Metro North Hospital and Health Service
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# RBWH Research Report Cancer Care Services



## **Cancer Care Services**



Assoc. Prof. Glen Kennedy Executive Director Cancer Care Services



**Gillian Nasato** Nursing Director Cancer Care Services

Cancer Care Services (CCS) at RBWH provides expert, highly skilled, evidence based care to patients affected by cancer and non malignant haematological conditions, including haemophilia. As a service committed to achieving excellence, our multidisciplinary research team is an essential part of ensuring the provision of cutting edge treatment to our patients. The Cancer Care research team includes the Cancer Nursing Professorial Precinct, Medical Oncology, Radiation Oncology, and Haematology (including the Haemophilia Centre and the BMT Unit). Research is considered core business within Cancer Care and a vehicle to the facilitation of progressive treatment for our patients.

2016 presented another year of fantastic achievement in research for Cancer Care. The annual CCS Research Retreat bought together investigators and clinicians from CCS along with senior hospital and district executives to facilitate forward planning to ensure that research remains at the forefront of our service both now and into the future.

The Cancer Nursing Professorial Precinct is a strategic collaboration between nurses in Cancer Care Services, Royal Brisbane and Women's Hospital (RBWH) and academics in the School of Nursing, Queensland University of Technology (QUT). The aim of the Precinct is to build capacity for embedding research and innovation into day-to-day clinical practice, and develop a world-class academic comprehensive cancer centre to improve patient outcomes. Our 2016 highlights include Professor Raymond Chan being awarded the prestigious Young Tall Poppy Award, and several cancer nurses being part of the RBWH Nursing Research Team that received a Highly Commended award for Improving Patient Outcomes in Critical Care in the 2016 Inaugural Metro North Hospital and Health Service Research Excellence Awards.

The RBWH Haematology and Bone Marrow Transplant Clinical Research Unit has continued to develop and widen the opportunities for patients with haematological malignancy to participate in a comprehensive and collaborative research programs. In 2016, research staff from across the department of Haematology and Bone Marrow Transplant excelled with poster and podium presentations at well attended National and International meetings. The unit continues to publish widely in peer reviewed journals and has strong collaborations with QIMR Berghofer Medical Research Institute in supporting world class translational research programs investigating novel targeted leukaemia treatment and cellular therapies.

The Queensland Haemophilia Centre is a state-wide service which is based at the Royal Brisbane and Women's Hospital (RBWH). The centre provides comprehensive care for those with haemophilia and other inherited bleeding disorders and continues to support the important outcome data via the Australian Bleeding Disorders Registry with ongoing participation in key clinical trials utilising novel approaches to the prevention of bleeding complications.

It has been another productive year for cancer research in Radiation Oncology at RBWH. The aim and focus of the Radiation Oncology Research group is to promote, support and drive innovation, promote quality initiatives and ensure quality improvement projects to deliver evidence-based practice, ensuring safe treatment delivery. With the recent implementation of Deep Inspiration Breath Hold (DIBH), Stereotactic Body Radiation Therapy (SBRT), Stereotactic Ablative Body Radiotherapy (SABR), and soon to be released Catalyst Body Surface Scanning system, clinical benefits for patient outcomes are multi-fold; including more targeted treatment delivery, faster treatment times and effective sparing of critical structures.



**Prof Geoff Hill**Research Director
Cancer Care Services

The CCS Medical Oncology Department has an ongoing, active clinical research program. A number of research grants were received in 2016 including those from the RBWH foundation and the newly established Herston Imaging Research Facility (HIRF). 2016 highlights include Dr Matthew Burge being awarded the 2016 AGITG Innovation fund prize and Natasha Roberts who was awarded the Best Nursing/Allied Health Poster presentation at the 2016 ANZUP Annual Scientific Meeting. Collaborative research is ongoing with other RBWH departments and external health partners as we continue to grow and develop an extensive research program across the district.

2016 represented a year of major changes within cancer research; the rapid evolution of immunotherapy including stunning results of chimeric antigen receptor (CAR) T cells in refractory leukaemia, the appreciation of the critical role of commensal microbiota in these and indeed most clinical therapies together with the widespread introduction of small molecules targeting the apoptotic pathway, developed here in Australia. Never before have new research-instructed paradigms transited so rapidly into clinical practice, bring new challenges to the cancer workforce. Importantly, these changes have been bought about by rapid changes in technology that bestow us with an increasing requirement for understanding related scientific disciplines, immunology and genomics in particular. It is thus fitting that Metro North and RBWH enter a new period with formalisation of research in our service. We welcome Scott Bell as the inaugural Director of Research in Metro North and the newly developed research strategy that seeks to embed research training and culture within RBWH.

Cancer Care continues to perform well in the research space, as Dr Kennedy has outlined in his review. I would highlight some notable achievements in 2016. Andrea Hendon won the coveted Baikie Medal for best work by a new investigator at the Haematology Society of Australia and NZ annual meeting in Melbourne. The study was part of Andrea's PhD work and she continues as a Haematologist in the Department. Ray Chan, Siok Tey and Steven Lane were awarded multiple NHMRC and CCQ grants. Kate Markey, a Haematology registrar based at RBWH received one of only five \$0.5M State-Wide QLD Health Junior Research Fellowships. Most impressively, Steven Lane received the inaugural CSL Fellowship, worth \$1.25M over 5 years. This is a major national achievement for Steve and the Department of Haematology, clearly placing him at the very top of his peer group in leukaemia research. We also congratulate Brett Hughes from Medical Oncology who co-authored a pivotal phase 2 study on a new ALK inhibitor in the very high impact Journal of Clinical Oncology. The Division was also successful in the Cancer Theme bid for the Brisbane Diamantina Health Partners (BDHP), led by myself and Euan Walpole from the PA Hospital together with Metro North theme leads in Blood Cancers (Steven Lane), Upper GI cancers (Matt Burge) and Lung Cancer (Brett Hughes). At the time of writing, BDHP is (confidently) awaiting the outcome of its NHMRC application for recognition as an Academic Health Research and Translation Centre, a vehicle likely to be integral to the disposal of funding from the Medical Research Future Fund. This new funding landscape will bring investigator driven research sharply into focus over the next 5 years and while our achievements this year place us in good stead, it will be important we continue to shape and mentor our young researchers to meet these challenges in the future.

# Haematology, Bone Marrow Transplant and Haemophilia

The RBWH Haematology and Bone Marrow Transplant Clinical Research Unit has continued to develop and widen the opportunities for patients with haematological malignancy from Metro North, central zone and across Queensland to participate in a structured comprehensive research program enhanced by collaborations with QIMR Berghofer Medical Research Institute, The Australian Leukaemia & Lymphoma Group (ALLG), other RBWH clinical and allied health units including the Department of Intensive Care, Nutrition & Dietetics, Pharmacy and The Herston Imaging Research Facility (HIRF).

The unit maintains a comprehensive suite of clinical studies from phase I to IV trials investigating the optimal management of leukaemia, lymphoma, myeloma and myeloproliferative neoplasms and improving the outcomes of patients requiring allogeneic stem cell transplantation via the utilisation of novel approaches to the prevention and treatment of Graft versus Host Disease. Collaborations with QIMR Berghofer Medical Research Institute continue to support world class translational research programs investigating novel targeted leukaemia treatment and cellular therapies.

This year research staff from across the department of Haematology and Bone Marrow Transplant excelled with poster and podium presentations at well attended National and International meetings. The unit continues to publish widely in peer reviewed journals.

The Queensland Haemophilia Centre is a state-wide service based at the Royal Brisbane and Women's Hospital (RBWH). The centre provides comprehensive care for those with haemophilia and other inherited bleeding disorders and continues to support the important outcome data via the Australian Bleeding Disorders Registry with ongoing participation in key clinical trials utilising novel approaches to the prevention of bleeding complications.

#### **Supervised Post-graduate Research Students**

Name	Current Studies University (duration)	Research Project Title	Supervisors (RBWH staff in bold)
Nienke Zomerdijk	PhD, UQ (2015-2018)	A multi-center, prospective, exploratory study of the psychosocial impact of donating haematopoietic stem cells on adult sibling donors.	Geoff Hill, Jane Turner
Therese Vu	PhD, UQ (2013-)	Maintenance of blood stem cells and the development of haematological malignancies	Steven Lane
Rebecca Austin	PhD, UQ (2014-)	What factors drive immune response in acute myeloid leukaemia	Steven Lane
Simone Minnie	PhD, UQ (2015-2017)	Optimizing the cellular and molecular pathways for graft vs myeloma effects after bone marrow transplantation	Geoff Hill
Dr Andrea Henden, Haematologist	PhD, UQ (2014-2017)	Anti-leukemia effects of the type I and III Interferons	Geoff Hill
Melody Cheung	PhD, Griffith (2012-2016)	Optimization of CD8+ dendritic cell cross presentation for enhanced graft versus leukemia effects following haematopoietic stem cell transplantation	Geoff Hill
Paulo Martins	PhD, UQ (2013-2016)	Dissecting the immunological determinants and consequences of cytomegalovirus reactivation in allogeneic haematopoietic stem cell transplantation using a novel murine model	Geoff Hill
Katie Lineburg	PhD, UQ (2014-2016)	Identifying the cells and pathways that contribute to chronic graft-versus-host disease	Geoff Hill
Kate Markey	Candidate for Masters in Clinical Research Methods – Monash University (2016-2018)	Coursework only	N/A

## Research Positions: Coordinators, Fellow, Adjunct and Honorary Positions

Name	Type of Fellowship	Research Program	University (years)
Associate Professor Steven Lane	CSL Centenary Fellowship Conjoint Fellow	Research into acute leukaemia	CSL Centenary Fellowship
Prof Geoff Hill	Senior Clinical Research Fellowship		Qld Health
Prof Geoff Hill	Honorary Practitioner Research Fellow Level 2, Laboratory Head, Principal Research Fellow		NHMRC

## Current RBWH Research Group / Department Led Research Activity

RBWH Lead	Collaborative Researchers	Research Project Title
Researchers		
Nienke Zomerdijk Jane Turner Geoff Hill	David Gottlieb Annette Barnes Jacobus Ungerer	A multi-center, prospective, exploratory study of the psychosocial impact of donating haematopoietic stem cells on adult sibling donors
Simon Durrant	Jason Butler, Cameron Curley, Glen Kennedy, Siok Tey, Steven Lane, Kirk Morris, Elango Subramonia Pillai, Nicholas Weber	A Phase III, 2-arm, randomized, double-blind, placebo-controlled study of intravenous PI3K inhibitor copanlisib in combination with standard immunochemotherapy in patients with relapsed indolent non-Hodgkin's lymphoma (iNHL) - CHRONOS-4
Glen Kennedy	Simon Durrant, Jason Butler, Cameron Curley, Steven Lane, Kirk Morris, Elango Subramonia Pillai, Ashish Misra	A Phase 3, Multicenter, Open-label, Randomized Study Comparing the Efficacy and Safety of AG-221 (CC-90007) Versus Conventional Care Regimens in Older Subjects with Late Stage Acute Myeloid Leukemia Harboring an Isocitrate Dehydrogenase 2 Mutation - AG-221-AML-004
Glen Kennedy	Simon Durrant, Jason Butler, Cameron Curley, Ashish Misra, Anthony James Morton, Elango Subramonia Pillai	A Randomized, Double-Blind, Placebo-Controlled, Phase 3 Trial to Evaluate the Protective Efficacy and Safety of a Therapeutic Vaccine, ASP0113, in Cytomegalovirus (CMV)-Seropositive Recipients Undergoing Allogeneic, Hematopoietic Cell Transplant (HCT) Protocol for Phase 3 Study of ASP0113
Jason Butler	Simon Durrant, Cameron Curley, Elango Subramonia Pillai	CINC424A2104 - A phase Ib, open-label, multi centre, two arm, dose-finding study to assess safety and efficacy of the oral combination of Ruxolitinib (INC424) and BKM120 in patients with primary myelofibrosis (PMF), post-polycythemia vera-myelofibrosis (PPV-MF), or post essential thrombocythemia-myelofibrosis (PET-MF) who have previously received or not a JAK inhibitor
Simon Durrant	Jason Butler, Elango Subramonia Pillai	A multi-center, randomized, double-blind, placebo controlled clinical trial of deferasirox (Exjade®) in patients with myelodysplastic syndromes (low/int-1 risk) and transfusional iron overload (TELESTO)
Simon Durrant	Elango Subramonia Pillai, Steven Lane, Ashish Misra, Kirk Morris, Jason Butler	Randomized, open label, multicentre phase IIIb study evaluating the efficacy and safety of ruxolitinib versus best available therapy in patients with polycythemia vera who are hydroxyurea resistant or intolerant (Response 2)
Simon Durrant	Elango Subramonia Pillai, Cameron Curley, Jason Butler	Randomized, open label, multicenter phase III study of Efficacy And Safety in POlycythemia vera subjects who are resistant to or intolerant of hydroxyurea: JAK iNhibitor INC424 tablets verSus bEst available care (The RESPONSE Trial)
Simon Durrant	Jason Butler, Elango Subramonia Pillai	An Open-Label Bosutinib Treatment Extension Study For Subjects With Chronic Myeloid Leukemia (CML) Who Have Previously Participated In Bosutinib Studies B1871006 Or B1871008
Glen Kennedy	Simon Durrant, Jason Butler, Cameron Curley, Ashish Misra, Elango Subramonia Pillai, Steven Lane, Siok Tey, Kirk Morris, Anthony James Morton	A phase III, international, multi center, randomized, controlled, open-label study to investigate the efficacy, safety and pharmacokinetics of rituximab SC in combination with CHOP or CVP versus rituximab IV in combination with CHOP or CVP in patients with previously untreated follicular lymphoma followed by maintenance treatment with either rituximab SC or rituximab IV. (BO22334)
Simon Durrant	Jason Butler, Cameron Curley, Ashish Misra, Elango Subramonia Pillai, Steven Lane, Siok Tey, Kirk Morris, Anthony James Morton	An adaptive, comparative, randomized, parallel-group, multi center, Phase lb study of subcutaneous (SC) rituximab versus intravenous (IV) rituximab both in combination with chemotherapy (fludarabine and cyclophosphamide), in patients with previously untreated CLL. Protocol Number: B025341

RBWH Lead Researchers	Collaborative Researchers	Research Project Title
Siok Tey, Geoff Hill	Glen Kennedy, Simon Durrant, Jason Butler, Cameron Curley, Ashish Misra, Elango Subramonia Pillai, Anthony James Morton	A phase I study of haploidentical haematopoietic stem cell transplantation with suicide gene-modified donor T cell addback in patients with poor risk haematological malignancies
Geoff Hill	Simon Durrant, Glen Kennedy, Jason Butler, Anthony James Morton, Siok Tey, Ashish Misra, Elango Subramonia Pillai, Cameron Curley	Observational Study of IL-17 – related Cytokines in Stem Cell Transplantation
Siok Tey, Glen Kennedy	Simon Durrant, Glen Kennedy, Jason Butler, Anthony James Morton, Elango Subramonia Pillai, Cameron Curley	Observational study of immune reconstitution following autologous stem cell transplantation (IR Auto)
Siok Tey, Geoff Hill	Glen Kennedy, Simon Durrant, Jason Butler, Cameron Curley, Ashish Misra, Elango Subramonia Pillai, Anthony James Morton	Observational study of immune reconstitution following stem cell Transplantation (IR Allo)
Geoff Hill, Glen Kennedy	Simon Durrant, Jason Butler, Anthony James Morton, Elango Subramonia Pillai, Cameron Curley, Siok Tey, Ashish Misra	A phase I / II study of pegylated-Interferon-2alpha for relapsed haematological malignancy after allogeneic haematopoietic progenitor cell transplantation (HPCT)
Glen Kennedy, Geoff Hill	Simon Durrant, Jason Butler, Anthony James Morton, Siok Tey, Ashish Misra, Elango Subramonia Pillai, Cameron Curley	A phase II study of humanized anti-IL-6 receptor antibody Tocilizumab (TCZ) to prevent development of acute graft versus host disease (GVHD) post HLA-mismatched allogeneic haematopoietic progenitor cell transplantation (HPCT)
Glen Kennedy, Geoff Hill, Prof Sanjoy Paul	Simon Durrant, Jason Butler, Anthony James Morton, Siok Tey, Elango Subramonia Pillai, Cameron Curley	A phase III randomized study of humanized anti-IL-6 receptor antibody Tocilizumab (TCZ) to prevent development of acute graft versus host disease (GVHD) post HLA-matched allogeneic haematopoietic progenitor cell transplantation (HPCT)
Siok Tey	Simon Durrant, Geoff Hill	Developing a method to generate regulatory T cells from healthy donors
Steven Lane	Geoff Hill, Glen Kennedy	Examination of genes that control the growth and survival of blood cancers P1382
Geoff Hill, Glen Kennedy	Simon Durrant, Jason Butler, Anthony James Morton, Siok Tey, Ashish Misra, Elango Subramonia Pillai, Cameron Curley	Substitution of alemtuzumab for ATGAM as part of combination therapy including etanercept, tacrolimus and mycophenolate mofetil for steroid-refractory acute graft versus host disease (SR-GVHD) post haematopoietic progenitor cell transplantation (HPCT)
Geoff Hill, Glen Kennedy	Simon Durrant, Jason Butler, Anthony James Morton, Siok Tey, Ashish Misra, Elango Subramonia Pillai, Cameron Curley	A phase I / II study of humanized anti-IL-6 receptor antibody Tocilizumab (TCZ) to prevent development of acute graft versus host disease (GVHD) post HLA-matched allogeneic haematopoietic progenitor cell transplantation (HPCT)

