics group has always had a younger profile, but this has led to the development of staff and allowing excellent growth in knowledge and skills. This had meant that the Physics group has provided high quality services in terms of commissioning work, quality assurance, treatment planning and dosimetry, education and research.

By taking a multidisciplinary approach, we have been able to develop the department into one which now has a highly regarded reputation within Australia. A benefit of this has been the reduction of staff shortages as compared to several years ago and increased skills mix.

Medical Physics research is of vital importance for improving the technology and techniques that we treat our patients with. At SWSCS this is an area which has developed significantly over the ten years of the department and further expansion is planned for the coming ten years. Through the support of the chief physicist and the radiation oncologists, the initial Research Fellow position was established in 1997. The initial work was to develop research interests of the physics group, establishing research support within the department, including joint projects and research meetings with the Radiation Therapists and Oncologists, and encouraging external students to the department. Since then research opportunities for the group in collaboration with the other professional groups in the department and the universities have continued to develop. It is anticipated that in the near future two postdoctoral research fellows will be employed who, together with the current physics group, will work on improving patient treatments.

Current projects include motion correction investigations in collaboration with Sydney University, adaptive radiotherapy and physiological IMRT. Further student projects are also encouraged in the department. Over the ten years of the department, three honours students, two masters student and two PhD students have completed their projects while involved in the department. Currently two masters and four PhD students are working in collaboration with the department towards completion of their projects. Together with research activities occurring throughout the cancer therapy centre it is anticipated that our goal of improving treatments for our patients will continue to be met.

The Medical Physics group is proud of their achievements and look forward into the next ten years with anticipation of new technologies in radiation therapy being implemented within the centre.
What a 10 years it has been for radiation oncology! Rapid expansion during that period has seen the radiation oncology service grow from nothing to now being an integrated service across two sites with five linear accelerators and outreach services at Bankstown and Bowral.

I am proud of the contribution made by all staff during this period as we have grown to the size that we are now. I am sure that you will agree when looking through this report that substantial excellent work has been achieved during this period. With further land releases planned for areas around Liverpool and Campbelltown, and with the newly-announced restructure of the area health services, the new radiation oncology service for the Sydney South Western Area Health Service will grow even further over the next 10 years. I hope that you enjoy reading about the achievements of this fabulous group of people.

As late as 1994, patients with cancer that required radiotherapy were referred to Prince of Wales Hospital. The radiation oncologists at Prince of Wales provided a consultative service at Liverpool and Campbelltown. However, anyone requiring treatment were required to travel into Randwick for their treatment. Those too sick to travel missed out on radiotherapy altogether or were transferred to Prince of Wales Hospital as an inpatient to undergo treatment thus being removed from their home environment for up to 7 weeks. For those patients considered fit to travel but without the means to provide their own transport, a bus service was provided which picked patients up at Campbelltown and Liverpool Hospitals. The patients on the bus would travel each day, back and forth. The round trip, including attendance for treatment, would frequently be 4-5 hours with patients from the Southern Highlands taking even longer for their treatment.

Some patients would have treatment courses that lasted 7 weeks. Therefore total travel distances would be nearly 5000 kilometres! In addition, the roads were not as good as they are today – there was no M5 freeway!
In 1995, the Liverpool Hospital radiation oncology service opened its doors to patients with the first patient receiving treatment on site on 1 May, 1995.

The department was the first in NSW to have a dedicated planning CT scanner within the department. Since then, Liverpool Hospital Radiation Oncology Department has three linear accelerators as well as a high dose rate brachytherapy service. It was planned that Liverpool would ultimately require four linear accelerators. However, in 1999, through the hard work of many members of staff we were able to advocate successfully for a radiation oncology service at Campbelltown Hospital and the Macarthur Cancer Therapy Centre was born. This department commenced treatment on 22 September 2003 and now has two linear accelerators.

In 1999, our department was selected as the pilot site to implement a new radiation oncology computerised information system and this has allowed an integrated electronic record across the area for radiation oncology. In addition, this information system is integrated with the medical oncology departments at Liverpool and Campbelltown.

Nowadays, we have integrated treatment facilities at both Liverpool and Campbelltown Hospitals along with outpatient consultative services at Bankstown and Bowral. Radiation oncologists participate in the wide-ranging multidisciplinary groups that have been established at Liverpool, Campbelltown and Bankstown Hospitals, working side-by-side with their colleagues in surgery, medical oncology, respiratory medicine, gastro-enterology, haematology, gynaecological oncology, palliative care, social work, allied health and psychological medicine. We have established research groups in radiation therapy, medical physics and radiation oncology.

The Collaboration for Cancer Outcomes Research and Evaluation (CCORE) is a health services research group established by the early Liverpool Hospital radiation oncologists to further collaborative research into the clinical service delivery of radiotherapy. This group is headed by A/Prof Michael Barton who has done an excellent job in establishing this group and developing CCORE to the forefront of oncology health services research over the past 5 years. Our focus on research is recognized nationally and internationally.

The radiation oncology group also have an active education programme. The undergraduate education programme includes regular medical student tutorials and clinic attachments and attendance at ward rounds and multi-disciplinary clinics.

Post-graduate teaching in medical physics, radiation therapy and radiation oncology have been established with strong records in each of these disciplines. All radiation oncology registrars who have trained at the centre have passed all of their examinations at their first attempt with several winning awards along the way and our department maintains a strong interest in registrar training.

I am proud of our achievements and reflect on what has occurred over the last 10 years and wonder how we have fitted all of this in such a short period of time. I wish to take this opportunity to thank all of the people who have worked with us and acknowledge the contribution that each and every one has made in establishing this service.
**The Radiation Oncology Executive**

*A/Prof Geoff Delaney* MBBS, MD, FRANZCR  
Chair of Radiation Oncology Executive, Director of Radiation Oncology  
Associate Professor Delaney is a senior staff specialist in radiation oncology and the Director of the Radiation Oncology service. He commenced at the Liverpool Cancer Therapy Centre in 1996 after doing a research fellowship at Westmead Hospital. Since then he was appointed Director of Radiation Oncology in 2002. He has been involved in local, state, national and international committees relating to oncology and has published research in a wide variety of aspects of oncological care. His main interests are health services research, information technology, breast cancer and lung cancer. He has been the chair of the Cancer Therapy Centre and SWSAHS Cancer Information Management Committees and was previously chair of the Cancer Therapy Centre Clinical Trials committee. When not at work, Geoff’s main interests are baseball, golf, tennis, cryptic crosswords and his family.

*A/Prof Michael Barton* MBBS, FRANZCR  
Deputy Director of Radiation Oncology, Director of CCORE  
Associate Professor Michael Barton is the Research Director of the Collaboration for Cancer Outcomes Research and Evaluation at Liverpool Hospital NSW where he is also deputy director of Radiation Oncology. He has a wide range of clinical and research interests with publications covering the gamut of clinical oncological interests from screening to palliation and cost-effectiveness. He has been involved in state, national and international strategic planning projects for cancer services. He chairs the Post Fellowship Education Committee of the Faculty of Radiation Oncology of the RANZCR. He started the Basic Science of Oncology course, which he ran from 1994 to 2001. He was the inaugural chair of The Cancer Council Australia’s Oncology Education Committee and was the Chair of the recently introduced Cancer Block of the Sydney University Graduate Medical Program. He is the Australian representative to the radiotherapy section of the International Atomic Energy Agency for whom he is developing a distance-learning course in the Basic Sciences of Radiation Oncology. He was the recipient of the NSW Cancer Council Inaugural Award for Professional Excellence in professional education in 2000. Michael’s main interests outside work are bird watching and playing the clarinet.

*Mrs Sandy Avery* Business Manager  
After successfully completing a post graduate certificate in Business and Administration in 2001, with credits and distinctions in courses chosen to enhance the innovations being driven in research at the time, Sandra joined Cancer Services, bringing several years of experience within Liverpool Health Service. Prior to health, her background includes budget development and reporting for primary industry and several years working for quarantine focusing on processes, implementation of new technology and cost recovery.
Mrs Sandy Avery continued
Sandra has recently achieved a Diploma of Business (Frontline Management), using this as a catalyst to implement a pilot Business Administration course for administrative staff. This will include process reviews, structured training programmes, and workplace competency assessments developed and applied across Cancer Services. Area Human Resources Development will be working closely with us to ensure the best results and make our administrative team the best they can be. Sandra enjoys spending time with her family, entertaining, retail therapy and traveling. Happily, these can be combined to achieve her pursuit of efficient processes and best practice.

A/Prof Martin Berry  MBBS, FRANZCR
Director of Cancer Therapy Centre, Radiation Oncologist
Martin was appointed as the first Director of the Liverpool Hospital Cancer Therapy Centre in 1994 and was Director of Radiation Oncology 1994-2002. He has facilitated the establishment of a comprehensive cancer service that includes multi-disciplinary practice, education and research programs. He has served on numerous State and National committees and major achievements have been the delivery of a sound policy framework for cancer in NSW and a state-wide radiotherapy information management system. In November 1999 Martin was appointed Area Director of the SWS Cancer Service. Through the Cancer Services Development Project he has implemented site specific Tumour Programs across the Area and the first Cancer Care Coordination Service in Australia.

In 2005 he was appointed Chief Censor for the Faculty of Radiation Oncology in the Royal Australian and New Zealand College of Radiologists. He holds a conjoint appointment with the UNSW SWS Clinical School as Associate Professor and his clinical interests are in paediatric and urological oncology. He was instrumental in establishing a number of pioneering efforts in education including a state wide multi-disciplinary group in urological cancer. He was a member of the Australian Cancer Network Group that devised National Best Practice Guidelines for prostate cancer. Interests outside work include being with his family, playing jazz and blues guitar, keeping fit and reading.

Dr Allan Fowler  MBBS, FRANZCR – Radiation Oncologist
Dr Allan Fowler is a staff specialist in Radiation Oncology at Liverpool and Macarthur Cancer Therapy Centres, commencing in 1997. His main interests are the treatment of gynaecological, head and neck, and skin malignancies. He is chairperson on the Head and Neck Tumour site program and of the Cancer Therapy Centre Information Management and Technology committee. In 1998 Allan assisted in introducing a brachytherapy program to Liverpool and this was a significant improvement for selected patients, especially with gynaecological cancer.