# Collaborative Research Activity involving RBWH Research Group / Department

Collaborative Lead Researchers	RBWH Researchers	Research Project Title
Dr Noemi Horvath (Adelaide)	Simon Durrant, Jason Butler, Cameron Curley, Geoff Hill, Glen Kennedy, Steven Lane Kirk Morris, Elango Subramonia Pillai, Siok Tey, Nicholas Weber	A Phase 3, Multicenter, Randomized, Double Blind Study of Bortezomib and Dexamethasone in Combination with Either Venetoclax or Placebo in Subjects with Relapsed or Refractory Multiple Myeloma Who are Sensitive or Naïve to Proteasome Inhibitors. Protocol: M14-031.
Andrew Wei ALLG (Melbourne)	Glen Kennedy, Kirk Morris, Jason Butler, Simon Durrant Cameron Curley, Steven Lane, Elango Subramonia Pillai, Nicholas Weber	Sorafenib in combination with intensive chemotherapy for previously untreated adult FLT3-ITD positive AML: a phase 2 randomised double-blind controlled multi-centre study
Andrew Wei ALLG (Melbourne)	Steven Lane, Jason Butler, Cameron Curley, Glen Kennedy, Steven Lane, Kirk Morris, Elango Subramonia Pillai, Siok Tey, Nicholas Weber	A phase Ib/II clinical evaluation of Ponatinib in combination with 5-azacitidine in FLT3-ITD positive acute myeloid leukaemia AML M21

Collaborative Lead Researchers	RBWH Researchers	Research Project Title
Andrew Wei ALLG (Melbourne)	Glen Kennedy, Cameron Curley, Jason Butler, Elango Subramonia Pillai, Steven Lane, Kirk Morris, Nicholas Weber, Simon Durrant	Australasian Leukaemia and Lymphoma Group "National Blood Cancer Registry"
JudithTrotman Emma Verner ALLG	Jason Butler, Cameron Curley, Simon Durrant, Glen Kennedy, Steven Lane, Ashish Misra, Kirk Morris, Anthony James Morton, Elango Subramonia Pillai, Nicholas Weber	A Phase II Study of Ibrutinib, Rituximab and mini-CHOP therapy in very elderly patients with newly diagnosed DLBCL
Dr Sushrut Patil (Alfred Hospital)	Simon Durrant, Jason Butler, Cameron Curley, Glen Kennedy, Kirk Morris, Elango Subramonia Pillai, Nicholas Weber	A Phase 2/3 Multi-center Study to Evaluate the Safety and Efficacy of Blinatumomab in Subjects with Relapsed/Refractory Aggressive B-Cell Non Hodgkin Lymphoma (20150292)
Hunter New England (NSW)	Glen Kennedy, Cameron Curley, Elango Subramonia Pillai, Jason Butler, Kirk Morris	A Randomized, Open-label, Phase 3 Study of Carfilzomib Plus Dexamethasone vs Bortezomib Plus Dexamethasone in Patients with Relapsed Multiple Myeloma. Protocol Number 2011-003
A/Prof David Ritchie (Royal Melbourne)	Simon Durrant, Glen Kennedy, Jason Butler, Cameron Curley, Ashish Misra, Kirk Morris, Elango Subramonia Pillai, Geoff Hill, Nick Weber	A Phase 3, Randomized, Open Label Study Investigating the Efficacy of the BiTEDAntibody Blinatumomab Versus Standard of Care Chemotherapy in Adult Subjects With Relapsed/Refractory B-precursor Acute Lymphoblastic Leukemia (ALL) (TOWER Study)
St Vincent's Hospital (NSW)	Simon Durrant, Elango Subramonia Pillai, Jason Butler, Cameron Curley, Kirk Morris	An open label, multi-center, Phase IV roll-over protocol for participants who have completed a prior ruxolitinib (INC424) study and are judged by the investigator to benefit from continued treatment
Hunter New England (NSW)	Simon Durrant, Jason Butler, Cameron Curley, Glen Kennedy, Steven Lane, Kirk Morris, Anthony James Morton, Elango Subramonia Pillai, Nicholas Weber	A Phase Ib/Ii Study Evaluating The Safety And Efficacy Of Mpdl3280a In Combination With Either Obinutuzumab Plus Bendamustine Or Obinutuzumab Plus Chop In Patients With Follicular Lymphoma Or Diffuse Large B-Cell Lymphoma
Melbourne Hospital	Simon Durrant, Steven Lane, Jason Butler, Kirk Morris, Elango Subramonia Pillai, Anthony James Morton, Cameron Curley, Glen Kennedy, Ashish Misra,	A Phase 3, Randomized, Double-blind Active-controlled Study Evaluating Momelotinib vs. Ruxolitinib in Subjects with Primary Myelofibrosis (PMF) or Post-polycythemia Vera or Post-essential Thrombocythemia Myelofibrosis (Post-PV/ET MF)
Melbourne Hospital	Glen Kennedy, Simon Durrant, Jason Butler, Cameron Curley, Geoff Hill, Anthony James Morton, Elango Subramonia Pillai, Ashish Misra, Nicholas Weber	A Phase 2b, Randomized, Double-Blind, Placebo-Controlled Multi-Center Study Evaluating Antiviral Effects, Pharmacokinetics, Safety, and Tolerability of GS-5806 in Hematopoietic Cell Transplant (HCT) Recipients with Respiratory Syncytial Virus (RSV) Infection of the Upper Respiratory Tract
Prince of Wales Hospital (NSW)	Kirk Morris, Cameron Curley, Siok Tey	A Phase 3, Randomized, Controlled Study Evaluating the Efficacy and Safety of Idelalisib(GS-1101) in Combination with Ofatumumab for Previously Treated Chronic Lymphocytic Leukemia
Princess Alexandra Brisbane	Simon Durrant, Jason Butler, Cameron Curley, Glen Kennedy, Steven Lane, Ashish Misra, Elango Subramonia Pillai	An Open-label, Randomised Trial of Bortezomib Consolidation (With Thalidomide and Prednisolone) Vs Thalidomide and Prednisolone Alone in Previously Untreated Subjects With Multiple Myeloma After Receiving Bortezomib, Cyclophosphamide, Dexamethasone (VCD) Induction and Autologous Stem Cell Transplant. 26866138-MMY-2073
Princess Alexandra Brisbane	Cameron Curley, Glen Kennedy Steven Lane, Jason Butler, Kirk Morris, Simon Durrant, Elango Subramonia Pillai	A Randomized Phase 2 Study of DACOGEN® (Decitabine) Plus JNJ-56022473 (Anti CD123) Versus DACOGEN (Decitabine) Alone in Patients with AML who are not Candidates for Intensive Chemotherapy
Princess Alexandra Brisbane	Kirk Morris, Ashleigh Scott	Real world" review of efficacy and safety of pomalidomide in Australian patients with relapsed refractory myeloma.
Princess Alexandra Brisbane	Simon Durrant, Jason Butler, Cameron Curley, Glen Kennedy, Steven Lane, Ashish Misra, Kirk Morris, Elango Subramonia Pillai, Siok Tey	A randomised, open label, multi-centre, Phase III study to investigate the efficacy of bendamustine compared to treatment of physician's choice in the treatment of subjects with indolent Non-Hodgkin's Lymphoma (NHL) refractory to rituximab
David Gottlieb, Westmead Hospital, NSW	Geoff Hill, Glen Kennedy, Siok-Keen Tey	Therapeutic infusion of most closely HLA-matched third party donor- derived virus-specific cytotoxic T-lymphocytes in patients with active viral reactivation post-allogeneic stem cell transplantation (R3ACT)

## **Research Awards and Achievements**

Recipient	Award	Event
Nienke Zomerdijk	Professor Lawrie Powell Early Career Research Award	25th Annual RBWH Healthcare Symposium, September, 2016

## Research Grants - Awarded

Investigators (RBWH staff in bold)	RBWH Research Groups / Departments	Project Title	Granting Body	Amount in 2016	Total Amount (years)
Nienke Zomerdijk, Jane Turner, Geoff Hill	Haematology/Bone Marrow Transplant	A multi-center, prospective, exploratory study of the psychosocial impact of donating haematopoietic stem cells on adult sibling donors.	University of Queensland	\$26,000	\$78,000 (2015-2018)
Lane, Steven	QIMRB	Targeting Leukaemia Stem Cells through inhibition of telomerase	NHMRC Project Grant (Sole CI)	\$219,000	\$657,000 (2016-2018)
Lane, Steven	QIMRB	The evolution of acute myeloid leukaemia through the in situ transformation of haematopoietic stem cells	NHMRC Project Grant (Sole CI)	\$215,667	\$647,000 (2016-2018)
Lane, Steven	QIMRB	Deciphering the overlapping roles of SSB1 and SSB2 in the regulation of haematopoiesis and intestinal homeostasis	NHMRC Project Grant (CIB)	\$239,750	\$959,000 (2015-2018)
Lane, Steven	QIMRB	Starving Stem Cells	NHMRC Project Grant (CIA)		\$484,000 (2014-2016)
Lane, Steven	QIMRB	EGFR and MET signalling in MPN	NHMRC Project Grant (CIB)		\$585,000 (2016-2018)
Steven Lane	Clinical Haematologist, RBWH	Research into acute leukaemia	CSL Centenary Fellowship		\$1,250,000
Siok Tey	Bone Marrow Transplant/ Haematology	The interplay between IL-6 and GVHD on anti-viral and anti-leukemic immunity	NHMRC Project Grant	N/A	\$489,376
Prof Geoff Hill	Director of Research – CCS RBWH	Immunological therapies for cancer, chronic infection and autoimmunity.	NH&MRC Program grant: APP1071822	\$359,506	\$1,797,530 (2015-2019)
Prof Geoff Hill	Director of Research – CCS RBWH	RORgt inhibition as a novel therapeutic for the prevention of GVHD after allogeneic BMT.	Cancer Council Qld	\$100,000	\$200,000 (2016-2017)
Prof Geoff Hill	Director of Research – CCS RBWH	A multi-centre phase 3 study of tociluzimab for the prevention of acute GVHD	Roche Pharmaceuticals	\$483,333	\$1,450,000 (2016-2018)
Prof Geoff Hill	Director of Research – CCS RBWH		NHMRC senior Principal research Fellowship		\$938,900 (2016-2020)
Kate Markey	Clinical Haematology Registrar	The Post BMT microbiome	QLD Health Junior Research Fellowship	\$500,000	(2016-2018)

## 2016 Research Publications

Type (Journal article / Book / Book chapter / Letter)	Publication information (RBWH staff in bold)
Journal article	Swords RT, Greenberg PL, Wei AH, <b>Durrant S</b> , Advani AS, Hertzberg MS, Lewis ID, Rivera G, Gratzinger D, Fan AC, Felsher DW, Cortes JE, Watts JM, Yarranton GT, Walling JM, Lancet JE. KB004, a first in class monoclonal antibody targeting the receptor tyrosine kinase EphA3, in patients with advanced hematologic malignancies: Results from a phase 1 study. Leuk Res. 2016;50:123-131.
Journal article	Kruger P, Cooney J, Nivison-Smith I, Dodds A, Bardy P, Ma D, Szer J, <b>Durrant S</b> . All is not lost in accelerated phase/blast crisis and after tyrosine kinase inhibitors fail in chronic myeloid leukaemia: a retrospective study of allogeneic stem cell transplant outcomes in Australia and New Zealand. Bone Marrow Transplant. 2016;51(10):1400-1403.
Journal article	Verstovsek S, Vannucchi AM, Griesshammer M, Masszi T, <b>Durrant S</b> , Passamonti F, Harrison CN, Pane F, Zachee P, Kirito K, Besses C, Hino M, Moiraghi B, Miller CB, Cazzola M, Rosti V, Blau I, Mesa R, Jones MM, Zhen H, Li J, Francillard N, Habr D, Kiladjian JJ. Ruxolitinib versus best available therapy in patients with polycythemia vera: 80-week follow-up from the RESPONSE trial. Haematologica. 2016l;101(7):821-9.
Journal article	Tey SK, Vuckovic S, Varelias A, Martins JP, Olver S, Samson L, Sturgeon E, Leach J, Avery J, Nakagaki M, Butler JP, Curley C, Morton AJ, Durrant ST, Kennedy GA, Hill GR. Pharmacokinetics and immunological outcomes of alemtuzumab-based treatment for steroid-refractory acute GvHD. Bone Marrow Transplant. 2016;51(8):1153-5.
Journal article	Siegel DS, Dimopoulos M, Jagannath S, Goldschmidt H, <b>Durrant S</b> , Kaufman JL, Leleu X, Nagler A, Offner F, Graef T, Eid JE, Houp J, Gause C, Vuocolo S, Anderson KC. VANTAGE 095: An International, Multicenter, Open-Label Study of Vorinostat (MK-0683) in Combination With Bortezomib in Patients With Relapsed and Refractory Multiple Myeloma. Clin Lymphoma Myeloma Leuk. 2016;16(6):329-334.e1.
Journal article	Vajdic CM, Mayson E, Dodds AJ, O'Brien T, Wilcox L, Nivison-Smith I, Le Marsney R, Daniels B, Ashton LJ; <b>CAST study investigators</b> . Second Cancer Risk and Late Mortality in Adult Australians Receiving Allogeneic Hematopoietic Stem Cell Transplantation: A Population-Based Cohort Study. Biol Blood Marrow Transplant. 2016;22(5):949-56.
Journal article	Dimopoulos MA, Moreau P, Palumbo A, Joshua D, Pour L, Hájek R, Facon T, Ludwig H, Oriol A, Goldschmidt H, Rosiñol L, Straub J, Suvorov A, Araujo C, Rimashevskaya E, Pika T, Gaidano G, Weisel K, Goranova-Marinova V, Schwarer A, Minuk L, Masszi T, Karamanesht I, Offidani M, Hungria V, Spencer A, Orlowski RZ, Gillenwater HH, Mohamed N, Feng S, Chng WJ; <b>ENDEAVOR Investigators</b> . Carfilzomib and dexamethasone versus bortezomib and dexamethasone for patients with relapsed or refractory multiple myeloma (ENDEAVOR): a randomised, phase 3, open-label, multicentre study. Lancet Oncol. 2016;17(1):27-38.
Journal article	Mesa R, Verstovsek S, Kiladjian JJ, Griesshammer M, Masszi T, <b>Durrant S</b> , Passamonti F, Harrison CN, Pane F, Zachee P, Zhen H, Jones MM, Parasuraman S, Li J, Côté I, Habr D, Vannucchi AM. Changes in quality of life and disease-related symptoms in patients with polycythemia vera receiving ruxolitinib or standard therapy. Eur J Haematol. 2016;97(2):192-200.
Journal article	<b>Scott A, Morris K, Butler J</b> , Mills AK, <b>Kennedy GA</b> . Treatment of aplastic anaemia with lower-dose anti-thymocyte globulin produces similar response rates and survival as per standard dose anti-thymocyte globulin schedules .Intern Med J. 2016;46(10):1198-1203.
Journal article	Fleming S, Ong DM, Jackson K, Avery S, Mollee P, Marlton P, <b>Kennedy G</b> , Wei AH. Partial response after induction chemotherapy has clinical relevance in acute myeloid leukaemia. Br J Haematol. 2016 Mar 31. doi: 10.1111/bjh.14063
Journal article	<b>Scott A</b> , Baidya S, <b>Butler J, Morris K</b> , Thornton A, <b>Kennedy GA</b> . Pretransplant platelet transfusion refractoriness is not associated with platelet nonengraftment in T-replete hematopoietic progenitor cell transplantation for hematologic malignancies. Transfusion. 2016;56(1):164–9.
Journal article	Mediwake H, Morris K, Curley C, Butler J, Kennedy G. Use of Brentuximab vedotin as salvage therapy pre-allogeneic stem cell transplantation in relapsed / refractory CD30 positive lympho-proliferative disorders: a single centre experience Accepted for publication, Internal Medicine Journal, October 2016  Use of Brentuximab vedotin as salvage therapy pre-allogeneic stem cell transplantation in relapsed / refractory CD30 positive lympho-proliferative disorders: a single centre experience, Internal Medicine Journal  Accepted manuscript online: 1 MAR 2017, Heshani Mediwake, Kirk Morris, Cameron Curley, Jason Butler and Glen Kennedy, D0I: 10.1111/imj.13415
Journal article	Le Texier L, Lineburg KE, Cao B, McDonald-Hyman C, Leveque-El Mouttie L, Nicholls J, Melino M, Nalkurthi BC, Alexander KA, Teal B, Blake SJ, Souza-Fonseca-Guimaraes F, Engwerda CR, Kuns RD, <b>Lane SW</b> , Teng M, Teh C, Gray D, Clouston AD, Nilsson SK, Blazar BR, <b>Hill GR</b> , MacDonald KP. Autophagy-dependent regulatory T cells are critical for the control of graft-versus-host disease. JCl Insight. 2016;1(15):e86850
Journal article	Austin R, Smyth MJ, <b>Lane SW</b> . Harnessing the immune system in acute myeloid leukaemia.Crit Rev Oncol Hematol. 2016;103:62-77.
Journal article	Bruedigam C, <b>Lane SW</b> . Telomerase in hematologic malignancies. Curr Opin Hematol. 2016;23(4):346-53.