Allan is on leave from Liverpool and Macarthur in 2005 while he gains further experience working for one of the world’s largest and most prominent cancer research and treatment organisations, the British Columbia Cancer Agency, in Vancouver. His interests outside of work include travelling and gardening.
Dr Andrew Kneebone  MBBS, FRANZCR  – Radiation Oncologist
Dr Andrew Kneebone has been a staff specialist in Radiation Oncology at Liverpool Hospital since 1998 and also conducts a weekly radiation oncology clinic at Bankstown hospital. He is secretary of the South Western Sydney Colo-Rectal Tumour Group (CRTG) and is supervising the SWS CRTG database which now has information on more than 1800 colorectal cancer cases. He is also on the SWS executive overseeing upper gastrointestinal cancers. Andrew is secretary of the NSW Genitourinary oncology group and was instrumental in establishing 6-field conformal radiotherapy at Liverpool Hospital in 1999 (the first in Australia). He also arranged the purchase of the BAT ultrasound machine to localise the prostate prior to each treatment making the radiation treatment for prostate cancer among the best in Australia. He has a strong interest in clinical research and was the principal investigator in a major multi centre randomised trial aimed at preventing radiation induced rectal injury. Since then he has been involved in numerous other clinical trials and research groups.

Andrew’s other special interest is in education. He was secretary of the NSW Education co-ordinating committee from 1999 to 2004 which has overseen dramatic changes in radiation oncology registrar training over recent years and was supervisor of registrar training at Liverpool hospital during that period.

Dr Shalini Vinod  MBBS, MD, FRANZCR  – Radiation Oncologist
Dr Shalini Vinod is a staff specialist in radiation oncology at Liverpool Hospital. She commenced at Liverpool Hospital in 1999 in a fellowship position at the Collaboration for Cancer Outcomes, Research and Evaluation (CCORE). She undertook a study into lung cancer patterns of care, which continued when she became a staff specialist in 2001. In 2004 her thesis on lung cancer was accepted for a Doctor of Medicine degree at UNSW. She has been the Junior Forum representative to the Education Board of RANZCR and the Radiation Oncology Expert Advisory Group of the National Breast Cancer Centre. Her clinical interests are lung cancer, breast cancer and gynaecological cancers. She is involved in health services and lung cancer research. She works part-time and spends her non-clinical days looking after her two active young children.

Dr George Papadatos  MBBS, FRANZCR  – Radiation Oncologist
Dr George Papadatos is a staff specialist in radiation oncology at the Macarthur Cancer Therapy Centre (MCTC). He commenced his employment in the SWSAHS in 2002. He has previously worked as a consultant at Newcastle Mater, Peter Macallum Cancer Institute, The Alfred Hospital in Melbourne and St George Hospital. His main clinical interest is breast cancer, but enjoys a diverse practice which includes servicing the Southern Highlands. He is involved in both under-graduate and post-graduate teaching and is a member of the research committee. His interests outside work include spending time with family, fishing and home renovating.
Dr Dion Forstner  MBBS, FRANZCR – Radiation Oncologist

Dion Forstner is a staff specialist in radiation oncology. He commenced at Liverpool and Macarthur Cancer Therapy Centres in 2003 after completing his training at Royal Adelaide Hospital. His main interests are in the management of head and neck, skin, lung and breast cancer. In 2005 he became the Supervisor of Training for radiation oncology registrars. He has previously been a member of a number of committees responsible for quality, an area in which he has a keen interest. He is eager to make the workplace a friendly environment for patients and staff and has been involved with arranging some interesting bonding activities for staff. His interests away from work include sailing, gardening and politics.

Mr Anthony Arnold  BAppSc MRS (Radiation Therapy)

Director of Radiation Therapy

Anthony Arnold is the Director of Radiation Therapy for Liverpool and Macarthur Cancer Therapy Centres. Anthony joined the service in 2002 as the Deputy Chief Radiation Therapist for the new Macarthur site, where he was responsible for the commencement of the new radiation therapy service. In 2003 Anthony was promoted to the position of Radiation Therapy Director. Prior to joining the service, Anthony worked for 8 years with the Illawarra Cancer Care Centre, playing a pivotal role in the centre’s development and implementation of 3D treatment planning, Intensity Modulated Radiation Therapy (IMRT), and later as a lead site project co-ordinator for the NSW Health, Radiotherapy Information Strategy. His main interests today are further developing cancer related IT, IMRT and personal management development. When not at work Anthony can be found relaxing either indulging in some social golf ball abuse or somewhere on the south coast with his surfboard.

Mrs Lynette Cassapi  DCRIT BSc (Hons)

Assistant Director, Radiation Therapy - Liverpool

Lynette trained in the UK as a Radiation Therapist, qualified in 1988 and worked in a very large regional Cancer Centre for the subsequent 15 years. During this time she developed an interest in all aspects of research and audit, at various times working in a Clinical Trials Team & introducing a Research and Development role to the department while maintaining routine clinical duties. She migrated to Australia in October 2003 and joined South Western Sydney Cancer Services as the Assistant Director of Radiation Therapy, primarily based at the Liverpool Centre.

Her main interests are the improvement & promotion of Quality and Standards in Radiation Therapy, the processes involved in Radiotherapy Planning and ongoing Research and Development. Away from Radiation Oncology, she enjoys spending time with family and friends, entertaining, motor sports, cross-stitch and reading.
Ms Nicole Cusack  BAppSc, MRT (Radiation Therapy)  
Assistant Director Radiation Therapy – Campbelltown

Nicole Cusack completed a Diploma of Applied Science in Medical Radiation Technology in 1992 and later upgraded this to a Bachelor of Applied Science in Medical Radiation Technology, Radiation Therapy in 1994. She commenced work at Liverpool Cancer Therapy Centre in 1995 and is now Assistant Director of Radiation Therapy at Macarthur Cancer Therapy Centre. She has also worked in Newfoundland Canada and Nepean Cancer Care Centre which has broadened her knowledge of radiation therapy techniques and practices. She has a special interest in complementary therapies in cancer care. Nicole is currently studying a Master of Health Management. When not working or studying, Nicole enjoys spending time with her family and friends, walking her dog, entertaining and being entertained.

Mr Gary Goozée  BSc (Hons), DipEd, MSc, MACPSEM  
Director of Medical Physics

Gary Goozée is the Director of Medical Physics for South West Sydney Cancer Service. After commencing work in the field of Radiation Oncology Medical Physics in 1989, he has had appointments at Westmead, St George and Nepean Hospitals before moving to his current position in 2002. Since that time he has overseen the growth of the medical physics group to encompass two hospital sites and a significant increase in staff numbers. He has recently completed a two-year term as Council member and Chairman of the NSW/ACT Branch of the Australasian College of Physical Scientists and Engineers in Medicine (ACPSEM), and continues to be involved in the profession’s development through membership in the NSW Tripartite Committee, the ACPSEM Continuing Professional Development working party, and ongoing activities of the ACPSEM Branch Committee. His outside interests are family, reading, and web database development.

Mr Satya Rajapakse  BSc(Hons), MAppSc  
Deputy Director of Medical Physics – Campbelltown

Satya is the Principal Physicist at Macarthur Cancer Therapy Centre and the Deputy Director of Medical Physics at South Western Sydney Cancer Service. Satya has been working as a medical physicist for the past twenty-three years. Before commencing at Macarthur in 2002, he worked as the Chief Physicist at WP Holman Clinic, Launceston, Tasmania for three years and a Senior Physicist at North Queensland Oncology Service, Townsville, Queensland for five years bringing with him vast medical physics experience. His main interests are in developmental work in quality assurance procedures of linear accelerators, IMRT radiation dosimetry and image-guided radiation therapy. Satya’s main interests outside work are playing cricket, reading and spending time with his family.
Mr Virendra Patel MSc DipRP –
Deputy Director of Medical Physics – Liverpool
Virendra Patel joined the Liverpool Cancer Therapy Centre in September 2004 as a Deputy Director of Medical Physics. Having been involved in almost all areas of clinical radiotherapy physics, Virendra brings a wealth of skills and experience to the centre. Over the past 28 years he has worked at eight different centres and held positions ranging from physicist to Deputy Chief Physicist. He has been involved in commissioning and running new treatment units and modalities. Apart from medical physics his interests include movies, travel and family outings.

Mrs Catherine Murray RN, RM, BA, MChN – Senior Nurse Manager
Catherine Murray is the Senior Nurse Manager for Cancer Services at Liverpool Hospital. She commenced at Liverpool in September 2002 and has extensive experience in oncology & palliative care nursing. Her main interests are risk management, professional development & support strategies for the health workforce. She is the Chair of the Quality Improvement Committee, Incident Review Committee and is the management representative on the Occupational Health and Safety Committee (LHS). Outside the workplace, Catherine’s interests include music, reading and relaxing with her family.
In its foundation year the radiation therapy team in 1995 totalled 18 radiation therapists, and was led by Ms Marcia Fleet as the Chief Radiation Therapist. Marcia was instrumental in the commencement of the new centre and was the driving force behind the development of the radiation therapy team over the next 8 years.

In 1995, of those patients in South Western Sydney requiring radiation therapy 73% were treated outside of the Area Health Service, in 2004 of those patients from SWS that received radiation therapy, 75% were treated within the area – a true reflection of the success of Liverpool.

Since 1995, the radiation therapy service has evolved to what it is today; a leading service of excellence, one held in highest regard throughout Australasia for the continual dedication to quality patient care and development of best practice techniques for both the planning and delivery of radiation therapy to our patient population.

While experiencing the pressures of staff shortages within the radiation therapy field and subsequent patient waiting lists, the radiation therapy team has experienced significant change over the last 10 years, much of this attributed to the rapid progression of technological advancement.

Major projects have included the inception of conformal 3D planning techniques for all tumour sites, the implementation of the first BAT Ultrasound system in Australia for prostate treatment, introduction of a new multi-slice CT scanner and the subsequent design and introduction of virtual simulation techniques for each tumour stream. The radiation therapy team have also been crucial to the successful implementation of the Radiotherapy Information Strategy Project, for which Liverpool was a lead site.

In more recent times radiation therapy has been successful in the creation and recruitment of two full time educators, completion of a comprehensive review of patient imaging and the design of a dedicated radiotherapy quality audit database.

To finish I would like to say that I am extremely proud to lead the radiation therapy team that we have today, having now grown to over 38 staff. The strength of this team stems from the work and dedication that has been the last 10 years. I can only hope that we can continue to achieve as well as has been done in the first 10 years of Liverpool.
Liverpool Hospital has been innovative in its approach to treating prostate cancer.

The radiation oncology service has treated more than 350 patients with 6-field conformal radiotherapy and collects data on a prospective database. In 2003, Liverpool hospital (in conjunction with Westmead) published the largest Australian series of 460 prostate cancer patients with Dr Kneebone being the principal author. It is the only department in Australia to have a BAT ultrasound unit to enable accurate daily localisation of the prostate during treatment. Research into the BAT system is ongoing.

Outside the department, there is strong representation by various clinicians on state and national initiatives. A/Prof Martin Berry has been chair of the NSW Genito-Urinary Oncology Group and Dr Andrew Kneebone has been secretary for many years.

In collaboration with the Urological Society of Australia and the Faculty of Radiation Oncology Genito-urinary Group, A/Prof Martin Berry and Dr Andrew Kneebone have convened two very successful urologic master classes in 2001 and 2004 with excellent attendance from across Australia and New Zealand. They have also convened two international conferences in 1998 and 2000.

A/Prof Berry was the inaugural Chair of the Faculty of Radiation Oncology Genito-Urinary Group. A/Prof Berry was a contributing author to the NHMRC Evidence Based guidelines for the management of clinically localised prostate cancer and Dr Kneebone was on the Steering Committee for the writing of a guide for men and their families produced by the Australian Prostate Cancer Collaboration.

Some of the Multidisciplinary Breast Team.

Multidisciplinary Care
Both were instrumental in developing the National Consensus guidelines for the delivery of external beam radiotherapy, which have been published in the college journal.

(ii) Breast Cancer
Breast cancer remains the most common cancer in women. Over the past 10 years our department has managed approximately 2500 new cases of breast cancer. Our centre provides consultative services at Liverpool, Campbelltown, Bankstown and Bowral. Our multidisciplinary team meet weekly at Liverpool and fortnightly at Macarthur campus, with video-links between both sites. The group comprises of surgeons, medical oncologists, radiation oncologists, registrars, medical students, nurses and various allied support staff. The unit has a full-time care coordinator, which has helped improve the cancer journey of our patients.

The format of the meeting involves case presentations, discussions and finally a consensus to the optimal management of each individual patient. They are supported by Anatomical Pathology with presentation of the histopathology at both sites. Meetings also serve as a place for education and updates as well as a forum for discussing research and encouraging recruitment of patients to various trials.

The centre is active in recruiting patients to clinical trials, both national and international, exploring the role of new drugs as well as different surgical and radiotherapy techniques. We are currently in the process of analysing the large database of patients treated in our centre. Our plan is to record this valuable information into an electronic format that will allow outcomes to be measured and foster ongoing research within the centre. This initiative will also allow us to perform quality control audits, which in turn, will allow us to better document the high standard of care that our patients deserve.

(iii) Head and Neck Cancer
The Head and Neck Tumour program has been led by Dr Allan Fowler. Multidisciplinary meetings and clinics are held fortnightly at Liverpool Hospital attended by a head and neck surgeon, radiation oncologists, a medical oncologist, pathologist, dentist, speech pathologist and social worker. The patients are well supported by dietetic, speech pathology and social work staff throughout the course of their illness.

In Radiation Oncology the aim in the near future is to develop image fusion (where the planning CT scans and diagnostic images including MRI and PET scans are fused together to allow even more accurate targeting of the cancer than we have had before) and implementation of Intensity Modulated Radiotherapy (IMRT). We are in the process of enhancing patient information resources and introducing evidence based protocols for oral care. We plan to explore ways to enhance our service within the recently amalgamated Sydney South West Area Health Service by discussing common protocols and databases with colleagues from other hospitals.

(iv) Lung Cancer
The multidisciplinary lung cancer group meet weekly with video-conferencing between Liverpool and Campbelltown Hospitals. The group consists of respiratory physicians, cardiothoracic surgeons, medical and radiation oncologists, palliative care physicians, radiologists, nuclear medicine physicians, registrars and nurses. They have had a full-time care coordinator since 2002 (Mrs Clare McCarthy). Services for lung cancer patients include PET and CT imaging, cardiothoracic surgery, respiratory medicine, radiation oncology (including endobronchial brachytherapy), chemotherapy and palliative care. There are future plans to have image co-registration of PET and CT images to better target tumours with radiotherapy which is an ongoing research endeavour between Cancer Therapy Centre staff and the nuclear medicine department.

The group are active in terms of lung cancer research and education. The medical oncologists and radiation oncologists have enrolled patients on a large number of clinical trials that test new drugs and test radiotherapy treatment. Dr Vinod and A/Prof Delaney have studied lung cancer patterns of care in SWS that provided a benchmark for improvements in practice in the area. Comparisons with practice in other area health services has also highlighted ways to improve the service. A/Prof Delaney and Dr Vinod are members of the International Association for the Study of Lung Cancer (IASLC), the Advisory Group for the NSW lung cancer patterns of care study, Lung Cancer Working Party of the NSW Cancer Council and the Australasian Lung Cancer Trials Group. Their research in lung cancer has been presented both nationally and internationally. A number of General Practitioner education seminars in lung cancer have been conducted over the past few years. Patient education and support sessions are run regularly for the benefit of patients and carers of patients with lung cancer.
(v) Central Nervous System Tumours

Brain and spinal tumours are managed by a multidisciplinary team comprising neurosurgeons, radiation and medical oncologists, social workers and a clinical nurse consultant. We organise the NSW Neuro-oncology group and helped found the Clinical Oncology Society of Australia Neuro-oncology group. This group will develop national guidelines for the management of gliomas in 2005-06.

(vi) Haematological Malignancies

The haematology group manages a large number of lymphomas and leukaemias at Liverpool Hospital. It contributes to several clinical trials. A/Professor Michael Barton has been involved in the writing of the National Lymphoma Guidelines and has been part of the organising committee of the national Lymphoma teaching course that is held every two years.

(vii) Gastro-intestinal Cancer

There are both upper and lower gastro-intestinal tumour groups, both with regular multi-disciplinary meetings to discuss patient care.

The Colorectal Tumour Group (CRTG) was established in 1995 and is a collaboration of more than 100 clinicians, nurses, stomal therapists and other paramedical staff involved in the management of colorectal cancer in the South Western Sydney area. With financial support from the SWS Bowel Cancer Foundation the CRTG has been able to achieve some of these aims.

The CRTG have developed a prospective database of all colorectal cancer cases since 1996. By 2005 more than 2000 patients with colorectal cancer have been entered onto the database.

In 2004 a report was distributed titled “Colorectal Cancer in South western Sydney 1997-2001” which has been accepted for publication in the Australia and New Zealand Journal of Surgery. This demonstrates excellent outcomes in many areas of management for colorectal cancer patients for patients in SWS.

A colorectal laboratory and tumour bank was established in late 1999 with more than 300 specimens collected. Colorectal cancer specimens are stored and analysed for special features that might predict outcome or indicate a familial predisposition. The lab is also exploring mechanisms by which colorectal cancer becomes resistant to chemotherapy which is a major problem with advanced disease.

In 2003 the lab moved across to St Vincent’s Hospital in a collaborative arrangement with A/Prof Robyn Ward. The Foundation has supported numerous professional and patient education initiatives in the area including 4 monthly weekend seminars, GP workshops, journal listings for specialists and regular pathology meetings.

In 2004, the Colorectal Surgical Unit was established under the Chairmanship of A/Prof Cyril Wong. It conducts regular multidisciplinary Tumour Boards and has a care co-ordinator (Sharon Cassar) further improving patient care. The unit now has some of the largest experience in Sydney with new surgical techniques including laparoscopic surgery and local excision of rectal tumours using the Trans Endoscopic Microsurgery (TEMS) machine.

(viii) Gynaecological Cancers

The multidisciplinary group consists of gynaecological oncologists, medical and radiation oncologists, pathologists, nurses and registrars. A clinical care co-ordinator is responsible for providing patient information and organising support groups for patients.

Whilst external beam treatment is available at both Liverpool and Campbelltown Hospitals, intracavitary and interstitial brachytherapy is only performed at Liverpool Hospital, as it is a highly specialised procedure requiring dedicated equipment. The SWS gynaecology oncology service has a weekly tumour board attended by a gynaecology oncologist, medical oncologist, radiation oncologists, pathologist and nursing staff. Professional education sessions are conducted with the gynaecological oncology team from Royal Prince Alfred Hospital. A clinical care co-ordinator (Ms Luciana Ward) co-ordinates the care of gynaecological oncology patients and provides education and support groups for patients and carers of patients with gynaecological cancer.

(ix) Skin Cancer

The Cancer Therapy Centre provides a radiation therapy service for the treatment of skin malignancies, with both superficial and megavoltage treatments available. At this stage there is not a regular multidisciplinary clinic or meeting for those managing skin cancers, with multidisciplinary care being practiced in a more informal way. Our aim is to strengthen the links with our dermatology and plastic surgery colleagues in the future and to be part of a more formal skin cancer program.
The Allied Health in CTC comprises Clinical Psychology, Dietetics, Occupational Therapy, Physiotherapy, Social Work, and Speech Pathology, providing a wide range of services in response to patients needs. Each discipline’s line management lies with its relevant parent department, as do their professional affiliations. Since 1996, Allied Health has had a representative on the Executive Committee, serving as the bridge between management and staff.

In the early phase, over half of the Allied Health staff were posted to CTC on a rotational basis. Fortunately, this situation has improved over the years by the allocation of Allied Health staff on a more permanent basis.