Type (Journal article / Book / Book chapter / Letter)	Publication information (RBWH staff in bold)
Journal article	Bagger FO, Bruedigam C, <b>Lane SW</b> . Analysis of telomerase target gene expression effects from murine models in patient cohorts by homology translation and random survival forest modeling. Genom Data. 2016;7:275-80.
Journal article	Jung HJ, Seo I, Casciello F, Jacquelin S, <b>Lane SW</b> , Suh SI, Suh MH, Lee JS, Baek WK. The anticancer effect of chaetocin is enhanced by inhibition of autophagy. Cell Death Dis. 2016;7:e2098.
Journal article	Olsen CM, <b>Lane SW</b> , Green AC. Increased risk of melanoma in patients with chronic lymphocytic leukaemia: systematic review and meta-analysis of cohort studies. Melanoma Res. 2016;26(2):188-94.
Journal article	Vu T, Austin R, Kuhn CP, Bruedigam C, Song A, Guignes S, Jacquelin S, Ramshaw HS, Hill GR, Lopez AF, <b>Lane SW</b> . Jak2V617F driven myeloproliferative neoplasm occurs independently of interleukin-3 receptor beta common signaling.Haematologica. 2016;101(3):e77-80
Journal article	Bunting MD, Varelias A, Souza-Fonseca-Guimaraes F, Schuster IS, Lineburg KE, Kuns RD, Fleming P, Locke KR, Huntington ND, Blazar BR, <b>Lane SW, Tey SK</b> , MacDonald KP, Smyth MJ, Degli-Esposti MA, <b>Hill GR</b> . GVHD prevents NK-cell-dependent leukemia and virus-specific innate immunity. Blood. 2017;129(5):630-642. doi: 10.1182/blood-2016-08-734020. Epub 2016 Dec 7.
Journal article	Dasari V, Rehan S, <b>Tey SK</b> , Smyth MJ, Smith C, Khanna R. Autophagy and proteasome interconnect to coordinate cross-presentation through MHC class I pathway in B cells. Immunol Cell Biol. 2016;94 (10):964–974.
Journal article	Smith C, Brennan RM, <b>Tey SK</b> , Smyth MJ, Burrows SR, Miles JJ, Hill GR, Khanna RCoinfection with Human Cytomegalovirus Genetic Variants in Transplant Recipients and Its Impact on Antiviral T Cell Immune Reconstitution. J Virol. 2016;90(16):7497–507.
Journal article	Ullah MA, <b>Hill GR, Tey SK</b> . Functional Reconstitution of Natural Killer Cells in Allogeneic Hematopoietic Stem Cell Transplantation. Front Immunol. 2016;7:144.
Journal article	Melino M, Gadd VL, Alexander KA, Beattie L, Lineburg KE, Martinez M, Teal B, Le Texier L, Irvine KM, Miller GC, Boyle GM, <b>Hill GR</b> , Clouston AD, Powell EE, MacDonald KP. Spatiotemporal characterization of the cellular and molecular contributors to liver fibrosis in a murine hepatotoxic-injury model. Am J Pathol. 2016, 186(3):524-38
Journal article	Montes de Oca M, Kumar R, de Labastida Rivera F, Amante FH, Sheel M, Faleiro RJ, Bunn PT, Best SE, Beattie L, Ng SS, Edwards CL, Muller W, Cretney E, Nutt SL, Smyth MJ, Haque A, <b>Hill GR</b> , Sundar S, Kallies A, Engwerda CR. Blimp-1-dependent IL-10 production by Tr1 cells regulates TNF-mediated tissue pathology. PLoS Pathog. 2016, 12(1):e1005398
Journal article	Flynn RP, Paz KG, Du J, Reichenbach DK, Taylor PA, Panoskaltsis-Mortari A, Vulic A, Luznik L, MacDonald KPA, <b>Hill GR</b> , Nyuydzefe M, Weiss J, Chen W, Trzeciak A, Serody JS, Aguilar EG, Murphy WJ, Maillard I, Munn DH, Cutler C, Antin JH, Ritx J, Waksal S, Aanin-Shorov A, Blazar BR. Rho-associated kinase 2 (ROCK2) inhibition decreases pathology of murine and human chronic GVHD through Stat3-dependent mechanism. Blood 2016, 127(17):2144-54
Journal article	Leveque-El moutte L*, Koyama M*, Le Texier L, Markey KA, Cheong M, Kuns KD, Lineburg KE, Teal BE, Alexander KA, Clouston AD, Blazar BR, <b>Hill GR*</b> , MacDonald KPA*. Corruption of dendritic cell antigen presentation during acute GVHD leads to a failure of regulatory T cell homeostasis and chronic GVHD. Blood 2016, 128(6):794-804
Journal article	McDonald-Hyman C, Flynn R, Panoskaltsis-Mortari A, Peterson N, MacDonald KP, <b>Hill GR</b> , Luxnik L, Serody JS, Murphy WJ, Maillard I, Munn DH, Turka LA, Koreth J, Cutler CS, Soiffer RJ, Antin JH, Ritz J, Blazar BR. Therapeutic regulatory T cell adoptive transfer ameliorates established murine chronic GVHD in a CXCR5-dependent manner. Blood 2016, 128(7):1013-7
Journal article	Ngiow SF, Young A, Blake SJ, <b>Hill GR</b> , Yagita H, Teng MW, Korman AJ, Smyth MJ. Agonistic CD40 mAb-driven IL-12 reverses resistance to anti-PD1 in a T cell-rich tumor. Cancer Res. 2016, 76(21):6266-6277
Journal article	Sebina I, James KR, Soon MSF, Fogg LG, Best SE, Rivers F, Montes de Oca M, Amante FH, Thomas BS, Beattie L, Souza-Fonseca-Guimaraes F, Smyth MJ, Hertzog PJ, <b>Hill GR</b> , Hutloff A, Engwerda CR, Haque A. IFNAR1-signalling obstructs ICOS-mediated humoral immunity during non-lethal blood-stage Plasmodium infection. Plos Pathogens. 2016, Nov 3;12(11):e1005999.
Journal article	Zaman M, Ozberk V, Langshaw EL, McPhun V, Powell JL, Phillips ZN, Ho MF, Calcutt A, Batzloff MR, Toth I, <b>Hill GR</b> , Pandey M, Good MF. Novel platform technology for modular mucosal vaccine that protects against streptococcus. Sci Rep. 2016 Dec 15;6:39274.

# 2016 Conference Presentations – Invited Speaker, Oral and Poster

Type (Oral / Poster / Invited)	Presentation information (RBWH staff in bold)
Oral	Transplantation in FLT-3-ITD+ AML with normal karyotype is associated with improved overall survival Taylor E, Morris K, Ellis M, Marlton P, Cochrane T, Clarey J, Irving I, Baveshi K & <b>Kennedy G</b> Oral Presentation, Haematology Society of Australia and New Zealand, 2016 Congress, Melbourne
Oral	Early acute kidney injury post allogeneic stem cell transplant is associated with increased risk of GVHD, higher mortality and reduced survival Birchley A, Butler J, Curley C, Scott A & <b>Kennedy G</b> Oral Presentation, Haematology Society of Australia and New Zealand, 2016 Congress, Melbourne
Oral	A single high-dose Cytarabine (HiDAC) during induction-consolidation may not be adequate for patients with a new diagnosis of acute myeloid leukaemia (AML) not planned for allogeneic haematopoietic stem cell transplantation (alloHSCT) in 1st complete remission (CR1) Schwarer A, Wight J, Jackson K, Beligaswatte A, Butler J, <b>Kennedy G</b> , Martin L, Lewis I, Hiwase D, Zantomio D, He S, Grigg A, Morris K, Mollee P & Marlton P Oral Presentation, Haematology Society of Australia and New Zealand, 2016 Congress, Melbourne
Poster and Other Abstracts	Allelic ratio in FLT3-ITD+ AML does not correlate with outcome Taylor E, <b>Kennedy G</b> , Ellis M, Marlton P, Cochrane T, Clarey J, Irving I, Baveshi K & Morris K Poster presentation, Haematology Society of Australia and New Zealand, 2016 Congress, Melbourne
Poster and Other Abstracts	Outcome of Mismatched Unrelated Donor (MMUD) allogeneic stem cell transplantation for acute leukaemia, MDS/MPN: a single centre experience Mediwake H, Curley C, Butler J, Sturgeon E, Leach J & <b>Kennedy G</b> Poster presentation, Haematology Society of Australia and New Zealand, 2016 Congress, Melbourne
Poster and Other Abstracts	High dose cytarabine (HiDAC) improves the cure rate of patients with newly diagnosed acute myeloid leukemia (AML): is it better to be given as induction therapy or as consolidation therapy? Schwarer AP, Wight J, Jackson K, Beligaswatte AM, Butler JP, <b>Kennedy G</b> , Martin L, Lewis ID, Hiwase D, Zantomio D, He SZ, Grigg A, Morris K, Mollee P, & Marlton P Poster presentation, American Society of Hematology 57th Annual Meeting, San Diego, USA Blood 2016; poster #3989
Poster and Other Abstracts	Early Acute Kidney Injury Post Allogeneic Hematopoetic Progenitor Cell Transplant Is Associated with Increased Risk of Gvhd, Higher Mortality and Reduced Survival Clinical Allogeneic Transplantation: Conditioning Regimens, Engraftment, and Birchley A, Butler JP, Scott A, Curley C & <b>Kennedy G</b> Poster presentation, American Society of Hematology 57th Annual Meeting, San Diego, USA Blood 2016; poster #2227
Oral	Bruedigam C, <b>Lane SW.</b> The Preclinical Efficacy of a Novel Telomerase Inhibitor (Imetelstat) in AML – a Randomized Trial in Patient-Derived Xenografts. American Society of Hematology, San Diego, CA. Dec 2016. ASH Abstract Achievement Award.
Oral	Jacquelin S, Lane SW. CRISPR-Cas9 Mediated Disruption of Dnmt3a in Jak2V617F Hematopoietic Stem Cells Accelerates Disease Phenotype and Induces Lethal Myelofibrosis. American Society of Hematology, San Diego, CA. Dec 2016. Nominated for the "Best of ASH" session, 2016 meeting.
Invited Speaker	<b>Lane SW.</b> In vivo transformation of hematopoietic stem cells by Cdx2 expression. 2016 European Hematology Association molecular hematopoiesis workshop.
Invited Plenary Speaker	Lane SW. Leukaemia stem cells, Brisbane Cancer Conference. Nov 2016.
Invited Plenary Speaker	<b>Lane SW</b> . Cdx2 has an important role in the generation of MDS and AML. New Directions in Leukaemia Research, Noosa, Australia. March 2016
Oral	<b>Zomerdijk N, Jane T, Hill G</b> , Gottlieb D. The psychosocial impact of donating haematopoietic stem cells on adult sibling donors. University of Queensland Discipline of General Practice Research Day. Brisbane, March 2016.
Poster	<b>Zomerdijk N, Jane T, Hill G,</b> Gottlieb D. The psychosocial impact of donating haematopoietic stem cells on adult sibling donors. Australian Society for Medical Research QLD Postgraduate Student Conference. Brisbane, June 2016.
Poster	<b>Zomerdijk N, Jane T, Hill G</b> , Gottlieb D. A multi-center, prospective, exploratory study of the psychosocial impact of donating haematopoietic stem cells on adult sibling donors. The 25th Annual RBWH Healthcare Symposium. Brisbane, September 2016.

Type (Oral / Poster / Invited)	Presentation information (RBWH staff in bold)
Poster	<b>Zomerdijk N, Jane T, Hill G</b> , Gottlieb D. A multi-center, prospective, exploratory study of the psychosocial impact of donating haematopoietic stem cells on adult sibling donors. The 18th International Psycho Oncology Society Congress. Dublin, Ireland, October 2016.
Poster	<b>Zomerdijk N, Jane T, Hill G,</b> Gottlieb D. A multi-center, prospective, exploratory study of the psychosocial impact of donating haematopoietic stem cells on adult sibling donors. The 2nd Annual Metro North Hospital and Health Service Cancer Care Services Research Retreat. Brisbane, November 2016.
Poster	<b>Zomerdijk N, Jane T, Hill G,</b> Gottlieb D. A multi-center, prospective, exploratory study of the psychosocial impact of donating haematopoietic stem cells on adult sibling donors. The International Congress of Behavioural Medicine. Melbourne, December 2016.
Invited Plenary Speaker	<b>Hill G.</b> Chronic GVHD: What have we learn from experimental models? American Society of Bone Marrow Transplantation, Hawaii, USA. 2016
Oral	Hill G. New pathways activating Th17 cells. GVH/GVL. 13th International Symposium, Regensburg, Germany. 2016
Oral	<b>Hill G.</b> Differential roles of tissue and peripheral antigen presentation in driving graft-versus-host disease and tolerance. International Congress of Immunology meeting, Melbourne Australia. 2016
Oral	<b>Hill G.</b> IL-6 inhibition in GVHD. Freiburg Translational Research Centre Opening Symposium, Freiburg, Germany. 2016
Oral	Hill G. Novel cytokine and cellular therapy in transplantation. Japanese Society of Hematology, Yokohama, Japan. 2016
Oral	<b>Hill G.</b> Recent insights into the mechanisms of graft-versus-host disease. Japanese Society of Hematology, Yokohama, Japan.
Oral	Hill G. Cytokines the microbiome and GVHD. BMT workshop, San Diego, USA.

## Other communications and outputs

Zomerdijk N, Turner J, Hill G, Gottlieb D. A multi-center, prospective, exploratory study of the psychosocial impact of donating haematopoietic stem cells on adult sibling donors. From www.myvmc.com/clinical-trials/multi-center-prospective-exploratory-study-psychosocial-impact-donating-haematopoietic-stem-cells-adult-sibling-donors/ (2016, October 18).

Zomerdijk N. Fundraising activities featured in RBWH Foundation Winter News 2016: www.rbwhfoundation.com.au/images/stories/Publications/RBWH\_WINTER\_Newsletter\_FINAL.pdf



# **Medical Oncology**



**David Wyld**Director
Medical Oncology

The Cancer Care Services Medical Oncology (MO) Department, as well as providing clinical services to the Metro North HHS district, acts as a major tertiary referral centre in Qld. It has an ongoing, active clinical research program, which continues to expand and develop each year. The unit's research program has a number of different components, each of which has progressed in 2016, only a few of which I can highlight in this summary.

Firstly, the MO clinical trials unit, which is widely recognized as a service that conducts exceptionally high quality clinical research. This recognition has resulting in the unit collaborating in an increasing number of studies in 2016. 20 new studies commenced in 2016, six studies were completed and archived, and there were a total of 111 studies active, with 1205 patients managed on a clinical trial protocol in 2016. That the unit could undertake this number of clinical trials, and conduct them at such a high standard, is directly related to the quality of the staff involved at all levels, particularly the clinical trials research staff and the Medical Oncologists involved. Many of these trials offer our patients access to new therapies not otherwise available, and all help advance knowledge to help improve outcomes for patients in the future.

In 2016, the Department has continued to increase the number of external partners it is undertaking collaborative research projects with. Examples include various groups within QIMR (Immunology in Cancer and Infection – Prof Mark Smyth, Population Health – Rachel Neale, Conjoint Gastroenterology – Barbara Leggett / Vicki Whitehall, Brain Cancer – Bryan Day), and Sociology colleagues at the University of NSW, led by Professor Alex Broom. An exciting new opportunity for collaborative research is in the area of Cancer Imaging, where we are collaborating with the Department of Nuclear Medicine and other researchers associated with HIRF to undertake novel imaging studies, in particular involving functional imaging studies in RBWH patients with cancer.

These are in addition to the extensive network of collaborators our team work with from the University of Qld and QUT, as well as the multiple clinical collaborators from centres across the country. In addition, many MO staff have active roles in a number Australian Cancer Clinical Trial Collaborative groups.

One major individual highlight in 2016 was Dr Matthew Burge receiving national recognition when he was awarded the Australasian Gastrointestinal Trials Group 2016 Innovation Fund Award. We now look forward to him now leading an Australia wide study in the treatment of metastatic colorectal cancer in the near future.

I think the expanding research program within the department is best demonstrated by the increased number of not only publications in 2016, but also the large number of both oral and poster presentations given by departmental staff at a national level this year.

# Supervised Post-graduate Research Students

Name	Current Studies University (duration)	Research Project Title	Supervisors (RBWH staff in bold)
Dr Elizabeth Ahern	PhD UQ 2015 -	Targeting RANK/RANKL in combination immunotherapy using murine and translational models of melanoma, prostate and other solid organ malignancies.	Mark Smyth, Michele Teng, <b>David Wyld</b>
Natasha Roberts	PhD QUT 2016 -	Patient Reported Outcomes in a Medical Oncology Setting	Monika Janda, Kim Alexander, <b>David Wyld</b>
Benjamin Van Haerringen	MBBS Hons 2016 – 2017 UQ	Prognostic factors and biomarkers in a cohort of metastatic colorectal cancer patients managed at RBWH/TPCH and Rockhampton cancer services	David Wyld
Timothy Kalas	MBBS Hons 2016 – 2017 UQ	Dose intensity and morbidity of therapy in women older than 65 years undergoing adjuvant chemotherapy for breast cancer at RBWH	David Wyld
Teresa Brown	PhD UQ	A randomised comparison of early prophylactic feeding via gastrostomy versus standard care in high risk patients with head and neck cancer	Brett Hughes, Merrilyn Banks, Judy Bauer
Natasha Roberts	PhD QUT 2016 -	Patient Reported Outcomes in a Medical Oncology Setting	Monika Janda, Kim Alexander, <b>David Wyld</b>

# Research Positions: Coordinators, Fellow, Adjunct and Honorary Positions

Name	Type of Fellowship	Research Program	University (years)
Dr Monica Dumbrava	Research Fellow	Medical Oncology	Queensland Health
Annette Cubitt	Manager, Clinical Trials Unit	Clinical Trials Unit Medical Oncology	Queensland Health
Jenny Campbell	Clinical Trial Coordinator	Clinical Trials Unit Medical Oncology	Queensland Health
Amy Ives	Clinical Trial Coordinator	Clinical Trials Unit Medical Oncology	Queensland Health
Andrea McKenzie	Clinical Trial Coordinator	Clinical Trials Unit Medical Oncology	Queensland Health
Wendy Pritchard	Clinical Trial Coordinator	Clinical Trials Unit Medical Oncology	Queensland Health
Erin Purdon	Clinical Trial Coordinator	Clinical Trials Unit Medical Oncology	Queensland Health
Megan Ward	Clinical Trial Coordinator	Clinical Trials Unit Medical Oncology	Queensland Health
Natasha Roberts	Clinical Trial Coordinator	Clinical Trials Unit Medical Oncology	Queensland Health
Gel Bolanos	Clinical Trial Coordinator	Clinical Trials Unit Medical Oncology	Queensland Health
Diana Lewis	Clinical Trial Coordinator	Clinical Trials Unit Medical Oncology	Queensland Health
David Hickey	Clinical Trial Coordinator	Clinical Trials Unit Medical Oncology	Queensland Health
Jennifer Lonton	Research Development Officer	Clinical Trials Unit Medical Oncology	Queensland Health
Victoria Holt	Research Administration Officer	Clinical Trials Unit Medical Oncology	Queensland Health
Danni Church	Research Administration Officer	Clinical Trials Unit Medical Oncology	Queensland Health
Denise Flynn	Research Administration Officer	Clinical Trials Unit Medical Oncology	Queensland Health

## Current RBWH Research Group / Department Led Research Activity

RBWH Lead Researchers	Collaborative Researchers	Research Project Title
David Wyld, Matthew Burge	Rachel Neale, Vanessa Beesley (QIMR)	PRO-NET: Patient reported outcomes in people with neuroendocrine tumours.
Natasha Roberts, David Wyld	Monika Janda (QUT), Kim Alexander (QUT)	Patient Report Outcomes (PROs) in a medical oncology setting: A low risk project to identify staff perceptions about the use of PRO data in a clinical setting
Zarnie Lwin	Alex Broom (UNSW)	Cultural biographies, medical knowledges: A sociological study at the intersection of cancer and culture
Zarnie Lwin	Emma Kirby (UNSW)	Informal care and living with glioma
Matthew Burge	Euan Walpole (MSHHS)	Prospective evaluation of FOLFIRINOX for metastatic or locally advanced Pancreatic Cancer
Jane Turner, Brett Hughes	IHBI, QUT	Enhances Study: Enhancing Head And Neck Cancer Patient's Experiences of Survivorship
Zarnie Lwin	Alex Broom (UNSW), David Sibritt (UTS), Rosemary Harrup (RHH), Deme Karikios (NHMRC), Kay Francis (MOGA)	2016 Australian Medical Oncologist Workforce Survey
Zarnie Lwin, Alex Broom (UNSW)	David Sibritt (UTS), Rosemary Harrup (RHH), Deme Karikios (NHMRC), Kay Francis (MOGA)	Australian Medical Oncologist Workforce Qualitative Study

# Collaborative Research Activity involving RBWH Research Group / Department

Collaborative Lead Researchers	RBWH Researchers	Research Project Title
Australasian Gastrointestinal Trials Group	Matthew Burge	INTEGRATE II A Randomised Phase III Double Blind, Placebo Controlled Study of regorafenib in Refractory, Advanced GastroOesophageal Cancer
Australasian Gastrointestinal Trials Group	Matthew Burge	ACTICCA-1 study: Adjuvant Chemotherapy With Gemcitabine and Cisplatin Compared to Observation After Curative Intent Resection of Cholangiocarcinoma and Muscle Invasive Gall Bladder Carcinoma (ACTICCA-1 Trial)
Australasian Gastrointestinal Trials Group	David Wyld	CONTROL NETS: Phase II multi-arm, randomised open label trial of Lutetium-177 Octreotate peptide receptor radionucleotide therapy, capecitabine/temozolamide chemotherapy, or the combination in the first or second line treatment of low to intermediate grade gastroenteropancreatic neuroendocrine tumours
Walter and Eliza Hall Institute, Colorectal Translational Oncology Group	Matthew Burge	ctDNA in Pancreatic Cancer
Australasian Gastrointestinal Trials Group	Matthew Burge	DOCTOR: A Randomised Phase II Trial of Pre-operative Cisplatin, 5 Fluorouracil and Docetaxel or Cisplatin, 5 Fluorouracil, Docetaxel plus Radiotherapy based on poor early response to standard chemotherapy for resectable adenocarcinoma of the oesophagus and/or OG Junction
Ludwig Institute for Cancer Research	Matthew Burge	Circulating Tumour DNA as a Sensitive and Specific Marker of Response to Therapy and of Occult Disease in Colorectal Cancer - for resectable CRC liver mets pts
Australasian Gastrointestinal Trials Group	Matthew Burge	ATTACHE: A Trial of Timing of Surgery and Adjuvant Chemotherapy for Hepatic Metastases from Colorectal Cancer
Peter MacCallum Cancer Centre	Matthew Burge	Predict IR : The utility of genomics and functional imaging to predict Irinotecan pharmacokinetics and pharmacodynamics
Peter MacCallum Cancer Centre	Matthew Burge	Predict SU: The utility of genomics and functional imaging to predict Sunitinib pharmacokinetics and pharmacodynamics
Australasian Gastrointestinal Trials Group	Matthew Burge	GAP: Phase II study of pre-operative Gemcitabine and Abraxane for resectable Pancreas cancer.

Collaborative Lead Researchers	RBWH Researchers	Research Project Title
Peter MacCallum Cancer Centre	David Wyld	INTERNET: A phase II study of Everolimus (RAD001) in patients with FDG-PET positive intermediate grade (Ki-67 3-20%) Pancreatic neuroendocrine tumours
Australasian Gastrointestinal Trials Group/European Organization for Research and Treatment of Cancer	David Wyld	AGITG GIST-STI571- Phase III randomised, intergroup, international trial assessing the clinical activity of STI571 at two dose levels in patient with unresectable or metastatic malignant gastrointestinal stromal tumours (GIST) expressing the KIT receptor Tyrosine Kinase (CD117)
Walter and Eliza Hall Institute	Matthew Burge	DYNAMIC: Circulating Tumour DNA Analysis Informing Adjuvant Chemotherapy in Stage II Colon Cancer
Walter and Eliza Hall Institute	Matthew Burge	Evaluation of temporal dynamics of RAS Mutation emergence in Cell Free DNA (cfDNA) in response to first-line cetuximab anti-EGFR therapy in Patients with Metastatic Colorectal Cancer
Centre for Medical Psychology and Evidence Based Decision Making	Matthew Burge	CHALLENGE: A Phase III study of the impact of a Physical Activity program on Disease- Free Survival in patients with high risk Stage II or Stage III Colon Cancer: a randomised controlled trial (CO.21)
Australasian Gastrointestinal Trials Group/National Cancer Centre, Singapore	Melissa Eastgate	ASCOLT: Aspirin for Dukes C and high risk Dukes B Colorectal Cancers an international, multi centre, double blind, randomised placebo controlled Phase III trial (AGITG)
Walter and Eliza Hall Institute	Matthew Burge	ctDNA as a Marker of Complete Pathological Response and Long Term Outcome for Locally Advanced Rectal Cancer Treated with Pre-operative Chemoradiotherapy
Ludwig Institute for Cancer Research	Matthew Burge	Circulating Tumour DNA as a Marker of Occult Disease in Stage II Colorectal Cancer and Response to Therapy in Metastatic Colorectal Cancer
Australasian Gastrointestinal Trials Group	Matthew Burge	AGITG SCOT Trial: Short Course Oncology Therapy - A Study of Adjuvant Chemotherapy in Colorectal Cancer
Australasian Gastrointestinal Trials Group/European Organization for Research and Treatment of Cancer	Matthew Burge	PETACC6- Preoperative chemoradiotherapy and postoperative chemotherapy with capecitabine and oxaliplatin vs. capecitabine alone in locally advanced rectal cancer
Theresa Brown, Department Nutrition and Dietetics, RBWH	Brett Hughes	PEG Study - A randomized comparison of early prophylactic feeding via gastrostomy versus standard care in high risk patients with head and neck cancer
Australia New Zealand Gynaecological Oncology Group	Jeffrey Goh	VELIA (M13-694) A Phase 3 Placebo Controlled Study of Carboplatin/Paclitaxel With or Without Concurrent and continuous Maintenance Veliparib in Subjects with Previously Untreated Stages III or IV High Grade Serous Epitheal Ovarian, Fallopian Tube, or Primary Peritoneal Cancer
Australia New Zealand Gynaecological Oncology Group	Alison Hadley	OUTBACK - A PHASE III trial of adjuvant chemotherapy following chemoradiation as primary treatment for locally advanced cervical cancer compared to chemoradiation alone
Australia New Zealand Gynaecological Oncology Group	Jeffrey Goh	PARAGON: A study to assess the activity of anastrozole, an aromatase inhibitor, in women with oestrogen receptor and/or progesterone receptor positive (ER/PR+ve) and therefore potentially hormone responsive recurrent or metastatic gynaecological cancers
Australia New Zealand Gynaecological Oncology Group	Jeffrey Goh	OVAR 2.21: A prospective randomized Phase III trial of carboplatin/ gemcitabine/ bevacizumab vs. carboplatin/pegylated liposomal doxorubicin/ bevacizumab in patients with platinum-sensitive recurrent ovarian cancer.
Australia New Zealand Gynaecological Oncology Group	Jeffrey Goh	Evaluation of Symptom Benefit during Palliative Chemotherapy in Women with recurrent Ovarian Cancer: measuring subjective improvement as well as objective response to estimate the benefit of palliative chemotherapy in women with platinum resistant or refractory ovarian cancer
Australia New Zealand Gynaecological Oncology Group	Jeffrey Goh	ICON 8: an international trial comparing weekly chemotherapy with 3 weekly chemotherapy for women with ovarian cancer, fallopian tube cancer or primary peritoneal cancer
Australia New Zealand Gynaecological Oncology Group	Jeffrey Goh	OVAR 16 - A Phase III study to evaluate the efficacy and safety of Pazopanib monotherapy versus placebo in women who have not progressed after first line chemotherapy for epithelial ovarian, fallopian tube or primary peritoneal cancer
Australia New Zealand Urogenital and Prostate Cancer Trials Group	David Wyld	Phase III BEP Trial: A randomised phase 3 trial of accelerated versus standard BEP chemotherapy for participants with intermediate and poor-risk advanced germ cell tumours
Australia New Zealand Urogenital and Prostate Cancer Trials Group	Aneta Suder	ENZAMET Trial: A randomised phase 3 trial of enzalutamide in first line androgen deprivation therapy for metastatic prostate cancer
Hoosier Oncology Group, USA	Jeffrey Goh	BNC105 Renal: Phase I/II Study of BNC105P in combination with Everolimus or following Everolimus for Progressive Metastatic Clear Cell Renal Cell Carcinoma following prior Tyrosine Kinase Inhibitor

Collaborative Lead Researchers	RBWH Researchers	Research Project Title
Cooperative Trials Group for Neuro-oncology	Zarnie Lwin	ACED: Randomised phase II study of acetazolamide plus dexamethasone versus dexamethasone alone for management of cerebral oedema in recurrent or progressive high grade gliomas.
Cooperative Trials Group for Neuro-oncology	Zarnie Lwin	VERTU – Veliparib, Radiotherapy and Temezolomide trial in Unmethylated MGMT Glioblastoma: A Randomised Phase II study of veliparib + radiotherapy (RT) with adjuvant temozolomide (TMZ) + veliparib versus standard RT + TMZ followed by TMZ in newly diagnosed glioblastoma (GBM) with unmethylated O (6)-methylguanine-DNA methlytransferase
Cooperative Trials Group for Neuro-oncology	Po-Ling Inglis	CATNON:Phase III trial comparing no adjuvant chemotherapy versus adjuvant therapy until progression for anaplastic glioma without 1p/19q loss. An EORTC/NCI-C/RTOG/MRC/HUB/ intergroup study
Medical Oncology, Cancer Care Services, RBWH	Michelle Nottage	A prospective study investigating the impact of the definitive chemoradiation in locally and/or regionally advanced squamous cell carcinoma of the skin. CRUST
Australia New Zealand Breast Cancer Trials Group	Michelle Nottage	PALbociclib CoLlaborative Adjuvant Study: A Randomized Phase III Trial of Palbociclib With Standard Adjuvant Endocrine Therapy Versus Standard Adjuvant Endocrine Therapy Alone for Hormone Receptor Positive (HR+) / Human Epidermal Growth Factor Receptor 2 (HER2)-Negative Early Breast Cancer
Australia New Zealand Breast Cancer Trials Group	Po-Ling Inglis	Penelope B: Phase III study evaluating palbociclib (PD\(\textit{D}\)0332991), a Cyclin\(\textit{D}\)Dependent Kinase (CDK) 4/6 Inhibitor in patients with hormone-receptor-positive, HER2\(\textit{D}\)normal primary breast cancer with high relapse risk after neoadjuvant chemotherapy
Kathleen Houston, Sunshine Coast Oncology Research Group	Michelle Nottage	TAPS: Gabapentin for taxane acute pain syndrome - a phase III randomised, placebocontrolled, crossover trial
Australia New Zealand Breast Cancer Trials Group/Breast International Group	Michelle Nottage	TEXT-Bone: A substudy of the TEXT trial to evaluate serial bone markers for bone remodeling, serial growth factors, and bone mineral density
Australia New Zealand Breast Cancer Trials Group/Breast International Group	Michelle Nottage	TEXT: A Phase III Trial Evaluating the Role of Exemestane plus GnRH analogue as Adjuvant Therapy for premenopausal women with endocrine responsive breast cancer
Australia New Zealand Breast Cancer Trials Group/Breast International Group	Michelle Nottage	An International multi-centre study of tamoxifen vs. Anastrozole in postmenopausal women with hormone sensitive ductal carcinoma in situ (DCIS) IBIS II
Australia New Zealand Breast Cancer Trials Group/ECOG-ACrIN	Po-Ling Inglis	TAILORx Program for the Assessment of Clinical Cancer Tests (PACCT-1): Trial Assigning IndividuaLized Options for Treatment: The TAILORx Trial
Australia New Zealand Breast Cancer Trials Group/Breast International Group	Michelle Nottage	Suppression of Ovarian Function Trial (SOFT) A Phase III Trial Evaluating the the Role of Ovarian function Suppression and the Role of Exemestane as Adjuvant therapies for premenopausal women with Endocrine responsive breast cancer
Australia New Zealand Breast Cancer Trials Group/Breast International Group	Michelle Nottage	A phase III study to evaluate Letrozole as adjuvant endocrine therapy for postmenopausal women with receptor (ER and/or PgR) posotive tumours
University of New South Wales	Zarnie Lwin	The changing landscapes of survivorship: A sociological study of cancer
Medical Oncology, Cancer Care Services, RBWH	Natasha Roberts	Poster Project: A pilot study to describe medical oncology patient perceptions of research
Medical Oncology, Cancer Care Services, RBWH	David Wyld	NET: Cancer on the margins: A qualitative study of neuroendocrine patients' experiences of living with rare tumours
Medical Oncology, Royal Prince Alfred and Concord Hospitals	Melissa Eastgate	i-Tool: Evaluation of a web-based tool for estimating and explaining Prognosis
University of Queensland	Zarnie Lwin	Women's Cancer Project: Understanding and improving social support amongst women with cancer: A qualitative study