Allied Health have consolidated the process of service delivery to meet the ever-increasing demands, serving the inpatient and outpatient cancer population. It has consolidated the referral process and procedures across the disciplines to facilitate communication and coordination of care.

Strong team cohesion has been achieved, and networks built with counterparts in other Area Health Services.

Over the years, a tradition of active collaboration among the disciplines has been built within the Allied Health team to provide comprehensive services to patients. In terms of clinical service, for instance, the Dietitians and Speech Pathologists have set up a joint clinic for patients with head and neck cancer, and the Occupational Therapist and Physiotherapist run a joint lymphoedema service.

Through effective collaboration, Allied Health runs many quality patient education and support programmes for patients and their families. The lymphoedema, laryngectomy, haematology, breast cancer, and brain tumour groups receive extremely favorable feedback from patients and families. The long-running “Dealing with Cancer Education Programme” won the 2002 Liverpool Health Service Quality Award.

The Allied Health team has also piloted several education and support programmes for the major ethnic communities within South Western Sydney.
Together with the NSW Cancer Council, it has conducted Vietnamese and Arabic education programmes, which have attracted residents from the local community and beyond. As a spin-off of the Vietnamese programme, a facilitator’s manual has been produced as a resource for other health professionals interested in running similar programmes in their local areas. In addition, Mandarin and Cantonese education programmes have been conducted.

With the same enterprising spirit, the lymphoedema clinic has extended its service to cover patients treated for cancer in the Fairfield, Liverpool, and Macarthur areas, while post-mastectomy care has extended into Fairfield.

The Speech Pathologists have provided community-based training for family members and hostel staff to perform weekly voice prosthesis changes for laryngectomy patients unable to do this themselves. This eliminates the need for weekly appointments, reduces dependency on clinicians, and empowers patients and families in their cancer care.

The Allied Health team has successfully integrated with other disciplines within the CTC. Its members have been actively collaborating within tumour streams, care coordination, and attend Multidisciplinary Team meetings to facilitate comprehensive care for patients. The Allied Health team are active on many of the Centre’s service committees. Its entire staff is now on the Lantis information system through which referrals, and communication can be carried out efficiently with the rest of the Centre. In-service for other staff within the CTC is a regular occurrence.

To Inform the Cancer Service on future directions and development of support services for patients, the Social Workers and Clinical Psychologist have developed a strategic plan on “Psycho-social care for the cancer population in SWS”. As part of the strategic plan, a pilot project on routine psycho-social assessment of patients has been developed to facilitate the identification and triage of patients in need of support. This was completed with the Medical and Radiation Oncology departments, Care Coordination, and CCORE in 2004. The team is looking at further promoting this initiative to have this process incorporated into the clinic routine.

The Allied Health team has been one of the youthful, vibrant, adventurous segments of the CTC, and with this spirit, it looks forward to the challenges of the next decade.
The Liverpool Hospital Palliative Care Consultancy Service began in 1995 with the employment of Dr Amanda Goldrick (0.5 FTE) and Gail Scott as Clinical Nurse Consultant.

The role of the service was to provide expert Palliative Care advice for the patients, carers and staff of the hospital who had a life limiting illness.

Over the years the service has grown through its consultancy role to include close liaison with the Area Palliative Care Service, Community Health & GP education.

The service is now funded for 1.5 FTE Staff Specialists, 1 Clinical Nurse Consultant and 2 Clinical Nurse Specialists. In the year 2003/2004 the service received 290 medical referrals and 690 nursing referrals. The total number of individual visits exceeded 6000.

We now also conduct an outpatients clinic, are involved in medical student education, pre & post graduate nursing education, allied health education and Area policy development.
When the Cancer Therapy Centre opened, nine nursing staff were recruited from Liverpool Hospital and areas beyond. Cassandra (Cassy) Hobbs Nurse Unit Manager oversaw the opening of the Centre. Unlike today, there were no PC’s in the clinic rooms and no electronic booking system for appointments.

Achievements over the years have been many.

They include:

- The transfer of inpatient Cisplatin therapy to outpatient therapy.
- Development of a Chemotherapy Education Program which has developed into a 2-day chemotherapy workshop for all new nursing staff.
- Insertion of PICC vascular access lines by nurses. Liverpool CTC was one of the first centres where nurses were accredited to perform this procedure. This has been further developed by the creation of a vascular access nurse portfolio, vascular access database and assessment tool.
- One of the first CNC positions in Clinical Trials in NSW.
- Nursing staff teaching sessions for the Oncology Course at the NSW College of Nursing & University of NSW Nursing degree.
- Development of the chemotherapy team leader, clinic nurse and the ongoing development of the radiation oncology nurse role.
- Nurse membership of Protocol reference groups at the Cancer Institute.
- The growth of the palliative care team from 1 CNC to an additional 2 CNS positions.
- Presentations by nurses at a number of conferences.
- Premiers Award to the Cancer Services CNE for her participation in the ‘Division of Medicine Length of Stay’ project.

The individuals have changed and the organisation and nursing practice have moved forward and grown, but the ethos of providing a holistic, dynamic and caring service that strives to deliver best practice and treatment to patients and their families continues today.
Academic Achievements

Publications that have had contributions from members of the Liverpool Cancer Therapy Centre (names in bold are people from CTC).

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Colorectal patterns of care in the Western Sydney and Wentworth Area Health Services.

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Cancer knowledge and skills of general practice registrars in Australia in 2002.
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Barton MB, Gebski V, Jacob S
A quality-adjusted analysis of the cost of Palliative Radiotherapy for Bone Metastases.

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Adjuvant Therapy for Rectal Cancer can no longer be ignored (Editorial).

Barton MB, Simons R

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Cardiac mortality and Tangential Breast Radiotherapy.

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Adjuvant Radiation and/or Tamoxifen for DCIS treated by complete Local Excision.
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Delaney GP
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Estimation of an Optimal Radiotherapy Utilization Rate for Breast Carcinoma.

Delaney GP, Blakey D, Drummond R, Kenny L
Breast Radiotherapy: A survey of current treatment techniques (On behalf of the NBCC Radiation Oncology Advisory Group).

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Vinod SK, Pendlebury S
Post Graduate Degrees\(^1\) and Awards\(^2\)

\(^1\)Oona Collins  
BSc (Hons).  
UTS. 2002.

\(^2\)Dr S Jacob  
Masters in Health Administration.  
UNSW. 2004.

\(^3\)Geoff Delaney  
MD awarded UNSW 2003.  
The thesis title: “The development of a new measure of Linear Accelerator Throughput in Radiation Oncology Treatment Delivery – The basic treatment equivalent”.

\(^4\)Ming Kong  
BSc (Hons).  
UNSW. 2004.

\(^5\)Teresa Simpson  
Master of Counselling.  
University of Western Sydney. 2002.

\(^6\)Phan Sayaloune  
Masters in Public Health.  
UNSW. 2002.

\(^7\)Kate Tynan  
Masters in Public Health.  
UNSW. 2003.

\(^8\)Thu Tran  
BSc (Hons).  
UNSW. 2004.

\(^9\)Michael Veness  
University of Sydney.  
The treatise: “Evidence Based Medicine and Radiation Oncology in Australia and New Zealand in 2000”.

\(^{10}\)Debra Vincent  
Bachelor of Applied Science (MRS) Radiation Therapy.  
University of Sydney. 1996.

\(^{11}\)Shalini Vinod  
MD awarded UNSW 2004.  
The thesis title: “A Lung Cancer patterns of care study in the South Western Sydney Area Health Service”.  

Ray Asghari
Trainee/Student Prize, Clinical Oncological Society of Australia AGM – Canberra 2004.
“Estimation of an Optimal Chemotherapy Utilization Rate in newly-diagnosed Colon Cancer”. R Asghari, E Hovey, E Moylan, S Jacob, G Delaney, M Barton.

Mike Bailey
ACPSEM Accreditation in Radiotherapy.

Michael Barton
Professional Excellence Award.

Geoff Delaney, Michael Barton, Susannah Jacob
Philips prize in Radiation Oncology for the best research paper presented by a fellow of the college at the RANZCR College meeting.

Geoff Delaney, Michael Barton
People’s Choice poster prize.

Lois Holloway
Australasian College of Physical Sciences and Engineering in Medicine’s Boyce Worthley Young Achiever Award. 2003.
Finalist in the Cancer Cure Foundation’s Young Researcher of the Year Award. 2003.

Lois Jones
Young Investigator Award at the 4th International Stereotactic Radiosurgery Congress. 1999
Marie Curie Prize for the best postgraduate research and presentation from the NSW Branch of the Australasian College of Physical Scientists and Engineers in Medicine. 1999.

Fabrice Monti di Sopra
MSc 1998.
Swiss Federal Institute of Technology, Zurich.

Stephen Thompson
“Optimal Brachytherapy Utilization”.
Awarded the Certificate of Merit for Oral Presentation – CVS and Cancer.
UNSW Faculty of Medicine.
Merck Sharp and Dohme poster competition. 23 September 2004.

Matthew Williams
Marie Curie Prize for the best postgraduate research and presentation from the NSW Branch of the Australasian College of Physical Scientists and Engineers in Medicine. 2002.
The following graphs show the changes in activity throughout the CTC’s history. They have shown steady increases in the demands for services. It is likely that we have not yet reached the peak activity as further enhancements to Cancer Services are planned over the next 5 years.

In the last 12 months, the radiation oncology department saw 1300 new patients, 3370 follow-up patients and provided 1300 new courses of treatment.

In medical oncology, there were nearly 1000 new patients, over 5,500 follow up appointments and over 6,000 treatments. There has been a plateau in consultations and treatments due to staff and facilities reaching full capacity in 1997/98.

The following graphs highlight the main activities in radiation oncology and medical oncology across the area.
Since Cancer Therapy Centre’s inception, a strong focus has been on the quality of care provided. This has resulted in ongoing development of initiatives to improve quality. In the second half of the decade, there has been formalisation of quality programs and processes. This has seen a significant amount of cooperative work from all groups within radiation oncology; medical physics, radiation therapy, medical oncology, palliative care, nursing, allied health and administrative support staff. We are now in a strong position with formal processes in place to detect and analyse any incidents and deficiencies, and then take appropriate action.