## **Research Awards and Achievements**

Recipient	Award	Event
Matthew Burge	2016 AGITG Innovation Fund	AGITG Annual Scientific Meeting 14-16 September 2016
Natasha Roberts	2016 ANZUP ASM Best of Nursing/Allied Health Poster Presentation	ANZUP Annual Scientific Meeting, July 2016

## Research Grants - Awarded

Investigators (RBWH staff in bold)	RBWH Research Groups / Departments	Project Title	Granting Body	Amount in 2016	Total Amount (years)
Patsy Yates, Kimberly Alexander, Christine Miaskowski, Raymond Chan, Alexandra McCarthy, Steven McPhail, David Wyld, Helen Skerman	Medical Oncology	A sequential multiple assignment randomised trial (SMART) of nursing interventions to reduce pain associated with chemotherapy induced peripheral neuropathy	NHMRC APP1129532	\$178354.55	\$713,418.20 2017 - 2020
Alex Broom, Emma Kirby, Renata Kokanovic; Jonathan Adams; <b>Zarnie</b> <b>Lwin; David Wyld</b> ; Eng- Siew Koh; Paul de Souza; Lisa Woodland	Medical Oncology	Cultural Biographies, Medical Knowledges: A sociological study	Australian Research Council Linkage Grant	\$250000.00	\$210,000 [ARC contribution] + [\$816,962 cash/in-kind partner contributions] 2016-2018
David Wyld	Medical Oncology	Evaluation of improvement in patient outcomes and assessment of patient satisfaction relating to their referral to the RBWH Neuroendocrince Multidisciplinary Service	Novartis Pharmaceuticals Australia Pty Ltd	\$20000.00	\$40,000 2015 - 2016
Benjamin Chua, Bryan Day, Stephen Rose, Paul Thomas, Rosalind Jeffree, Yi Chieh Lim, Po-Ling Inglis, Z Lwin, Jacqui Keller	Medical Oncology, Radiation Oncology	Using molecular-guided PET/ MRI imaging to target hypoxia in glioblastoma:A preclinical study to identify novel pathways and define molecular signatures associated with hypoxia and poor patient outcome	Herston Imaging Research Facility Seed Funding		\$66,498 Time frame not specified on grant
Matthew Burge, Paul Thomas, David Wyld Stephen Rose, Melissa Eastgate, Nick O'Rourke David Cavallucci, Richard Bryant	Medical Oncology	A study to look at a new way of detecting the spread of pancreas cancer.	Herston Imaging Research Facility Seed Funding		\$58,014 Time frame not specified on grant
Matthew Burge, Paul Thomas, David Wyld Stephen Rose, Melissa Eastgate, Nick O'Rourke David Cavallucci, Richard Bryant	Medical Oncology	A Pilot Study of CXCR-4 PET scanning in operable rectal cancer	Herston Imaging Research Facility Seed Funding		\$23,760 Time frame not specified on grant
Natasha Roberts	Medical Oncology	Patient Reported Outcomes in a Medical Oncology Setting	RBWH Post Graduate Scholarship 2016		\$50,000
Natasha Roberts	Medical Oncology		AGITG Travel Scholarship		\$250

## 2016 Research Publications

Type (Journal article / Book / Book chapter / Letter)	Publication information (RBWH staff in bold)
Journal article	Beesley VL, Wockner L F, O'Rourke P, Janda M, Goldstein D, Gooden H, Merrett ND, O'Connell DL, Rowlands IJ, <b>Wyld DK</b> , Neale RE. Erratum to: risk factors for current and future unmet supportive care needs of people with pancreatic cancer. A longitudinal study. Support Care Cancer. 2016; 24 (8): 3601-3602.
Journal article	Beesley VL, Wockner LF, O'Rourke P, Janda M, Goldstein D, Gooden H, Merrett ND, O'Connell DL, Rowlands IJ, <b>Wyld DK</b> and Neale RE. Risk factors for current and future unmet supportive care needs of people with pancreatic cancer. A longitudinal study. Support Care Cancer. 2016; 24(8): 3589-99.
Journal article	Beesley VL, Janda M, Goldstein D, Gooden H, Merrett, ND, O'Connell DL, Rowlands IJ, <b>Wyld, DK</b> and Neale Re. A tsunami of unmet needs: pancreatic and ampullary cancer patients' supportive care needs and use of community and allied health services. Psychooncologie. 2016; 25(2): 150-7.
Journal article	Bellet M, Gray KP, Francis PA, Lang I, Ciruelos E, Lluch A, Climent MA, Catalan G, Avella A, Bohn U, Gonzalez-Martin A, Ferrer R, Catalan R, Azaro A, Rajasekaran A, Morales J, Vazquez J, Fleming GF, Price KN, Regan MM. Twelve month estrogen levels in premenopausal women with hormone-receptor positive breast cancer receiving triptorelin plus exemestane or tamoxifen in the suppression of ovarian function (SOFT). The Soft-Est Trial". Journal of Clinical Oncology. 2016; 34(14): 1584-1593 (Nottage M)
Journal article	Bond CE, McKeone DM, Kalimutho M, Bettington ML, Pearson SA, Dumenil TD, Wockner LF, <b>Burge M</b> , Leggett BL, Whitehall VL. Rnf43 and Znrf3 are commonly altered in serrated pathway colorectal tumorigenesis. Oncotarget. 2016.
Journal article	Broom A, Wong WKT, Kirby E, Sibbritt D, Karikios D, Harrup H, <b>Lwin Z</b> . A qualitative study of medical oncologists' experiences of their profession and workforce sustainability. PloS 30 Nov 2016 http://dx.doi.org/10.1371/journal.pone.0166302
Journal article	Brown T, Banks M, <b>Hughes BGM</b> , Lin C, Kenny L, Bauer. Comparison of nutritional and clinical outcomes in patients with head and neck cancer undergoing chemoradiotherapy utilising proactive versus reactive nutrition support approaches. Journal of the Academy of Nutrition and Dietetics, 2016. doi.org/10.1016/j.jand.2016.10.013
Journal article	Brown TE, Crombie J, Spurgin AL, Tripcony L, Keller J, <b>Hughes BG</b> , Dickie G, Kenny LM, Hodge RA. Improving guideline sensitivity and specificity for the identification of proactive gastrostomy placement in patients with head and neck Cancer. Head Neck. 2016;38 Suppl 1: E1163-71.
Journal article	Brown TE, Getliffe V, Banks MD, <b>Hughes BG</b> , Lin CY, Kenny, LM, Bauer JD. Validation of an updated evidence-based protocol for proactive gastrostomy tube insertion in patients with head and neck cancer. Eur J Clin Nutr. 2016; 70, (5): 574-81.
Journal article	Brown TE, Wittholz K, Way M, Banks MD, <b>Hughes BG</b> , Lin CY, Kenny LM, Bauer JD. Investigation of p16 status, chemotherapy regimen, and other nutrition markers for predicting gastrostomy in patients with head and neck cancer. Head&Neck. 2016; 10.1002/hed.24630
Journal article	Burge M, Whitehall V. Management of BRAF-mutant metastatic colorectal cancer. Colorectal Cancer. 2016; 5(4): 131-133.
Journal article	Burmeister EA, O'Connell DL, Jordan SJ, Goldstein D, Merrett N, <b>Wyld DK</b> , Beesley VL, Gooden HM, Janda M, and Neale RE. Factors associated with quality of care for patients with pancreatic cancer in Australia. Med J Aust. 2016; 205(10): 459-465.
Journal article	Burmeister EA, Waterhouse, Jordan SJ, O'Connell DL, Merrett ND, Goldstein D, <b>Wyld D</b> , Beesley V, Gooden H, Janda M, Neale R. Determinants of survival and attempted resection in patients with non-metastatic pancreatic cancer: An Australian population-Based study. Pancreatology. 2016; 16(5): 873-81.
Journal article	Burmeister EA, Jordan SJ, O'Connell DL, Beesely VL, Goldstein D, Gooden HM, Janda M, Merrett ND, <b>Wyld D</b> , Neale RE. Using a delphi process to determine optimal care for patients with pancreatic cancer. Asia-Pacific Journal of Clinical Oncology. 2016; 12(2):105
Journal article	Chapman S J, McKavanagh D, <b>Burge M,</b> McPherson I, Walpole E, Hollingworth SA. Effectiveness of bevacizumab and cetuximab in metastatic colorectal cancer across selected public hospitals in Queensland. Asia Pac J Clin Oncol. 2016.
Journal article	Chirgwin JH, Giobbie-Hurder A, Coates AS, Price KN, Ejlertsen B, Debled M, Gelber RD, Goldhirsch A, Smith I, Rabaglio M, Forbes JF, Neven P, Lang I, Colleoni M, Thurlimann B. Treatment adherence and its impact on disease-free survival in the Breast International Group trial of tamoxifen and letrozole, alone and in sequence. Journal of Clinical Oncology. 2016; 34 (21): 2452-2459 (epub 23 May 2016). (Nottage M)
Journal article	Colleoni M, Sun Z, Price KN, Karlsson P, Forbes JF, Thurlimann B, Gianni L, Castiglione M, Gelber RD, Coates AS, Goldhirsch A. Annual hazard rates of recurrence for breast cancer during 24 years of follow-up: results from the International Breast Cancer Study Group Trials I to V. Journal of Clinical Oncology. 2016; 34 (9): 927-935 (Nottage M/Wyld D)
Journal article	Courneya KS, J. L. Vardy, C. J. O'Callaghan, C. M. Friedenreich, K. L. Campbell, H. Prapavessis, J. J. Crawford, P. O'Brien, H. M. Dhillon, D. J. Jonker, N. S. Chua, S. Lupichuk, M. S. Sanatani, S. Gill, R. M. Meyer, S. Begbie, T. Bonaventura, <b>M. E. Burge,</b> J. Turner, D. Tu and C. M. Booth. "Effects of a Structured Exercise Program on Physical Activity and Fitness in Colon Cancer Survivors: One Year Feasibility Results from the Challenge Trial." Cancer Epidemiol Biomarkers Prev 25, no. 6 (2016): 969-77.

Type (Journal article / Book / Book chapter / Letter)	Publication information (RBWH staff in bold)
Journal article	Davidson, A., A. S. Veillard, A. Tognela, M. M. Chan, <b>B. G. Hughes</b> , M. Boyer, K. Briscoe, S. Begbie, E. Abdi, C. Crombie, J. Long, A. Boyce, C. R. Lewis, S. Varma, A. Broad, N. Muljadi, S. Chinchen, D. Espinoza, X. Coskinas, N. Pavlakis, M. Millward and M. R. Stockler. "A Phase III Randomized Trial of Adding Topical Nitroglycerin to First-Line Chemotherapy for Advanced Nonsmall-Cell Lung Cancer: The Australasian Lung Cancer Trials Group Nitro Trial." Ann Oncol 26, no. 11 (2015): 2280-6.
Journal article	Forbes JF, Sestak I, Howell A, Bonanni B, Bundred N, Levy C, von Minckwitz G, Eiermann W, Neven P, Stierer M, Holcombe C, Coleman RE, Jones L, Ellis I, Cuzick J, on behalf of the IBIS-II investigators. Twelve-Month Estrogen Levels in Premenopausal Women With Hormone Receptor-Positive Breast Cancer Receiving Adjuvant Triptorelin Plus Exemestane or Tamoxifen in the Suppression of Ovarian Function Trial (SOFT): The SOFT-EST Substudy. Anastrozole versus tamoxifen for the prevention of locoregional and contralateral breast cancer in postmenopausal women with locally excised ductal carcinoma in situ (IBIS-II DCIS): a double-blind, randomised controlled trial. The Lancet. 2016; 387 (10021): 866-873. (Nottage M)
Journal article	Friedlander M, Banerjee S, Mileshkin L, Scott C, Shannon C, <b>Goh J</b> . Practical guidance on the use of olaparib capsules as maintenance therapy for women with BRCA mutations and platinum-sensitive recurrent ovarian cancer. Asia-Pacific Journal of Clinical Oncology. 2016; 12(4):323-331.
Journal article	Gibson A F, Broom A, Kirby E, <b>Wyld DK</b> , and <b>Lwin Z</b> . The social reception of women with cancer. Qual Health Res. 2016.
Journal article	Hammel P et al, Effect of Chemoradiotherapy vs Chemotherapy on Survival in Patients With Locally Advanced Pancreatic Cancer Controlled After 4 Months of Gemcitabine With or Without Erlotinib. The LAPO7 Randomized Clinical Trial. JAMA. 2016;315(17):1844-1853. doi:10.1001/jama.2016.4324 (Burge M)
Journal article	Hansen AR, <b>Hughes BG</b> , Paul S, Steadman P, Sommerville S, Dickinson IC, Walpole ET, Thomson DB, Mar Fan HG, Joubert WL. Single institution retrospective review of perioperative chemotherapy in adult and adolescent patients with operable osteosarcoma. Asia Pac J Clin Oncol. 2016 Jun;12(2):e222–8. doi: 10.1111/ajco.12167.
Journal article	Ignatiadis M, Azim Jr. HA, Desmedt C, Veys I, Larsimont D, Salgado R, Lyng MB, Viale G, Leyland-Jones G, Giobbie-Hurder A, Kammler R, Dell'Orto P, Rothe F, Laios I, Ditzel HH, Regan MM, Piccart M, Michiels S, Sotiriou, C. The genomic grawde assay compared with Ki67 to determine risk of distant breast cancer Recurrence. JAMA Oncol. 2016;2(2):217-24. (Inglis P)
Journal article	Courneya KS, Vardy JL, O'Callaghan CJ, Friedenreich CM, Campbell KL, Prapavessis H, Crawford J, O'Brien P, Dhillon HM, Jonker DJ, Chua NS, Lupichuk S, Sanatani MS, Gill S, Meyer R, Begbie S, Bonaventura T, <b>Burge ME, Turner J</b> , Tu D, Booth CM. Effects of a structured exercise program on physical activity and fitness in colon cancer survivors: One year feasibility results from the CHALLENGE Trial. Cancer Epidemiology, Biomarkers and Prevention. 2016.
Journal article	Kirby E, Broom A, Good P, Bowden V, <b>Lwin, Z.</b> Experiences of interpreters in supporting the transition from oncology to palliative care: a qualitative study." Asia Pac J Clin Oncol. 2016.
Journal article	Lazar A, Bonetti AM, Cole BF, Yip WK, Gelber R. Identifying treatment effect heterogeneity in clinical trials using subpopulations of events: STEPP. Clin Trials. 2016; 13(2): 169-79. (Nottage M/Wyld D)
Journal article	Lee B, Wong H, Tacey M, Tie J, Wong R, Lee M, Nott L, Shapiro J, Jennens R, Turner N, Tran B, Ananda S, Yip D, Richardson G, Parente P, Lim L, Stefanou G, <b>Burge M</b> , Iddawela M, Power J, Gibbs P. The impact of bevacizumab in metastatic colorectal cancer with an intact primary tumor: Results from a large prospective cohort study. Asia-Pacific Journal of Clinical Oncology. 2016. doi:10.1111/ajco.12639
Journal article	Modi S, Tiang KW, <b>Inglis P</b> , Collins S. Adult Wilms' tumour: case report and review of literature. Journal of Kidney Cancer and VHL. 2016; 3(2):1-7
Journal article	<b>Nottage M</b> , Lin C, <b>Hughes BGM</b> , Kenny L, Smith D, Houston K, Francesconi A. Prospective study investigating the impact of definitive chemoradiation in locally and/or regionally advanced squamous cell carcinoma of the skin. Head Neck 2016. doi 10.1002/hed.24662
Journal article	Ou S.H, Ahn JS, De Petris L, Govindan R, Yang JC, <b>Hughes BG</b> , Lena H, Moro-Sibilot D, Bearz A, Ramirez SV, Mekhail T, Spira A, Bordogna W, Balas B, Morcos PN, Monnet A, Zeaiter A, Kim D. Alectinib in Crizotinib-Refractory Alk-Rearranged non-small-cell Lung Cancer: A Phase Ii Global Study. J Clin Oncol. 2016; 34(7): 661-8.
Journal article	Pagani O, Regan MM, Francis PA. Are SOFT and TEXT results practice changing and how? The Breast. 2016; 27: 122-125. (Nottage M)
Journal article	Pavlakis N, et al, Regorafenib for the Treatment of Advanced Gastric Cancer (INTEGRATE): A Multinational Placebo-Controlled Phase II Trial. June 20, 2016, doi: 10.1200/JC0.2015.65.1901 (Burge M)
Journal article	Pharoah PD, Song H, Dicks E, Intermaggio MP, Harrington P, Baynes C, Alsop K, Bogdanova N, Cicek MS, Cunningham JM, Fridley BL, Gentry-Maharaj A, Hillemanns P, Lele S, Lester J, McGuire V, Moysich K, Poblete S, Sieh W, Sucheston-Campbell L, Widschwendter M, Whittemore AS, Dork T, Menon U, Odunsi K, Goode EL, Karlan BL, Bowtell DD, Gayther SA, Ramus SJ. Ppm1d mosaic truncating variants in ovarian cancer cases may be treatment-related somatic mutations. J Natl Cancer Inst. 2016; 108(3). (Goh J)
Journal article	Phillips KA, Regan MM, Ribi K, Francis PA, Puglisi F, Bellet M, Spazzapan S, Karlsson P, Budman DR, Zaman K, Abdi EA, Domchek SM, Feng Y, Price KN, Coates AS, Gelber RD, Maruff P, Boyle F, Forbes JF, Ahles T, Fleming GF, Bernhard J for the Co-SOFT Investigators. Adjuvant ovarian function suppression and cognitive function in women with breast cancer. British Journal of Cancer. 2016; 114: 956-954, (Nottage M).

Type (Journal article / Book / Book chapter / Letter)	Publication information (RBWH staff in bold)
Journal article	Pittman K, Antill YC, Goldrick A, <b>Goh J</b> , de Boer RH. Denosumab: Prevention and management of hypocalcemia, osteonecrosis of the jaw and atypical fracture. Asia-Pacific Journal of Clinical Oncology
Journal article	Price TJ, Thavaneswaran S, <b>Burge M</b> , Segelov E, Haller DG, Punt CJ, Arnold D, Karapetis CS, Tebbutt NC, Pavlakis N, Gibbs P, Shapiro JD. Update on optimal treatment for metastatic colorectal cancer from the Actg/Agitg expert meeting: Ecco 2015." Expert Rev Anticancer Ther. 2016; 16(5): 557-71.
Journal article	Pulford DJ, Harter P, Floquet A, Barrett C, Suh DH, Friedlander M, Arranz JA, Hasegawa K, Tada H, Vuylsteke P, Mirza MR, Donadello N, Scambia G, Johnson T, Cox C, Chan JK, Imhof M, Herzog TJ, Calvert P, Wimberger P, Berton-Rigaud D, Lim MC, Elser G, Xu CF, du Bois A. Communicating BRCA research results to patients enrolled in international clinical trials: lessons learnt from the AGO-OVAR 16 study. BMC Medical Ethics 2016; 17(1): 63. (Goh J)
Journal article	Regan MM, Francis PA, Pagani O, Fleming GF, Walley BA, Viale G, Colleoni M, Lang I, Gomez HL, Tondini C, Pinotti G, Price KN, Coates AS, Goldhirsch A, Gelber RD. Absolute benefit of adjuvant endocrine therapies for premenopausal women with hormone receptor positive, human epidermal growth factor receptor 2 negative early breast cancer: TEXT and SOFT trials. Journal of Clinical Oncology. 2016; 34 (19): 2221-2231. (Nottage M)
Journal article	Ribi K, Luo W, Bernhard J, Francis PA, Burstein HJ, Ciruelos E, Bellet M, Pavesi L, Lluch A, Visini M, Parmar V, Tondini C, Kerbrat P, Perello A, Neven P, Torres R, Lombardi D, Puglisi F, Karlsson P, Ruhstaller T, Colleoni M, Coates AS, Goldhirsch A, Price KN, Gelber RD, Regan MM, Fleming GF. Adjuvant tamoxifen plus ovarian function suppression versus tamoxifen alone in premenopausal women with early breast cancer:patient-reported outcomes in the Suppression of Ovarian Function Trial. Journal of Clinical Oncology. 2016; 34 (14): 1601–1610. (Nottage M)
Journal article	Schofield PE, Stockler MR, Zannino D, Tebbutt NC, Price TJ, Simes R, Wong N, Pavlakis N, Ransom D, Moylan E, Underhill C, <b>Wyld D</b> , Burns I, Ward R, Wilcken N, Jefford M. Hope, optimism and survival in a randomised trial of chemotherapy for metastatic colorectal cancer. Support Care Cancer. 2016 24(1): 401–8.
Journal article	<b>Thaker DA</b> , Douglas E, Blazak J, Xu W, <b>Hughes B, Burge M,</b> Steinke K, <b>Wyld D</b> . An analysis of incidental and symptomatic pulmonary embolism (Pe) in medical oncology patients. Asia Pac J Clin Oncol, 2016.
Journal article	Van hazel G, Et al: SIRFLOX: Randomized Phase III Trial Comparing First-Line mF0LF0X6 (Plus or Minus Bevacizumab) Versus mF0LF0X6 (Plus or Minus Bevacizumab) Plus Selective Internal Radiation Therapy in Patients With Metastatic Colorectal Cancer. JCO February 22, 2016 (Burge M)
Journal article	Waterhouse MA, Burmeister EA, O'Connell DL, Ballard EL, Jordan SJ, Merrett ND, Goldstein D, <b>Wyld D</b> , Janda M, Beesley VL, Payne ME, Gooden HM, Neale, RE. Determinants of outcomes following resection for pancreatic cancer-a population-based study. J Gastrointest Surg. 2016; 20(8): 1471-81.
Journal article	Xu W, Singh M, Yan H, <b>Lwin Z, Eastgate M</b> . Disseminated disease including intra-cardiac metastasis from intermediate trophoblastic tumor of unspecified subtype, presenting in pregnancy. Gynecol Oncol Rep 2016 16: 34-8.

# 2016 Conference Presentations – Invited Speaker, Oral and Poster

Type (Oral / Poster / Invited)	Presentation information (RBWH staff in bold)
Poster	Barbour A, O'Rourke N, Chan H, Chua YJ, Kench J, Hicks RJ, Samra JS, Pavlakis N, Haghighi KS, Yip S, Donoghoe M, Friend C, <b>Burge ME</b> , Fawcett J, Harris M, Aghmesheh M, Joubert WL, Gebski V, Simes J, Goldstein D. Initial survival outcomes for the AGITG GAP study – a phase II study of perioperative nabpaclitaxel and gemcitabine for resectable pancreatic ductal adenocarcinoma (PDAC). ASCO 2016
Oral	Barlesi F, Dingemans A, Yang J, Ou S, Ahn J, Petris L, <b>Hughes B</b> , Lena H, Zeaiter A, Bordogna W, Golding S, Morcos P, Balas B, Kim D. Updated efficacy and safety results from a global phase II NP28673 study of alectinib in patients (pts) with previously treated ALK+ non-small cell lung cancer (NSCLC). ESMO 2016.
Poster	Bhatt M, Nocher S, Griffiths M, Lee K, Bartlett M, <b>Wyld D</b> , Goodman S, Fong W. Theranostics – RBWH experience. 4th Theranostics World Congress 2016, Melbourne Australia 7-9th November, 2016.
Poster	Blagden S, Gabra H, Hamilton A, Wong S, Michael A, Mileshkin L, Hall M, <b>Goh J,</b> Lisyanskaya A, DeSilvio M, Habr D, Gainer S, Gopalakrishna P, Meniawy T. Phase I/II Dose-escalation and Expansion Study of Afuresertib Plus Carboplatin and Paclitaxel in Recurrent Ovarian Cancer. ASCO 3-7 Jun 2016
Poster	Beesley V, Janda M, Burmeister E, Goldstein D, Merrett N, O'Connell D, Rowlands I, <b>Wyld D</b> , Young J, Neale R. Association Between Pancreatic Cancer Patients' Perception Of Care Coordination And Patient Outcomes. MASCC/ISOO Annual Meeting, Adelaide 2016
Poster	Chua B, Jefree L, Thomas P, <b>Lwin Z</b> . Real-world diagnostic performance of 18-fludeoxyglucose positron emission tomography (FDG-PET) and contrast-enhanced magnetic resonance imaging (MRI) in evaluation of glioma. Society of Neurooncology, Phoenix, Arizona 2016

Type (Oral / Poster / Invited)	Presentation information (RBWH staff in bold)
Poster	Blake C, Lai R, Moroney L, Helios J, <b>Hughes B</b> , Chua B, Bauer J, Brown T. Nutrition Outcomes and Toxicities Following Helical-Intensity Modulated Radiotherapy (H-Imrt) in Patients with Head and Neck Cancer. COSA 2016
Oral	Brown T, Banks M, <b>Hughes BGM</b> , Lin C, Kenny LK, Bauer J. Early feeding via a prophylactic gastrostomy – preliminary findings from an RCT. ANZHNCS 2016.
Oral	Brown T, Banks M, <b>Hughes BGM</b> , Lin C, Kenny LK, Bauer J. Understanding initiation of nutrition support in patients with head and neck cancer and adherence to recommendations – a patient perspective. COSA 2016.
Oral	Brown T, Chan A, Dwyer K, Banks M, <b>Hughes BGM</b> , Lin C, Kenny L, Crombie J, Spurgin AL, Bauer J. Validation of a protocol to predict proactive gastrostomy tube placement in patients with head and neck cancer receiving Helical-Intensity Modulated Radiotherapy. ANZHNCS 2016.
Oral	Brown T, Dwyer K, Chan A, Banks M, <b>Hughes BGM</b> , Lin C, Kenny L, Bauer J. Revalidation of gastrostomy tube guidelines for high-risk patients undergoing chemoradiotherapy. ANZHNCS 2016.
Oral	Brown T, Wittholz K, Wockner L, Banks M, <b>Hughes B</b> , Lin C, Kenny L, Bauer J. Investigation of p16 status, chemotherapy regimen and other nutritional markers for predicting gastrostomy placement in patients with head and neck cancer. MASCC/ISOO Adelaide 2016.
Poster	<b>Burge ME</b> , Wong HL, Lee B, Tie J, Kosminder S et al. Impact of first-line bevacizumab therapy on the efficacy of subsequent anti-epidermal growth factor antibodies (anti-EGFR) in metastatic colorectal cancer (mCRC). ASCO Gastrointestinal Cancers Symposium 2016
Poster	Chan B, Sim H, Ravikumar A, Bailey D, Chan D, Lawrence B, McEwan A, Pavlakis N, Segelov E, Singh E, Roach P, <b>Wyld D</b> . 417P - Availability and Utility of Functional Imaging (FI) and Peptide Receptor Radionuclide Therapy (PRRT) in the CommNETS Collaboration (Australia, Canada and New Zealand). ESMO Asia 2016 Congress 17 December s 2016.
Poster	Chan BA, Sim H, Ravikumar A, Bailey D, Chan D, Lawrence B, McEwan S, Pavlakis N, Segelov E, Singh S, Roach P, <b>Wyld D</b> . CommNETS Survey of Current Local Practices Towards Peptide Receptor Radionuclide Therapy (PRRT) and Functional Imaging (FI) for Neuroendocrine Tumours (NETs). Australasian Gastrointestinal Trials Group (AGITG) Annual Scientific Meeting, Melbourne, 14-16 September 2016
Poster	Chavalertsakul N, <b>Lwin Z, Hughes BGM</b> . Pneumocystis pneumonia (PJP) in lung cancer patients. COSA 2016.
Oral	Cooney L, Brown T, Elvin-Walsh L, Kern E, Ahern S, Smith D, Kenny L, <b>Hughes B</b> , Porceddu S, Hickman I, Cartmill B. A comparison of prophylactic versus reactive tube feeding approaches on unplanned hospital admissions and weight loss in head and neck cancer (HNC) patients receiving radiotherapy +/-chemotherapy (C/RT). COSA 2016.
Invited speaker	<b>Cubitt A.</b> Why Do We Do Clinical Trials? - Cancer Preceptorship for Primary Health Care Providers - 23 July 2016
Invited speaker	<b>Cubitt A.</b> Assessing Capacity "How to Keep the Donkey's Feet on the Ground" - Cancer Care Services Research Retreat - 10 November 2016.
Poster	Dung L, Thierry A, Hiroki H, You KT, Takyuki B, <b>Burge M</b> et al. P-274Pembrolizumab for patients with previously treated, mismatch repair—deficient microsatellite instability—high advanced colorectal carcinoma. ESMO June 2016
Poster	Goodman SJ, Bhatt M, <b>Wyld D.</b> Comparison of the Functional Response and Tumour Sink Effect in Patients with High and Low Liver Dose on the Dosimetry Scan. 4th Thernostics World Congress 2016, Melbourne Australia 7-9th November, 2016
Poster	Goodman SJ , Smith JG, <b>Burge ME, Wyld D</b> , Ravi Kumar AS. Pretherapy Identification of Patients at Risk of Receiving a High Renal Dose Undergoing Peptide Receptor Radionuclide Therapy. European Neuroendocrine Tumour Society 12th Annual Conference, Barcelona Spain, March 2016
Poster	Gray S, Bhatt M, Lee K, <b>Wyld D</b> , Nocher S, Goodman S, Fong W, Joshi A, Burge M. Unusual Neuroendocrine tumour cases. 4th Thernostics World Congress 2016, Melbourne Australia 7-9th November, 2016
Oral	Grosso F, Steele N, Novello S, Nowak AK, Popat S, Greillier L, John T, Leighl N, Reck M, Taylor P, Pavlakis N, Sorensen JB, Planchard D, Ceresoli GL, <b>Hughes BGM</b> , Mazieres J, Socinski M, Mueller M, von Wangenheim U, Loembe AB, Morsli N, Barrueco J Scagliotti GV. Nintedanib plus pemetrexed/cisplatin in patients with MPM: Phase II findings from the placebo-controlled LUME-Meso trial. WCLC 2016
Poster	Gunawan, B, Button, E, Bates, T, Nasato, G, <b>Wyld, D</b> . Unplanned admissions to a medical oncology unit at a tertiary hospital - an analysis of emergency presentations. In: Asia-Pacific Journal of Clinical Oncology. COSA's 43 and ANZBCTG's 38 Annual Scientific Meetings. Partners for Progress in Breast Cancer Research and Care, Gold Coast, QLD Australia, 15-17 November 2016