Specific incident reporting tools relevant to radiation oncology and review of incident processes have been developed. The Radiotherapy Quality Improvement Committee formally began in 2000. Its role is to review all processes related to the delivery of radiation therapy to patients and to oversee the development of new techniques and installation of new technology. The Radiation Therapy Incident Review Committee was formed in 2004. This was a significant initiative in fostering an environment and culture of reporting all incidents, including events that were “near miss” incidents.

The committee reviews incidents reported then assesses the department’s response to the incident and the adequacy and evaluation of implemented changes. There is a weekly audit of patient treatment. This provides peer review and a discussion forum for radiation therapists and medical physicists to highlight planning and treatment delivery issues. This audit is currently undergoing review and change to comply with the new (currently in draft) Royal Australian and New Zealand College of Radiologists audit requirements.

The Cancer Therapy Centre Quality Improvement Committee is a multi-disciplinary group that ensures cooperation and coordination within the relevant departments of the Cancer Therapy Centre. It is charged with the facilitation and reporting of quality assurance projects, systems and procedures, and evaluation of audit results and reporting to the hospital executive.

The Cancer Therapy Centre also participates in the broader quality and occupational health and safety programs of Liverpool and Campbelltown Hospitals and New South Wales Health, including EQu IP and Numerical Profile accreditation.
Education is a particular strong point of the Cancer Therapy Centre, with many staff interested in fostering good education programmes.

The Cancer Therapy Centre has a highly regarded Radiation Oncology Training Programme with an excellent record in getting registrars through the exam at the first attempt. This is largely due to the interest in education and training by its radiation oncologists. A/Prof Martin Berry has been an examiner from 1997-2003 and is a previous chair of the NSW Education co-ordinating committee. In 2005 he was appointed as Chief Censor for the Faculty of Radiation Oncology. Dr Andrew Kneebone has been the Supervisor of training at Liverpool from 1997 to 2004 and also has been the secretary of the NSW Education Committee for the last 5 years. A/Prof Michael Barton has been awarded the professional education award from the NSW Cancer Council, established the highly successful Basic Sciences of Oncology Course (and has expanded this to develop a distance Basic Sciences of oncology course for the International Atomic Energy Agency), has formulated the Ideal Cancer Curriculum for Australian Medical Students and has been involved in numerous other education initiatives.

A/Prof Geoff Delaney has been a member of the NSW Education committee for many years and was pivotal in organising the highly successful state-wide training programme as well as the pre-examination workshops. Dr Shalini Vinod has been a previous registrar representative on the faculty education board and is now an active member of the NSW education Committee. In 2005, Dr Dion Forstner has taken over as supervisor of registrar training. Already his enthusiastic attitude has made an impact on the training programme.

This interest in Education has produced outstanding results. Since opening in 1995, SWS has had 9 radiation oncology registrars complete their training. These registrars were Andrew Hui, James McKean, Gil Campbell, Thomas Shakespeare, Lyn Austen, Minjae Lah, Upendra Parvathaneni, Marketa Skala and Rowena Martin. All 9 passed their final barrier exams on their first attempt, which is a record the department is very proud of. Currently we have 6 registrars working at Campbelltown and Liverpool.
The Cancer Therapy Centre continues to be a consistent and strong supporter of training for Radiation Therapists in South Western Sydney. All programs that are run for Radiation Therapists are recognised by the professional body, the Australian Institute of Radiography. Radiation Therapy Student Education has evolved to a fully co-ordinated program including buddy training, student debriefing, and thorough student orientation to the department and radiation therapy. Students from Sydney and Newcastle Universities are welcomed in the department 39 weeks of the year, and always report a positive and enriching learning experience. Students from Sydney University first year class also visit the department for an introduction to the profession they are training for.

In the last 3 years, the Cancer Therapy Centre has attracted and retained 17 new graduates in radiation therapy. Training for these new graduates, has extended from a program that caters for basic needs, to a program that inducts the PDY’s into every aspect of a multi-disciplinary dual site department, with full assessment of their progress throughout the year.

Continuing education for staff is vital to staff retention and assisting in the development of competence and safe delivery of treatment. In recent years, the cancer therapy in-service program has developed to include education that assists Radiation Therapists, Registrars, Oncologists and Physicists.

The program was developed collaboratively between the three groups to provide an education program that appeals to all. Topics include basic oncology science, general workplace education, radiation therapy specific talks and presentations from members of the physics team. Cancer Services’ Education Committee’s charter is to co-ordinate and advocate for improved education for staff and patients of Cancer Services. They facilitate the documentation of all education programmes for the centre, and aim to standardise the information that is disseminated. The scope includes staff education, orientation and assessment, as well as patient information, education programmes and support groups.

The clinic support staff has undertaken a pilot programme to upskill the whole team in customer service. They will broaden their knowledge to help with problem solving at the base level and achieve a certificate in Business Administration. The committed staff are enjoying the programme, and we hope that it will achieve an improvement in the service our patients receive at the front door.

Since the inception of the Cancer Therapy Centre, education and training has been a high priority within the Medical Physics group. In the first few years, the experience level of the junior staff was low and from this, a number of education initiatives were undertaken. An in-house tutorial program was run for about four years covering the basic competencies in radiotherapy physics.

These were of a practical nature and ensured that all staff had sufficient clinical training to take part in the various clinical tasks. Several junior physics staff attended the Basic Sciences of Oncology course as run by the NSW Cancer Council. The training program was refined in the following years, particularly in regards to treatment planning. In 2003, NSW Health announced funding for medical physics registrar positions. This required the implementation of a formal training program in accordance with the Australian College of Physical Scientists and Engineers in Medicine (ACPSEM) training program called TEAP. The ACPSEM has specified the competencies required within TEAP but did not design any training program. The training program was put together and consisted of a tutorial program (with questions and recommended readings), competency assessment sheets and an assessment process. This required significant work by the senior physics staff in combining various resources together to set this program in place.

The medical physics staff have been actively involved in education outside of the group throughout the 10 years. This involvement has included providing lectures in the Basic Science of Oncology courses, tutorial session for radiation oncology registrars, lectures and tutorials at the various university departments for both medical physics and radiation therapy courses.
There have been a large number of information technology initiatives that have been conducted in the Liverpool CTC. The CTC have an information technology meeting monthly to discuss project progress. A number of members of the CTC have provided significant input into state and national information technology initiatives. The Liverpool CTC were the instigator of the NSW Health Radiotherapy Information Strategy which has resulted in every public radiation oncology facility having an electronic radiotherapy patient record. Liverpool and Campbelltown have extended this electronic record to incorporate medical oncology and have worked on the system to use it in a way that results in less error, greater efficiency and greater treatment quality. In addition, the information technology group have been responsible for establishing the CTC website http://www.swsahs.nsw.gov.au/cancer/default.asp, the development of a touchscreen computer programme that assists clinicians establish whether patients have symptoms of depression or anxiety, the development of video-conferencing of multiple multidisciplinary meetings, the development of a prospective database for all cancer patients and electronic linkages with the hospital information system.

One major initiative that will require significant work is the development of an area-wide hospital-based cancer registry which will allow clinicians and administrators access to real-time data on patterns of care, incidence and treatment quality across Sydney South-West. To date, significant groundwork has been done in developing a system that will facilitate development of this registry. Dr Val Poxon has just been appointed as project leader and she brings with her a wealth of experience in developing similar audit tools in the Division of Surgery.
From the outset the Cancer Therapy Centre set up a unit to promote clinical trial participation. Initially chaired by Dr David Goldstein the committee set about involving itself with establishing a range of clinical trials with international collaborations in all cancer sites. Denise Burns, the clinical trials Nurse Consultant established a service based on good clinical practice, high quality data collection and built up a team of nurses, research officers and data managers. When Dr Goldstein left in 1996, A/Prof Delaney took over the chair until he handed over to Dr Della-Fiorentina in 1998.

We quickly obtained a reputation for levels of enrolment into clinical trials at levels above the National Health and Medical Research Foundation targets. We were the leading recruiting site in adjuvant studies for colorectal and breast cancer within the first 4 years of operation.

This recognition led to oncologists from the Cancer Therapy Centre leading national studies in prostate, lung, breast and lymphoma studies.

We have developed innovative research within the centre around multicultural needs of cancer patients and a touch-screen technology for patient’s anxiety assessment and needs. A/Prof Barton was a member of the Liverpool Ethics committee; Dr Kneebone is on the steering committee for the Cancer Council NSW Clinical Trials group. Dr Della-Fiorentina is a reviewer for the NSW Health Shared Scientific Assessment Committee.

The Cancer Service has been successful in obtaining grants for two research officers from the NSW Cancer Council and one from the NSW Cancer Institute. This is in recognition for the quality of our work; the needs of the population of South West Sydney, the high level of enrolment to clinical trials and the fostering of a research environment amongst the staff of the Cancer Therapy Centre.

The following list of our clinical trial involvement shows the breadth and commitment to finding newer and better treatments to our current and future patients.
The following clinical trials have been conducted within the Liverpool Hospital Cancer Therapy Centre.

**Radiation Oncology**

**TROG 99.04 - Chemotherapy and Radiotherapy for Osteolympoma**
A prospective non-randomised study of Chemotherapy and Radiotherapy for Osteolympoma.
Principal Investigator: AProf Michael Barton.

**PET scan f-18 FDG**
Phase III clinical trial of 18-FDG Co-PET Scanning in patients with Inoperable Cancer.
Principal Investigator: Dr Martin Berry.

**Anxiety Study**
Patient anxiety associated with Cancer Follow-up clinic attendance.
Principal Investigator: Dr Minjae Lah.

**Merkel Cell**
A Phase II study of Synchronous Carboplatin/Etopside and Radiation in Merkel Cell Carcinoma of the skin.
Principal Investigator: Dr Geoff Delaney.

**Prostate PPS**
Phase III Double Blind Study of Pentosan Polysulphate Sodium (PPS) in the treatment of late (Chronic) Radiation Proctitis.
Principal Investigator: Dr Martin Berry.