Type (Oral / Poster / Invited)	Presentation information (RBWH staff in bold)
Poster	Hughes BGM, McKeage M, Markman B, Hidalgo M, Millward M, Jameson M, Harris D, Stagg R, Kapoun A, Holmgren E, Dupont J, Kotasek D. A phase 1b study of the anti-cancer stem cell agent demcizumab (DEM), pemetrexed (PEM) & carboplatin (CARBO) in patients with 1st line non-squamous NSCLC. ALCC 2016.
Poster	Kalas TS, <b>Wyld D</b> . Optimizing adjuvant chemotherapy delivery in older women with breast cancer - a review. COSA's 43 and ANZBCTG's 38 Annual Scientific Meetings. Partners for Progress in Breast Cancer Research and Care, Gold Coast, QLD Australia. 15-17 November 2016
Poster	Kwan EM, Lee B, Wong H, Lee M, Wong R, Shapiro JD, <b>Burge ME</b> , Lipton LR, Kosmider S, Gibbs P. Use and impact of bevacizumab in patients undergoing liver resection for metastatic colorectal cancer in routine clinical practice. ASCO Gastrointestinal Cancers Symposium 2016
Poster	Khasraw M, McDonald KL, Rosenthal M, <b>Lwin Z</b> , Ashley DM, Wheeler H, Barnes E, Koh E, Foote MC, Buckland M, Swanson R, Hall M, Yip S, Oostendorp M, Simes J. VERTU - VEliparib, Radiotherapy (RT) and Temozolomide (TMZ) trial in Unmethylated MGMT Glioblastoma (GBM). Poster Presentation Trials in progress, ASCO Chicago 2016
Poster	<b>Ladwa R,</b> Xu W, Tani D, Williamson K, Wockner L, <b>Lwin Z,</b> Ritchie A, Steinke K, <b>Hughes B.</b> The significance of solitary pulmonary nodules in head & neck cancer. MOGA 2016.
Poster	<b>Ladwa R</b> An update of the tolerability and feasibility of newer adjuvant chemotherapy in older patients with breast cancer COSA/ANZBCTG Gold Coast, QLD Australia, 15-17 November 2016.
Poster	<b>Ladwa R, Burge M, Wyld D</b> . A single center experience of cardiac metastasis from neuroendocrine tumors (net). In: COSA's 43 and ANZBCTG's 38 Annual Scientific Meetings. Partners for Progress in Breast Cancer Research and Care, COSA/ANZBCTG Gold Coast, QLD Australia, 15-17 November 2016.
Poster	<b>Ladwa R, Burge M, Wyld D</b> . A Single Centres Experience of Cardiac Metastasis from Neuroendocrine Tumours (NET). European Neuroendocrine Tumour Society 12th Annual Conference, Barcelona Spain, March 2016
Oral	<b>Ladwa R</b> , Chern B, Sanmugarajah J, <b>Wyld D</b> . A prospective 2-year experience of a medical oncology advanced trainee in Queensland. In: COSA's 43 and ANZBCTG's 38 Annual Scientific Meetings. Partners for Progress in Breast Cancer Research and Care, COSA/ANZBCTG Gold Coast, QLD Australia. 15-17 November 2016.
Poster	<b>Ladwa R,</b> Lyle M, <b>Wyld D, Burge M.</b> The Difficulties of Response Assessment After Peptide Receptor Radionucleotide Therapy (PRRT): An Unusual Case of Symptomatic Pseudoprogression. European Neuroendocrine Tumour Society 12th Annual Conference, Barcelona Spain, March 2016
Poster	Lassman AB, van den Bent M, Gan HK, Reardon DA, Kumthekar P, Butowski N, <b>Lwin Z</b> , Mikkelsen T, Nabors LB, Papadopoulos KP,Penas-Prado M, Simes J, Gomez E, Lee H, Roberts-Rapp L, Xiong H, Bain E, Holen K, Merrell R. Efficacy of a Novel Antibody-Drug Conjugate (ADC), ABT-414, with Temozolomide (TMZ) in Recurrent Glioblastoma (rGBM) ESMO, Copenhagen 2016
Poster	Lee B, Wong H, Tie J, Wong R, Lee M, Nott L, Shapiro JD, Jennens R, Turner NH, Tran B, Ananda S, Yip D, Richardson GE, Parente P, Lim L, Stefanou G, <b>Burge ME</b> , Iddawela MY, Gibbs P. Impact of anit-VEGF therapy in metastatic colorectal cancer with an intact primary tumour. ASCO Gastrointestinal Cancers Symposium 2016
Poster	Lucas CJ, Goodman SJ, Smith JG, <b>Burge ME, Wyld D</b> , Ravi Kumar AS. Dosimetry to Estimate the Effect of Gelofusine® on the Renal Absorbed Dose of Lutetium 177-DOTA-octreotate. European Neuroendocrine Tumour Society 12th Annual Conference, Barcelona Spain, March 2016
Invited speaker	Lwin Z. Indian Society of Neuro-oncology Annual Scientific Meeting. Hyderabad, India. April 2016
Invited speaker	<b>Lwin Z</b> . Logistics of setting up Multidisciplinary Team Meetings/Tumour Boards for Cancer Care. Myanmar Cancer Symposium, Military Hospital (2), Yangon, Myanmar Oct 2016
Invited speaker	<b>Lwin Z</b> . The 2016 Medical Oncologist Workforce Project; Qualitative and Quantitative Studies. MOGA ASM Gold Coast Australia 2016
Invited Speaker	<b>Lwin Z</b> . "The role of interpreters in transition to palliative care" Royal North Shore Hospital, Sydney, Australia, Grand Rounds May 2016
Poster	McKeage M, <b>Hughes B</b> , Markman B, Hidalgo M, Millward M, Jameson M, Harris D, Stagg R, Kapoun A, Holmgren E, Dupont J, Kotasek D. A phase 1b study of the anti-cancer stem cell agent demcizumab (DEM), pemetrexed (PEM) & carboplatin (CARBO) in patients with 1st line non-squamous NSCLC. ASCO 2016.
Poster	Mileshkin L, Edmondson R, O'Connell R, Sjoquist K, Cannan D, Jyothirmayi R, Beale B, Bonaventura A, <b>Goh J,</b> Hall M, Clamp A, Green J, Lord R, Scurry J, Friedlander M on behalf of the PARAGON study group. A Phase 2 study of anastrozole in recurrent strogen(ER)/progesterone (PR) positive endometrial cancer: The PARAGON trial – ANZGOG 0903. ASCO 2016

Type (Oral / Poster / Invited)	Presentation information (RBWH staff in bold)
Oral	Moroney L, Helios J, Ward E, Crombie J, Pelecanos A, Burns C, Spurgin AL, Blake C, Kenny L, <b>Hughes BGM</b> . Patterns of dysphagia and acute toxicities in patients with oropharyngeal carcinoma undergoing helical IMRT +/- concurrent chemotherapy. ANZHNCS 2016.
Poster	<b>Peters G</b> , Rasool M, Smith DD, <b>Ladwa R, Hughes B, Lwin Z</b> ., Lean thinking: exploring the volume of overhead and supplementary tasks in cancer care (CC) in the oncology outpatient encounter (OOE) MOGA ASM, Gold Coast Australia 2016
Poster	Peters G, Rasool M, Smith D, Ladwa R, Wyld D, Eastgate M, Xu W, Kalokineros P, Tan J, Goh J, Nottage M, Inglis P, Burge M, Al-Saig H, Hughes B, Lwin Z. Lean thinking: exploring the volume of overhead and supplementary tasks (OST) in cancer care (CC) in the oncology outpatient encounter (OOE) in 2 tertiary centres. ASCO Chicago 2016.
Poster	<b>Roberts N</b> , Janda M, Alexander K, <b>Wyld D</b> . A systematic review and meta-analysis of patient reporting outcomes in clinical practice. In: COSA's 43rd and ANZBCTG's 38th Annual Scientific Meetings. Partners for Progress in Breast Cancer Research and Care, COSA/ANZBCTG, Gold Coast, QLD, Australia, 15–17 November, 2016.
Poster	<b>Roberts NA, Ives AB, Cubitt A, Wyld D</b> . Patient understanding of research in a medical oncology setting. ANZUP ASM, Brisbane, July 2016.
Poster	<b>Roberts NA, Ives AB, Cubitt A, Wyld D</b> . Patient understanding of research in a medical oncology setting, RBWH Research Symposium, Brisbane 2016.
Poster	Tognela A, Kiely BE, Espinoza D, Chan M, Davidson JA, <b>Hughes BGM</b> , Boyer M, Briscoe KP, Begbie S, Abdi E, Crombie C, Long J, Boyce A, Lewis CR, Varma S, Broad A, Muljadi N, Coskinas X, Pavlakis N, Millward M, Stockler MR. on behalf of the Australian Lung Cancer Trials Group (ALTG). Oncologists' estimates of expected survival time and scenarios for survival: accuracy in ALTG NITRO trial of 1st line chemotherapy for advanced non-small cell lung cancer (NSCLC). ASCO 2016.
Poster	Van den Bent M, Lassman A, Kumthekar P, Merrell R, Butowski N, <b>Lwin Z</b> , Mikkelsen T, Nabors L, Papdopoulos K et al. ACTR-07. Efficacy of a novel antibody-drug conjugated (ADC), ABT-414, as monotherapy in epidermal growth factor receptor (EGFR) amplified (EGFRamp), recurrent glioblastoma (rGBM). ASCO Annual Meeting Chicago 2016
Oral	Van den Bent M, Gan HK, Lassman AB, Kumthekar P, Merrell R, Butowski N, <b>Lwin Z</b> , Mikkelsen T, Nabors LB, Papadopoulos KP, Penas-Prado M, Simes J, Walbert T, Scott A, Gomez E, Lee H, Roberts-Rapp L, Xiong H, Bain E, Holen K, Maag D, Reardon DA. Efficacy of a novel antibody-drug conjugate (ADC), ABT-414, as monotherapy in epidermal growth factor receptor (EGFR) amplified (EGFRamp), recurrent glioblastoma (rGBM). Asian Society of Neurooncology and COGNO ASM Sydney Australia 2016
Poster	van den Bent M, Gan HK, Lassman AB, Kumthekar P, Merrell R, Butowski N, <b>Lwin Z</b> , Mikkelsen T, Nabors LB, Papadopoulos KP, Penas-Prado M, Simes J, Walbert T, Scott A, Gomez E, Lee H, Roberts-Rapp L, Xiong H, Bain E, Holen K, Maag D, Reardon DA. Efficacy of a novel antibody-drug conjugate (ADC), ABT-414, as monotherapy in epidermal growth factor receptor (EGFR) amplified (EGFRamp), recurrent glioblastoma (rGBM). European Society of Clinical Oncology ASM Copenhagen 2016
Oral	van den Bent M, Gan HK, Lassman AB, Kumthekar P, Merrell R, Butowski N, <b>Lwin Z</b> , Mikkelsen T, Nabors LB, Papadopoulos KP, Penas-Prado M, Simes J, Walbert T, Scott A, Gomez E, Lee H, Roberts-Rapp L, Xiong H, Bain E, Holen K, Maag D, Reardon DA. Efficacy of a novel antibody-drug conjugate (ADC), ABT-414, as monotherapy in epidermal growth factor receptor (EGFR) amplified (EGFRamp), recurrent glioblastoma (rGBM) Society of Neurooncology ASM, November 17-20, Scottsdale, AZ 2016
Poster	van Haeringen B, <b>Burge M, Wyld D</b> . Prognostic and Predictive Clinical, Pathological, and Molecular Biomarkers in Metastatic Colorectal Cancer - A Review. Australasian Gastrointestinal Trials Group (AGITG) Annual Scientific Meeting, Melbourne, Australia, 14-16 September 2016.
Oral	Vardy J, Kay M, <b>Turner J</b> , Gunningham K, Courneya K, Callaghan C, Meyer R, Begbie S, Bonaventura A, <b>Burge M</b> , Booth C, Dhillon H. Effects of a structured exercise program on physical activity and fitness in colon cancer survivors: One year feasibility results from the CHALLENGE trial and study update. COSA/ANZBCTG, Gold Coast, QLD, Australia, 15–17 November, 2016
Poster	Wann A, Tully P, Barnes L, <b>Lwin Z</b> , Jeffree L, Drummond K, Gan H, Khasraw M. Outcomes of second surgery for recurrent glioblastoma multiforme: a retrospective case control study. Society of Neurooncology ASM, Phoenix, Arizona 2016
Invited speaker	<b>Wyld D</b> . Advanced neuroendocrine tumours – Systemic therapies. First Annual North Queensland Neuroendocrine Tumour Meeting, Townsville, 17 June 2016.
Invited speaker	<b>Wyld D</b> . Managing Neuroendocrine Tumours (NETs) in 2016 – What's new? ESA/SRB/ANZBMS Joint meeting, Gold Coast 21-24 August 2016
Invited speaker	<b>Wyld D</b> . Neuroendocrine tumour management. Medical Oncology Group of Australia 2016 Annual Scientific Meeting (ASM), Gold Coast 3-5 August 2016.
Invited speaker	Wyld D. Why is My patient in a clinical trial? RBWH GP Education day. 23 July 2016

Type (Oral / Poster / Invited)	Presentation information (RBWH staff in bold)
Poster	<b>D Wyld, S Plage</b> , A Broom, <b>M Burge, Z Lwin, A Cubbitt</b> . Cancer on the margins: A qualitative study of neuroendocrine patients' experiences of living with rare tumours, European Neuroendocrine Tumour Society ASM, Barcelona 2016
Poster	<b>Wyld D, Plage S, Burge M</b> , Broom A, <b>Lwin Z, McDade H, Cubitt A</b> . How Long Is the Piece of String? – How Patients Negotiate the Uncertainties of a NET Diagnosis. European Neuroendocrine Tumour Society 12th Annual Conference, Barcelona Spain, March 2016
Poster	Xu W, <b>Ladwa R</b> , Tani D, Wockener L, Williamson K, <b>Lwin Z</b> , Ritchie A, Steinke K, <b>Hughes B</b> The significance of pulmonary nodules in head and neck cancer, ALTG/ALCC, Melbourne, Australia 2016

## Other communications and outputs

#### **Conference Abstracts**

Tie J, Wang Y, Springer S, Kinde I, Wong H, Kosmider S, Tran B, Christie M, Thomson BN, Wong R, Burge ME, Shannon J, Kotasek D, Field KM, Strausberg R, Diaz LA, Papadopoulos N, Kinzler KW, Vogelstein B, Gibbs P. Serial circulating tumor DNA (ctDNA) and recurrence risk in patients (pts) with resectable colorectal liver metastasis (CLM). J Clin Oncol 34, 2016 (suppl; abstr e15131).

## **Research Publications / Presentations Summary Table**

Research Group / Department	Publications		Presentation National and	s International
	Journal Articles	<b>Books and Chapters</b>	Oral	Poster
Medical Oncology	45	0	22	42



# **Nursing Professorial Precinct (Cancer)**

#### Aims of research group

The Cancer Nursing Professorial Precinct is a strategic collaboration between nurses in Cancer Care Services, Royal Brisbane and Women's Hospital (RBWH) and academics in the School of Nursing, Queensland University of Technology (QUT). The aim of the Precinct is to build capacity for embedding research and innovation into day-to-day clinical practice, and develop a world-class academic comprehensive cancer centre that improves patient outcomes. The Precinct is creating a thriving culture of research that delivers continuous service improvement and evidence-based care.

#### Clinical benefits of research

Key areas of the Precinct's research programme include service delivery improvement, wound management, vascular access device management, and prevention of blood stream infections, managing treatment toxicities, survivorship care, and palliative care. In 2016, the Precinct conducted research or quality improvement projects that were driven by the needs of the service line including emergency care of cancer patients, and developing a registry to track complications of central venous access devices. A strength of the Precinct lies in the number of high-quality trials conducted investigating best practice management of vascular access devices. All research conducted in the Precinct is patient-centred and seeks to improve the care of patients in clinical practice. The broad body of work conducted will lead to improved outcomes for people living with and beyond treatment for cancer through personalised healthcare interventions and health service innovation at a local and international level. Locally, the Evidence Based Practice program enables excellence in delivery of nursing care in the clinical areas. The international impact of the work conducted in the Precinct is demonstrated by the number of publications and presentations.

## Grants / awards received in 2016

In 2016, research was conducted in the Precinct that was funded by a wide range of sources including the National Health and Medical Research Council, the RBWH Foundation, professional bodies (such as the Cancer Nursing Society of Australia), academic institutions, and industry partners. Cancer Care Services has a strong culture of nurses pursuing post-graduate study and research higher degrees. In 2016, several nurses continued such studies and were awarded competitive scholarships. Other highlights include Professor Raymond Chan being awarded the prestigious Young Tall Poppy Award, and several cancer nurses being part of the RBWH Nursing Research Team that received a Highly Commended award for Improving Patient Outcomes in Critical Care in the inaugural Metro North Hospital and Health Service Research Excellence Awards 2016. A key achievement in 2016 was the appointment of Professor Raymond Chan (Professor of Nursing, Metro North Hospital and Health Services and QUT), who's work primarily focuses on care of people with cancer.

## Research collaborations

A key strength of the Cancer Nursing Professorial Precinct lies in the team's ability to collaborate widely. In 2016, RBWH cancer nurses worked with academic institutions including QUT, Griffith University, University of Southern Queensland, University of Queensland, and Bond University. Collaborations also occurred with the Princess Alexandra Hospital and with researchers in USA, China, Brazil and Singapore. These collaborations continue to enhance the quality and impact of the research conducted in Cancer Care Services at the RBWH.