**Clinical Ultrasound**
Pilot Study to Evaluate the Feasibility of Utilising F-Fluordeoxyglucose and Co-incidence Detection Gamma Detection Camera Imaging in Inoperable Lung Cancer.
Principal Investigator: Dr Michael Veness.

**Anal Canal TROG 99.02**
A prospective single arm non-randomised study of concurrent Radiation and Chemotherapy for the Organ Conserving Treatment of early Anal Canal Cancer.
Principal Investigator: Dr Andrew Kneebone.

**Superdex**
A pilot randomised controlled trial of Dexamethasone 90mgs versus 16mgs for Malignant Spinal Cord Compression treated by Radiotherapy.
Principal Investigator: Dr Geoff Delaney.

**Pre-op Oesophagus**
A randomised Phase III clinical trial comparing surgery alone with Concurrent Pre-operative Chemotherapy and Radiation followed by surgery for localised Resectable Carcinoma of the Oesophagus.
Principal Investigator: Dr Geoff Delaney.

**Anal Guidelines**
TROG guidelines for the treatment of Anal Canal Carcinoma.
Principal Investigator: Dr Andrew Kneebone.

**Strontium 89**
Strontium-89 (Metastron) for painful Bone Metastases in Prostate Cancer.
Principal Investigator: Dr Martin Berry.

**Sucralfate**
Effect of Oral Sucralfate on the Rectum for patients receiving Radiotherapy for Localised Carcinoma of the Prostate.
Principal Investigator: Dr Martin Berry.

**Neuropathic Bone Pain**
A prospective randomised trial of Single Fraction versus Fractionated Radiotherapy for Neuropathic Pain due to Bone Metastases.
Principal Investigator: Dr Geoff Delaney.

**PCNSL**
A Phase II study of Intravenous Methotrexate and Cranial Irradiation in the treatment of Primary Central Nervous System Lymphoma (PCNSL).
Principal Investigator: Dr Geoff Delaney.

**Standard Oesophagus**
Standard Radio-Chemotherapy for Oesophageal Cancer Patients (Not identified as having favourable Prognostic Features).
Principal Investigator: Dr Geoff Delaney.

**TCC of Bladder TROG 99.06**
Phase II study of Trans-urethral Resection followed by Synchronous Chemo-radiotherapy in the definitive management of Localised Invasive TCC of the Urinary Bladder.
Principal Investigator: Dr Martin Berry.

**TOAD**
A collaborative randomised Phase III Trial: The timing of intervention with Androgen Deprivation in Prostate Cancer patients with a rising PSA.
Principal Investigator: Dr Andrew Kneebone.

**Lung Tumour Volume**
Turn Volume as an Independent Prognostic Factor in patients with non-small Cell Lung Cancer; A Protocol for a Prospective Database.
Principal Investigator: Dr Geoff Delaney.

**TROG Rectum 01.04**
A randomised trial of Preoperative Radiotherapy for Stage T3 Adenocarcinoma of Rectum.
Principal Investigator: Dr Andrew Kneebone.

**MA20**
A Phase III Study of Regional Radiation Therapy in early Breast Cancer.
Principal Investigator: Dr Geoff Delaney.

**SC20 Bone Mets**
A Phase II International randomised trial of Single versus Multiple Fractions for Re-irradiation of Painful Bone Metastases.
Principal Investigator: Dr George Papadatos.

**TROG 03.01 Oesophageal**
A randomised Phase III Study in Advanced Oesophageal Cancer to compare quality of life and palliation of Dysphagia in patients treated with Radiotherapy versus Chemo-radiotherapy.
Principal Investigator: Dr Andrew Kneebone.

**TROG 03.02 Gastric**
A feasibility study to evaluate Adjuvant Chemoradiotherapy for Gastric Cancer.
Principal Investigator: Dr Andrew Kneebone.

**Medical Oncology**

**Advanced Ovarian (S231)**
Phase II Study of First-Line, Single Agent Carboplatin followed sequentially by Gemcitabine and Paclitaxel in patients with Advanced Ovarian Cancer; An Australian and New Zealand Gynaecological group study.
Principal Investigator: Dr Amanda Goldrick.

**AG0603G Oesophago-gastric Cancer Trial**
A randomised Phase II Study evaluating a weekly schedule of Docetaxel with Cisplatin and 5-FU (wTFC) or with Capecitabine (wTX) in Advanced Oesophago-gastric Cancer.
Principal Investigator: Dr Eugene Moylan.

**ANZ 9311**
Comparison of high dose Chemotherapy plus Filgrastim with standard dose Chemotherapy in patients with advanced Breast Cancer.
Principal Investigator: Dr Eugene Moylan.

**Aromasin**
Randomized Phase II-III Study in First Line Hormonal Treatment for Metastatic Breast Cancer with Exemestane or Tamoxifen in postmenopausal patients.
Principal Investigator: Dr Stephen Delta-Ferreirina.

**Asymptomatic Colon**
Phase III Study of early Chemotherapy for Asymptomatic Metastatic Colorectal Cancer.
Principal Investigator: Dr Eugene Moylan.

**ATAC**
Adjuvant Trial in Postmenopausal Breast Cancer. Arimidex, Tamoxifen alone or in combination (ATAC) - ANZ 9801.
Principal Investigator: Dr Stephen Delta-Ferreirina.
ATLAS
Adjuvant Tamoxifen Longer Against Shorter (ATLAS).
Principal Investigator: Dr Stephen Della-Fiorentina.

AZURE
Does adjuvant Zoledronic acid reduce recurrence in patients with high-risk Localised Breast Cancer.
Principal Investigator: Dr Stephen Della-Fiorentina.

BAY 43-9006 Renal Cell Cancer Trial
A Phase III randomised study of BAY 43-9006 in patients with unresectable and/or Metastatic Renal Cell Cancer.
Principal Investigator: Dr Elizabeth Hovey.

Gemcitabine NSCLC
principal investigator: Dr Stephen Della-Fiorentina.

Camptosar CPT-11 SCLC
A randomised, Phase III Trial comparing CPT-11 (tinrotenan HCL; Captopos injection) / Cisplatin with Etoposide/Cisplatin in patients with previously untreated, extensive, Small-Cell Lung Cancer.
Principal Investigator: Dr Stephen Della-Fiorentina.

Capetitabine
Expanded access program: Treatment guideline of Xeloda (Capetitabine) in patients who have failed or are resistant to previous treatment with Paclitaxel (Taxol) or Docetaxel (Taxotere) for locally advanced and/or Metastatic Breast Cancer.
Principal Investigator: Dr Stephen Della-Fiorentina.

C-06
A clinical trial comparing Oral Uracil/TORIFUR (UFT) plus Leucovorin (LV) with 5-Fluorouracil (5-FU) plus LV in the treatment of patients with Stages II and III Carcinoma of the Colon.
Principal Investigator: Dr Eugene Moylan.

ECF Gastric
A Phase II feasibility study of pre-Operative and post-Operative Chemotherapy using Epirubicin, Cisplatin and Protracted Venous Infusion Fluorouracil (ECF) in Patients with advanced but operable Gastric Cancer.
Principal Investigator: Dr Eugene Moylan.

EFC5378 Odessey Prostate
Evaluation of two doses of SR31747A (75mg & 125mg) in Non-metastatic Androgen in-depandent Prostate Cancer. Randomised, double-blind, placebo controlled Phase II Study.
Principal Investigator: Dr Elizabeth Hovey.

ESPAC 3
Adjuvant Chemotherapies in Resectable Pancreatic Cancer (ESPAC-3v3).
Principal Investigator: Dr Eugene Moylan.

Exemestane
Randomised double-blind trial in post-Menopausal women with Primary Breast Cancer who have received Adjuvant Tamoxifen for 2-3 years comparing subsequent Adjuvant Exemestane Treatment with further Tamoxifen.
Principal Investigator: Dr Stephen Della-Fiorentina.

Gemcitabine
Compassionate use of Gemcitabine in patients with Pancreatic Cancer.
Principal Investigator: Dr Goldstein.

Gemcitabine NSCLC
A Phase II Study of Gemcitabine in patients with Stage II or IV non-small Cell Lung Cancer.
Principal Investigator: Dr Goldstein.

Gemtax NSCLC
Randomised comparison of first line Docetaxel/Gemcitabine Doublet Chemotherapy versus sequential single agent Chemotherapy (Docetaxel followed by Gemcitabine) in Stage IIIIB/IV NSCLC.
Principal Investigator: Dr Stephen Della-Fiorentina.

Germ Cell Registry
Prognostic factors for survival and patterns of care for Germ Cell Tumours in Australia and New Zealand.
Principal Investigator: Dr Goldstein.

GLA Pancreas
An open label, controlled, randomised, parallel group Phase III Study in Unresectable Pancreatic Carcinoma to assess the effects of a combined Intravenous and Oral Dose Regimen of GLA added to existing treatment (either Best Supportive Care or Chemotherapy).
Principal Investigator: Dr Eugene Moylan.

GOG 0182
A Phase III randomised trial of Paclitaxel and Carboplatin versus Triplet or Sequential Doublet Combinations in patients with Epithelial Ovarian or Primary Peritoneal Carcinoma.
Principal Investigator: Dr Amanda Goldrick.

GOG 02-01
A Phase II Trial of Weekly Docetaxel (Taxotere) for patients with relapsed ovarian cancer who have previously received Paclitaxel.
Principal Investigator: Dr Amanda Goldrick.

Good Prognosis Germ Cell
Randomised Phase III Trial for good prognosis Germ Cell Tumours comparing two different regimes of Cisplatin, Etoposide and Bleomycin.
Principal Investigator: Dr Goldstein.

Her 2
Chemotherapy and Antibody Response Evaluation (CARE): A Phase III, multinational, randomised study of Recombinant Humanised Anti-p185 (HER2) Monoclonal Antibody (rHuMAb HER2) combined with Chemotherapy in patients with HER 2 Overexpression who have not received Cytotoxic Chemotherapy for Metastatic Breast Cancer.
Principal Investigator: Dr Amanda Goldrick.

Her 2 Extension
An open-label extension study with Recombinant Humanised Anti-p185 (Her 2) Monoclonal Antibody (rHuMAb HER 2) for patients whose Metastatic Breast Cancer progressed during treatment on Protocol H0648b.
Principal Investigator: Dr Amanda Goldrick.

HERA
A randomised 3-Arm Multi-centre Comparison of 1 year and 2 years of Herceptin versus no Herceptin in women with HER2-positive Primary Breast Cancer who have completed Adjuvant Chemotherapy.
Principal Investigator: Dr Eugene Moylan.

Herceptin®
Open label, comparative, randomized, multicentre, multinational study of Herceptin® (Trastuzumab) given with Docetaxel (Taxotere®) versus Docetaxel as Single Agent First-line Metastatic Breast Cancer (MBC) patients with HER2neu Overexpression.
Principal Investigator: Dr Amanda Goldrick.

Herceptin® Extension
An open-label, multicenter, continuation trial of Recombinant Humanised Anti-p185 (HER2) Monoclonal Antibody (Herceptin® [Trastuzumab]) in patients with HER2 Overexpressing Tumours.
Principal Investigator: Dr Amanda Goldrick.

IBCSG IX
Adjuvant Therapy for postmenopausal patients with Node Negative Breast Cancer.
Principal Investigator: Dr Amanda Goldrick.

IBCSG 12-93
Adjuvant therapy for post/perimenopausal patients with node positive breast cancer who are suitable for endocrine therapy alone.
Principal Investigator: Dr Goldstein.

Intravesicular Bladder
Phase II Trial of Intravesical Gemcitabine in patients with Transitional Cell Carcinoma of the bladder.
Principal Investigator: Dr Elizabeth Hovey.

IRESSA
A randomised, double blind, Phase III Comparative Trial of Two Doses of ZD1839 (Iressa) in combination with Paclitaxel and Carboplatin versus Placebo in combination with Paclitaxel and Carboplatin in chemotherapy-naive patients with advanced (Stage III or IV) Non-small Cell Lung Cancer.
Principal Investigator: Dr Stephen Della-Fiorentina.
Irinotecan
A Phase II Study of Irinotecan, Leucovorin and Fluorouracil in advanced Gastric Cancer.
Principal Investigator: Dr Eugene Moylan

JMAt
A Phase II Study of MTA (LY231514) and Vinorelbine administered in patients with Locally Advanced or Metastatic Non-small Cell Lung Cancer.
Principal Investigator: Dr Eugene Moylan

Letrozole
A Phase III Study to evaluate Letrozole as Adjuvant Endocrine Therapy for Post-menopausal women with Receptor (ER and/or PgR) Positive Breast Cancer.
Principal Investigator: Dr Stephen Della-Fiorentina

Letrozole AR/BC3
Letrozole versus Aminoglutethimide plus Cortisone Acetate in advanced Breast Cancer.
Principal Investigator: Dr Goldstein

LIFE
A randomised trial evaluating Elotuxin® (Oxaliplatin) combined with two different 5-Fluorouracil Regimes in patients with previously untreated advanced Colorectal Cancer (ACC).
Principal Investigator: Dr Stephen Della-Fiorentina

NavXel
Phase II Study of Intravenous Vinorelbine (Navelbine®) + Capecitabine (Xeloda®) in patients with advanced Breast Cancer.
Principal Investigator: Dr Eugene Moylan

NESP
A randomised, double-blind, placebo-controlled, dose-finding study of Novel Erythropoiesis Stimulating Protein (NESP) administered by Subcutaneous (SC) Injection for the treatment of Anaemia in subjects with Solid Tumours receiving Multicycle Chemotherapy.
Principal Investigator: Dr Amanda Goldrick

Oligodendrogial
Phase II Study of Temozolomide Therapy for Anaplastic Oligodendrogial containing Gliomas.
Principal Investigator: Dr Elizabeth Howey

Oxaliplatin – MOSAIC
Multicentre International study of Oxalaplatin/5-FU-LV in the Adjuvant Treatment of Colon Cancer - MOSAIC O38.
Principal Investigator: Dr Stephen Della-Fiorentina

Pancreatic Cancer (CPT-11)
A randomised, open-label, multicentre, Phase II Study comparing the efficacy and safety of Gemcitabine and Irinotecan HCl (CPT-11) to Gemcitabine alone in patients with locally advanced or Metastatic Pancreatic Cancer who have not received prior Systemic Therapy.
Principal Investigator: Dr Stephen Della-Fiorentina

Panorex
A prospective randomised multicentre Phase III clinical trial comparing the effects of PANOREX injection plus 5-Fluorouracil/Lucovorin versus 5-Fluorouracil/Lucovorin versus PANOREX injection alone, in patients with Surgically Resected Stage III (Dukes’ C) Carcinoma of the Colon, incorporating amendments numbers one, two and three.
Principal Investigator: Dr Eugene Moylan

Patient PACT
Patient’s perceptions of Adjuvant Chemotherapy for early Breast Cancer: What makes it worthwhile?
Principal Investigator: Dr Eugene Moylan

PROTAT
A feasibility and efficacy study of Taxotere/Prednisone in combination with Thalidomide in Hormone Refactory Prostate Cancer. The Pro Tat Study.
Principal Investigator: Dr Elizabeth Howey

Recurrent Ovarian (S202)
Phase II Study of Gemcitabine and Oxaliplatin of second line treatment of patients with recurrent Ovarian Cancer: An Australian and New Zealand Gynaecological Oncology Group Study.
Principal Investigator: Dr Amanda Goldrick

Sesame SR48692 SCLC
A double-blind, randomized, Phase II-III maintenance study of SR48692 versus placebo in patients with extensive stage Small Cell Lung Cancer, following a first line chemotherapy with Cisplatin + Etoposide.
Principal Investigator: Dr Eugene Moylan

SOFT
A Phase III Trial evaluating the role of Olaratumab Function Suppression and the role of Exemestane as Adjuvant Therapies for pre-menopausal women with Endocrine responsive Breast Cancer.
Principal Investigator: Dr Stephen Della-Fiorentina

Tarceva OSI-774
A randomised Placebo Controlled Study of OSI-774 (Tarceva) plus Gemcitabine in patients with locally advanced, Unresectable or Metastatic Pancreatic Cancer.
Principal Investigator: Dr Eugene Moylan

Taxotere
An Intergroup Phase III Trial to evaluate the activity of Docetaxel, given either sequentially or in combination with Doxorubicin, followed by CMF, in comparison to Doxorubicin alone or in combination with Cyclophosphamide, followed by CPM, in the adjuvant treatment of Node-Positive Breast Cancer Patients.
Principal Investigator: Dr Eugene Moylan

Text
A Phase III Trial evaluating the role of Exemestane plus GnRH Analogue as adjuvant therapy for post-Menopausal women with Endocrine Positive Breast Cancer.
Principal Investigator: Dr Stephen Della-Fiorentina

Tiber
An open-label, non-comparative, two-arm, Phase II Trial of ZD1839 (IRESSA) in patients with Hormone-Intensive (ER and PgR Negative) or Hormone-Resistant (ER and/or PgR Positive) Metastatic or inoperable locally advanced Breast Cancer.
Principal Investigator: Dr Eugene Moylan

Xcytrin PCYC-0211
Principal Investigator: Dr Stephen Della-Fiorentina
The Collaboration for Cancer Outcomes Research and Evaluation (CCORE) is a research unit attached to the Liverpool Cancer Therapy Service. It was founded by the Radiation Oncology Department in 1999 to improve the outcomes of cancer treatment by the better use of existing knowledge. We have particular expertise in radiotherapy but have broad interests in all areas of cancer management. Our staff includes radiation oncologists, a medical oncologist, an epidemiologist, a data manager and project officers. We have long-standing collaborative arrangements with other leading cancer specialists, epidemiology services and health services research groups. In the last six years we have published 40 peer-reviewed journal articles and 12 commissioned reports. We have received nearly two million dollars in project grants.

CCORE has a wide range of activities that extend from the individual cancer patient to the organisation of cancer services at a State or National level. We have been involved in the planning and evaluation of radiotherapy services in NSW, Victoria and nationally and have particular expertise in the utilisation, costs and cost-effectiveness of radiotherapy services as well as cancer services in general.

We have published patterns of care studies in colorectal and lung cancers.

We have developed a distance-learning course in the applied sciences of oncology. This course covers radiobiology, physics, cancer anatomy, chemotherapy, communication skills, critical appraisal, symptom control and molecular biology. It is funded by the International Atomic Energy Agency, an organisation within the United Nations family. The course is provided as an interactive CD-ROM and has been piloted in Egypt, Argentina, the Philippines, Pakistan and Malaysia. In the future we plan to use this course to help trainee doctors to become cancer specialists throughout Africa, Asia and South America.

Last year we reviewed the feasibility of establishing a radiotherapy service in the Northern Territory. We performed a snapshot of cancer services in NSW for the Cancer Institute NSW and for the NSW government, we have updated measures of the complexity of different radiotherapy treatments that will allow better comparison of efficiency between departments. We have explored similar measures for chemotherapy.

CCORE Report

Associate Professor Michael Barton – Director of CCORE
In 2002-03 CCORE assembled a team of experts to examine the management of cancer in Victoria to develop a cancer services framework for their Department of Human Services. This study examined surgery, radiotherapy, chemotherapy, palliative care and other support services. It has formed the basis of a twenty million dollar reorganisation of the management of cancer services in Victoria.

CCORE was involved in the development of the Single Machine Department trial in Victoria that has established one linear accelerator departments in Bendigo, Ballarat and LaTrobe. The departments act as spokes of hub centres in Melbourne. We designed the evaluation strategy in collaboration with the Centre for Health Program Evaluation at the University of Melbourne.

In 2001 the Commonwealth Department of Health and Ageing asked us to examine all the evidence for radiotherapy to estimate the proportion of cancer patients should be treated that way. Previous estimates were based on opinion rather than evidence. We have shown that 52% of all new cases of cancer should receive radiotherapy. This study is a world first and will have major effects on the provision of radiotherapy services in Australia and overseas.

Currently in NSW the proportion of people who do receive radiotherapy varies but overall is about 37%. We have studied the differences between actual and optimal use of radiotherapy for some specific cancers. For breast or head and neck cancers the use of radiotherapy appears optimal but for other cancers such as rectal or lung, it appears that a large proportion of patients do not receive appropriate treatment. Our studies of the patterns of care of lung cancer in the South Western Sydney and Northern Sydney Areas Health Services highlighted the fact that many patients do not receive the treatment that might help them. It was interesting to note that there was little difference between Northern and South Western Sydney.

In 2001, we drew up a plan for the development of cancer services in Papua New Guinea. This plan also examined the feasibility of radiotherapy services for remote and isolated communities.

In other studies we determined the willingness of cancer patients to wait for radiotherapy and examined the levels of anxiety in patients after their treatment had finished. CCORE developed a touchscreen computer system to record the symptoms of treatment and the levels of anxiety and depression of cancer patients. CCORE actively supports further education and development of its staff. We have a position for a recently qualified radiation oncologist to undertake a higher degree in health services research. Staff members have qualified the following higher degrees:

1. A/Prof Geoff Delaney MD
2. Dr Shalini Vinod MD
3. Dr Andrew Hui MMed(Clin Epi)
4. Dr S Jacob MHA
5. Dr Gabriel S Gabriel FAFPHM

In addition two staff members are undertaking PhDs, one is training for Fellowship of the Faculty of Public Health Medicine, and one is undertaking a higher qualification in health economics.
Fund Raising

The facilities at Liverpool for treating cancer and caring for cancer patients and families have been provided through a mixture of government funding and donations. Donations fill funding needs not supported by government grants and insurance reimbursement. Over the last 10 years, 3000 individuals and organisations have helped in our quest to sustain and expand life-saving research programs, and to enhance care and comfort for cancer patients. Charitable gifts to Liverpool Cancer Services provide vital support for our programs in research, patient care, and cancer education.

The following are a few examples of how gifts have helped:

- **Research (Clinical Trial) Fund**
  Support ongoing research into prevention, detection, treatment and supportive care for patients with cancer.

- **Education Fund**
  Sponsoring Cancer staff to attend specialised training; funding cancer-training courses offered at Liverpool.

- **Patient Care Fund**
  Purchase of equipment and resources for patient and visitors comfort on the ward and CTC.

Fundraising activities such as raffles, dinners, head shaving and morning teas, have been supported by the generosity of our community, and this has lead to initiatives such as the establishment of the Patient and Family resource centre that provides educational resources for patients and families to acquire knowledge about the diagnosis and treatment of their illness. Information sessions, support groups and translating information into other languages are funded through donations.

Special items that have been able to be replaced and/or upgraded include wheelchairs, pumps and other medical equipment. This would not have been possible without support of donations.

Volunteers

Liverpool Cancer Services is fortunate to have the assistance of a dedicated group of volunteers who give up their time to help patients find their way around the centre, and lend a listening ear.

The Busby Auxilliary, affectionately known as ‘the pink ladies’, focus on making the patients more comfortable during their visit, and they do this selflessly. They are also tireless in their fundraising efforts; raffles, cake stalls, and morning teas would not be successful without the continued support of our fantastic volunteers.

F Best
J Blunt
V Dargan
D Day
N Dean
P Dicker
J Drinnan
M Flood
M Gunn
D Haynes
J Higgs
T Hodges
C Keogh
E Lowe
J Maloney
V McCarthy
J McPherson
A Musscatella
L Powell
W Saxton
V Spruce
A Tangi
D Thomson
J Watson
B Wright
**Look Good Feel Better**

– A Cosmetic Industry Community Service Program

This program is dedicated to helping women, men and teenagers face cancer with confidence. Experienced beauty industry volunteers teach patients beauty techniques including skincare, makeup application, and creative ways with scarves, turbans, hats and wigs. All these help to minimise the appearance-related side effects from some treatments and explain some of the changes that occur during treatment. The workshops are designed to help boost self esteem and confidence. Some of the partners who have contributed are:

L Evans
K Giufre
S Pinkerton
S Harrold (National Program Manager)
M Legaspi
M Thackeray

D Haynes
D Matthews
J Wright
N Holyoake (Facilitator)
J Meehan (NSW Manager)

**Wig Library**

The Wig Library was set up by the Social Work Staff early in 1989 from monetary donations from local services clubs and donations of wigs from local people. At that time the Wig Library was one of only two in NSW the other being at Prince of Wales Hospital. In 1992 an application was made to the Liverpool City Council’s Annual Donation Program and $2,000 was received. In 1996 the activities of the Wig Library were passed on to the professional hairdresser and hospital volunteer Victoria Nasso and her assistant Berenice Dwyer.

Victoria Nasso has been the driving force behind the Wig Library. This is one of the most appreciated services provided to chemotherapy patients who lose their hair as a result of their treatment. This small but effective group of volunteers see around 500 patients every year, matching them to wigs, and ensuring there is a variety of quality wigs available.

Fiona Gould and Sharon Smith have helped to build the library of wigs into a very worthwhile service. The service helps to retain patient self-esteem. The library relies on donations to maintain the service, and has had tremendous support.
Acknowledgement of Staff

The staff members listed below have all worked at Liverpool CTC during the past 10 years.

**Allied Health**
Heather Aldis
Teresa Anderson
Gerald Au
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Rosemary Bendrey
Natalie Butler
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Gabrielle Coffey
Traci Cook
Jenella Cottle
Melanie D’Costa
Joanne Davis

Merran Findlay
Riki Franklin
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Amin Gadalia
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Kathleen Glenday
Megan Grennan
Diana Hayes
Gayathri Jegendran
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Melinda Jung
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Charis Liu
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Robyn Macdonald
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Lance Muir
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Annette Polizois
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Katherine Pronk
Alison Pryor
Sandra Queilch
Teresa Simpson
Patricia Snell
Julie Stabb
Josephine Tamara
Lily Tran
Melinda Woodward
Ying Wu
Georgette Yacoub

**Administration / Clerical / Secretarial / Transcription**
P Abdy
Gail Adams
Isobelle Anson corbe
Rosalie Atkin
R Atkinson
Tammy Attard
Narelle Barnett
Holanda Bentancor
Ashti Bibani
Rachel Bryant
Maree Cain
Patricia Calvaresi
Suzanne Campbell
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Darren Faulds
Linda Ganwood
Grace Gilmore
Vicki Gill
Sue Graham
Hong Huynh
Tammie Halls
Robyn Hittman
Michelle Howard
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Natasha Jones
Diane Kelly
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Dina Kokkotas
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Darleine Lakos
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Awrers
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Sezan Malcok
T Marquez
Therese Mathis
Lisa Miller
S Neal
Rachel Newell
Kriston Nicholls
L O’Connor
Lyn Ounthoulay
Heather Patchett
A Paltaci
Tiffany Paul
Dianne Plummer
Dean Ralph
Corina Ramon
Sharon Rawley
Colleen Reynolds
Janette Robinson
Beverley Ryan
Fatgheya Sallie
Franca Serafin
Rachel Sergeant
Brigida Sbezzi
Karolyn Shay
Vivian Shaw
Robyn Shipley
Sue Slater
Laure Smith
Matthew Smith
Theresa Stephenson
Lyn Torming
S Murray
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Vakakulosingham
Sarah Volic
Leanne Wafer
Judy Walker
Helen Walsh
Lyn White
Barbara Wieczorek
Victor Ye
Deborah Young

**Business Management**
Paul Anderson
David Kelly
Gerard Viswasam

Peter
Apostolopoulos
Anthony McShane

Sandra Avery
Stephanie Parker

Director, 1995.


Secretarial and Transcription, 1995.

Clinic Support, 1995.
Care Coordination
Sharon Cassar  Clare McCarthy  Nick Wilcox
Anne – Marie Griffin  Luciana Ward

Clinical Trials
Anil Amaratunga  Masrura Kabir  Shashi Nair
Denise Burns  Bonaventura Malikus  Vu Nguyen
Jackie Hammer  Evie Mann  Iman Ridda

Computer Support / Data Management
Sharon Behan  Corina Grech  Denise McDonnell
Angela Berthelsen  John Hallett  Ann Morgan
Richard Bryson  Inas Hanna  Phan Sayaloune
Sue Gerrey  Alexander Koshman

Collaboration for Cancer Outcomes Research & Evaluation (CCORE)
Sharon Behan  Susannah Jacob  Sharon Miles
Gabriel Gabriel  Bill Kricker  Jesmin Shafiq

Medical Oncology
Diana Adams  Richard Eek  Elizabeth Hovey
Mahmoud Alam  Peter Ellis  Particia Kho
Basim Al-Bharani  Bahram Farouzesh  Fred Kirsten
Ray Ashgari  Amanda Goldrick  Geraldine Lake
Tony Chan  David Goldstein  Gavin Marx
Stephen Della-Florentina  Charlotte Grimley  Eugene Mooyan

Nursing
Rosalie Atkin  Doris Dadic  Tony Heclimovic
Diana Aston  Anja DeRuyter  Alison Hill
Cindy Aquilina  Bernadette Donovan  Melissa Hinton
Karen Baker  Lorraine Douglas  Cassandra Hobbs
Susan Baker  Gail Dwyer  Leanne Hollis
Janine Ballard  Rhonda Eke  Karl Jobburn

Chief of RT and Physics, 1995.

Palliative Care
Meera Agar  Naomi Ellis  Bronwyn Heron
Andrew Broadbent  Louise Elliott  Justin Hussein
Colleen Carter  Robyn Haloran  Sharon Loudoun
Debbie Coultridge

Pharmacy
Robert Bayley  Michelle Findley  Maria Lambell
Pirkko Boyd  M Hall  Lindy Leslie
Gayle Cave  Amanda Hilton  Jan Lewis
Robyn Cavill  Fariba Khosravan  Rhea McFarlane
Alison Fagan

Nursing Staff OTC, 2005.


Senior Nurses, networking 2004.
### Physics

<table>
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### Radiation Oncology

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### Radiation Therapy

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### Support Services

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<td>Joe Attard</td>
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### SWS Cancer Services Development Team

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<td>Bill Kricke</td>
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This review has been sponsored by: **SIEMENS**