## **Supervised Post-graduate Research Students**

Name (RBWH in bold)	Current Studies (e.g. PhD, Masters etc.)University (duration))	Research Project Title	Supervisors (RBWH staff in bold)
Elise Button	PhD, QUT (2014-2017)	Identifying clinical indicators that signal a person with a haematological malignancy is at risk of deteriorating and dying	Patsy Yates, Raymond Chan, Shirley Chambers, Jason Butler
Sarah Northfield	Master of Applied Science (Research), QUT (PT: 2014-2017)	Identifying factors that influence specialist palliative care referrals for hospitalised patients with advanced cancer	<b>Patsy Yates, Raymond Chan,</b> John Rosenberg
Jenni Leutenegger	Master of Applied Science (Research), QUT (PT: 2016-2019)	Training models of tele-oncology in nursing	Patsy Yates, Raymond Chan
Rae Blades	Master of Applied Science (Research), QUT (PT: 2016-2019)	A cost-effectiveness analysis of a silicone gel (StrataXRT®) for prophylaxis and management of Radiation Induced Skin Injury in head and neck cancer patients.	Patsy Yates, Raymond Chan, Steven McPhail
Therese Hayes	Master of Applied Science (Research), QUT (PT: 2016-2019)	Unmet care needs in elderly patients with a haematological malignancy	Raymond Chan, Patsy Yates
Justine Leach	Master of Applied Science (Research), QUT (PT: 2016-2019)	Nurse-led Clinics in Cancer Care Services	Raymond Chan, Patsy Yates
Alison Bowers	PhD, QUT (FT: 2016-2019)	Models of care and care needs for Queensland Children Hospice	Patsy Yates, Raymond Chan
Leanne Stone	PhD, QUT (PT: 2014-2019)	Comparing the nature of nursing practice in Australian Magnet and non-Magnet hospitals	<b>Fiona Coyer, Raymond Chan,</b> Alexandra McCarthy
Hanan Al Yami	PhD, UQ (FT: 2016-2018)	Attributes of Quality End-of-Life Care for Advanced Cancer Patients in Critical Care Units in Saudi Arabia	Karen New, Judith McMurray, Raymond Chan

## Research Positions: Coordinators, Fellow, Adjunct and Honorary Positions

Name	Type of Fellowship	Research Program	University (years)
Raymond Chan	NHMRC Health Professional Research Fellowship	Development and evaluation of a tailored fatigue self-management behavioural intervention for patients with advanced cancer	Queensland University of Technology (2014-2017)
Nicole Gavin	Visiting Fellow	School of Nursing	Queensland University of Technology (2015- current)

# Current RBWH Research Group / Department Led Research Activity

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RBWH Research Group / Department Lead Researchers	Collaborative Researchers	Research Project Title
Nicole Gavin	Nicole Gavin, Gillian Nasato, Nicole Marsh, Emily Larsen, Sarah Northfield, Glen Kennedy, David Wyld, Michale Smith, Krispin Hajkowicz, Trent Atkinson, Barbara Hewer, Fiona Coyer, Alison Alexander, Patsy Yates, Peter Mollee	Central Venous Access Device Registry
Nicole Gavin	<b>Claire Rickard,</b> David MacMillan <b>,</b> Samantha Keogh	The saFety of pArenteral nutrition regarding miCrobial growth and vascular catheTer-related infection (The FACT Study)

RBWH Research Group / Department Lead Researchers	Collaborative Researchers	Research Project Title		
Julie Flynn	Claire Rickard, Samantha Keogh, Li Zhang	Decontamination of central venous catheter needleless connectors.		
Sarah Northfield	<b>Patsy Yates, Raymond Chan,</b> John Rosenberg	Identifying factors that influence specialist palliative care referrals for hospitalised patients with advanced cancer		
Elise Button	Gillian Nasato, David Wyld, Patsy Yates, Eileen Fennelly, Jenni Leutenegger, Rae Blades, Jadwiga Chabrowska, Michael Smith, Sarah Northfield, Nicole Gavin	RBWH Cancer Care Services model of care: working to reduce avoidable emergency presentations and hospitalisations		
Elise Button	Patsy Yates, Raymond Chan, Shirley Connell, Jason Butler	Clinical indicators that identify risk of deteriorating and dying in people with a haematological malignancy		
Raymond Chan	Patsy Yates, Jane Turner, Brett Hughes	Development and evaluation of a tailored fatigue self-management behavioural intervention for patients with advanced cancer.		
Raymond Chan	Louisa Gordon, Adrienne Hudson, Natalie Bradford, Aaron Conway, <b>Patsy Yates</b> , Cherie Franks, Robyn Henderson, Richard Lakeman, Trisha Johnson, Tim Moffitt	Queensland Nurse Navigator Program Evaluation Pilot Study		
Raymond Chan	Alex Molassiotis, <b>Patsy Yates</b>	Survivorship care for patients with cancer after TrEatment completion in the Asia-Pacific Region: An international service-mapping study (The STEP Study)		
Raymond Chan	Natalie Bradford, <b>Patsy Yates,</b> Ann Boner, Wolf Marx, Clint Douglas	Nurse-led models of care where the nurse takes a primary care role: a systematic review		
Raymond Chan	Glen Kennedy, <b>Patsy Yates</b> , Jane Turner, <b>Elise Odell,</b> Anthony Smith	A Multi-centre Randomised Controlled Trial of a Nurse-led Survivorship Intervention for EmpoweriNG pAtients with HodGkin's and Non-Hodgkin's Lymphoma after trEatment: (The ENGAGE Trial)		
Jenni Leutenegger	Patsy Yates, Raymond Chan	Training models of tele-oncology in nursing		
Rae Blades	Patsy Yates, Raymond Chan, Steven McPhail	A cost-effectiveness analysis of a silicone gel (StrataXRT®) for prophylaxis and management of Radiation Induced Skin Injury in head and neck cancer patients		
Therese Hayes	Raymond Chan, Patsy Yates	Unmet care needs in elderly patients with a haematological malignancy		
Justine Leach	Raymond Chan, Patsy Yates	Nurse-led Clinics in Cancer Care Services		
Sue Patterson (Mental Health)	Raymond Chan, David Wyld	Optimising recruitment to randomised controlled trials in mental health and cancer care: comparative case studies		
Jane Turner (Psychology)	Patsy Yates, Liz Kenny, Brett Hughes, Raymond Chan	Improving quality of life in high-risk cancer populations: a randomised trial of a structured intervention for head and neck cancer survivors		
Kaye Petherick, Judith McLean, Lowanna Dunn, Deborah Anderson, Cynthia Cliff, Marisha McAuliffe (QUT)	Alison Alexander, Gillian Nasato, Michael Smith, Ian Drake, Jodie Stewart, Glen Kennedy (Cancer Care Services)	Cancer Care Information Portal for Cancer Patients in Brisbane's Metro North Area		
Nahid Choudhury (Griffith University)	Raymond Chan, Nicole Gavin (Cancer Care Services)	Emergence of Chlorhexidine Tolerance in Bacteria associated with Catheter Related Infections.		
Claire Rickard, Peter Mollee, Geoffrey Playford, Li Zhang, Sam Keogh, Andrew Hallahan, Evan Alexandrou (Griffith University)	Joan Webster, Raymond Chan, Nicole Gavin (Cancer Care Services)	Peripherally InSerted CEntral catheter dressing and Securement in cancer patients: the PISCES Trial. Protocol for a 2x2 factorial, superiority randomised controlled trial		
Bonnie Clough, Sonj March, Leanne Casey, Rachel Phillips R, & Michael Ireland. (University of Southern Queensland and Ipswich Hospital)	Raymond Chan (Cancer Care Services)	Psychosocial Interventions for Managing Occupational Stress and Burnout among Medical Doctors: A Systematic Review		
Alexandre Chan (National University of Singapore)	Raymond Chan (Cancer Care Services)	A culturally adapted, multidisciplinary psychoeducation program for early-stage breast cancer survivors in Asia: A randomized, controlled trial		

RBWH Research Group / Department Lead Researchers	Collaborative Researchers	Research Project Title
Elaine Barros Ferreira, Christiane Inocêncio Vasques, Rafael Gadia, Eliete Neves Silva Guerra, Luis André Mezzomo, Graziela De Luca Canto, Paula Elaine Diniz dos Reis (University of BrasíliaBrasiliaBrazil)	Raymond Chan (Cancer Care Services)	Topical interventions to prevent acute radiation dermatitis in head and neck cancer: a systematic review and meta-analysis
Natalie Bradford, Rachel Edwards (Children's Health Queensland)	Raymond Chan (Cancer Care Services)	Heparin versus 0.9% sodium chloride intermittent flushes for CVC in children and infants: a systematic review and meta-analysis
Tewodros Eyob, Terence Ng, Alexandre Chan (National University of Singapore)	Raymond Chan (Cancer Care Services)	Impact of chemotherapy on cancer-related fatigue and cytokines in 1312 patients: A systematic review of quantitative studies
Laisa Teleni, Alexandre Chan, Liz Isenring, Ian Vela, Warrick Inder, Debra Anderson, Alexandra McCarthy. (Bond University, National University of Singapore, and PA Hospital)	Raymond Chan (Cancer Care Services)	Dietary and exercise interventions on the quality of life, menopausal-like symptoms and metabolic risk factors in men undergoing androgen deprivation therapy for prostate cancer: A systematic review of quantitative studies
Jessica Scaife, Alexandra McCarthy, Leanne Stone (PA Hospital)	Nicole Gavin, Raymond Chan, Selena Hughes (Cancer Care Services)	Critical Appraisal of clinical guidelines for the management of neutropenic fever in patients with cancer
Carla Thamm, Alexandra McCarthy, Leanne Stone (PA Hospital)	Raymond Chan, Selena Hughes (Cancer Care Services)	Specialist nurse-led Triage and Assessment at emergency department to improve patient outcomes and reduce wait time
Jane Campbell, Alexandra McCarthy, Leanne Stone (PA Hospital)	Selena Hughes, Raymond Chan (Cancer Care Services)	Opioid and sedatives during bone-marrow aspiration

## **Research Awards and Achievements**

Recipient	Award	Event
Raymond Chan	Young Tall Poppy Science Award	Australian Institute of Policy and Science
Raymond Chan	Best Abstract Presentation	Cancer Care Research Retreat, Cancer Care Services, RBWH
Joan Webster and RBWH Nursing Research Team (including Nicole Gavin, Emily Larsen, Julie Flynn, Claire Rickard, Samantha Keogh).	Highly commended - Improving Patient Outcomes in Critical Care	Metro North Hospital and Health Service Research Excellence Awards 2016



## Research Grants - Awarded

Investigators (RBWH staff in bold)	RBWH Research Groups / Departments	Project Title	Granting Body	Amount in 2016	Total Amount (years)
Julie Flynn	Alliance for Vascular Access Teaching and Research Group	Decontamination of central venous catheter needleless connectors.	Cancer Nurses Society of Australia Research Grant	\$5,500	\$5,500 (2016-2017)
Julie Flynn	Alliance for Vascular Access Teaching and Research Group	Decontamination of central venous catheter needleless connectors.	Royal Brisbane and Women's Hospital Foundation	\$17,000	\$17,000 (2016)
Julie Flynn	Alliance for Vascular Access Teaching and Research Group	Decontamination of central venous catheter needleless connectors.	Australian Postgraduate Award, Griffith University	\$26,000	\$78,000 (2015-2017)
Julie Flynn	Alliance for Vascular Access Teaching and Research Group	Decontamination of central venous catheter needleless connectors.	Doctor of Philosophy Centurion Top-Up Scholarship, School of Nursing and Midwifery, Griffith University	\$5,000	\$15,000 (2015-2017)
Nicole Gavin	Alliance for Vascular Access Teaching and Research Group	The saFety of pArenteral nutrition regarding miCrobial growth and vascular catheTer-related infection (The FACT Study)	Royal Brisbane & Women's Hospital Post Graduate Scholarship 2015	\$24,000	\$24,000 (2015)
Nicole Gavin	Alliance for Vascular Access Teaching and Research Group	The saFety of pArenteral nutrition regarding miCrobial growth and vascular catheTer-related infection (The FACT Study)	National Health and Medical Research Council Centre for Research Excellence in Nursing PhD Scholarship	\$32,000	\$96,000 (2012 – 2015)
Elise Button	Cancer Nursing Professorial Precinct	Clinical indicators that identify risk of deteriorating and dying in people with a haematological malignancy	Royal Brisbane & Women's Hospital Post Graduate Scholarship	\$25,000	\$25,000 (2016)
Elise Button	Cancer Nursing Professorial Precinct	Clinical indicators that identify risk of deteriorating and dying in people with a haematological malignancy	Queensland University of Technology, Centre for Research Excellence in End of Life PhD Scholarship	\$35,000	\$105,000 (2014-2017)
Amanda Ullman, Patricia Kleidon, Sarah Northfield, Nicole Gavin, Claire Rickard	Alliance for Vascular Access Teaching and Research Group	Peripherally Inserted Central Catheter OutcoMes PolyurethAne veRsus Endexo (PIC COMPARE) Pilot Trial.	Unrestricted Research Grant 2016 - AngioDynamics	\$US62,100	\$US62,100 (2016)
Kylie Ash, Leisa Brown- West, Sarah Northfield, Elizabeth Coyne, Munton K, Miles C.	Cancer Nurses Society of Australia (CNSA) Education Standing Committee	Update of the CNSA position statements on the minimum safety and education requirements for nurse administration of antineoplastic drugs.	Cancer Nurses Society of Australia Special Project Grant.	\$7,500	\$7,500 (2016)
Raymond Chan	Cancer Nursing Professorial Precinct	Development and evaluation of a tailored fatigue self-management behavioural intervention for patients with advanced cancer	National Health and Medical Research Council Fellowship	\$38,824	\$155,298 (2014-2017)
Jane Turner, Patsy Yates, Liz Kenny, Louisa Gordon, Bryan Burmeister, Damien Thomson, Brett Hughes, Alexandra McCarthy, A., Christopher Perry, Raymond Chan.	Cancer Nursing Professorial Precinct	Improving quality of life in high-risk cancer populations: a randomised trial of a structured intervention for head and neck cancer survivors	National Health and Medical Research Council Project Grant	\$119,019	\$476,074 (2013-2016)

Investigators (RBWH staff in bold)	RBWH Research Groups / Departments	Project Title	Granting Body	Amount in 2016	Total Amount (years)
Claire Rickard, Joan Webster, Raymond Chan, Peter Mollee, Geoffrey Playford, Li Zhang, Sam Keogh, Andrew Hallahan, Evan Alexandrou (Al: Nicole Gavin)	Alliance for Vascular Access Teaching and Research Group	Peripherally InSerted Central catheter Securement: the PISCES Trial	National Health and Medical Research Council Project Grant	\$220,343	\$1,101,717 (2016-2020)
Glen Kennedy, Raymond Chan, Patsy Yates, Jane Turner, Elise Odell, Anthony Smith.	Cancer Nursing Professorial Precinct	A Multi-centre Randomised Controlled Trial of a Nurse-led Survivorship Intervention for EmpoweriNG pAtients with HodGkin's and Non-Hodgkin's Lymphoma after trEatment: (The ENGAGE Trial)	Royal Brisbane and Women's Hospital Foundation	\$20,000	\$ 40,000
Raymond Chan, Rae Blades, Patsy Yates, Steven McPhail, Grahame Dickie, David Wyld, Steven Sylvander, Steven Crowe, Elise Button, Christopher Walsh, Jacqui Keller, Lee Jones	Cancer Nursing Professorial Precinct	A non-blinded, randomised, controlled, superiority trial of StrataXRT® versus 10% Glycerine (Sorbolene) cream for prophylaxis and management of radiation dermatitis in head and neck cancer patients receiving radical radiotherapy with or without concurrent systemic therapy	Stratpharma	\$56,000	\$112,000



# **Radiation Oncology**

The theme of inter-disciplinary collaboration and technology advancing research continued for the department of radiation oncology in 2016. As our department moved another year on from decentralising provision of clinical care for our provincial centres, we focus on equipping ourselves as the tertiary/quaternary referral hub while still providing outreach visits to Central Queensland, Redcliffe and Caboolture areas.

While physics and radiation therapy lead the investigator-initiated technical studies, medical staff has continued their collaborations with national and international trial groups ventures. For example, Tran-Tasman Radiation Oncology Group, Australian Lung Trial Group, EORTC. The year has been dominated by research in trials in various areas of stereotactic ablative radiotherapy and cutting edge imaging research within the Herston Imaging Research Facility.

While collaborating research amongst the 3 core disciplines of Radiation Oncology, combined trials with chemotherapy and immunotherapy are also thriving. With ongoing imaging research collaborations with the Sydney South West Area Hospital Service (SSWAHS) and collaborations with other centres and universities in Australia and overseas and we have had a number of successful publications and presentations.

The aim and focus of the Radiation Oncology Research group is to promote, support and drive innovation, promote quality initiatives and ensure quality improvement projects deliver evidence-based practice, to ensure safe treatment delivery. With new and emerging technologies rapidly being assimilated into daily practice, the focus of research outcomes is to deliver precision radiotherapy in a safe, efficient and cost-effective manner.

With the recent implementation of Deep Inspiration Breath Hold (DIBH), Stereotactic Body Radiation Therapy (SBRT), Stereotactic Ablative Body Radiotherapy (SABR), and soon to be released Catalyst Body Surface Scanning system, clinical benefits for patient outcomes are multi-fold; including more targeted treatment delivery, faster treatment times and effective sparing of critical structures.

State-wide Radiation Therapist Research Fellow, Catriona Hargrave has been an invaluable resource in supporting collaborative research projects and supporting quality improvement projects locally.

### **Supervised Post-graduate Research Students**

Name	Current Studies University (duration)	Research Project Title	Supervisors (RBWH staff in bold)
Andre Asena	PhD, QUT (2013-2017)	Dose distributions in the vicinity of high-density materials in radiotherapy	<b>Scott Crowe</b> , Jamie Trapp, Tanya Kairn
Diana Binny	PhD, QUT (2015-2021)	Optimizing patient plan deliveries by characterizing treatment planning systems in radiotherapy	<b>Scott Crowe</b> , Jamie Trapp, Tanya Kairn
Rae Blades	Masters Applied Science (Research), QUT (2016-2019)	A cost-effectiveness analysis of a silicone gel (StrataXRT®) for prophylaxis and management of Radiation Induced Skin Injury (RISI) in head and neck cancer patients.	Professor Patsy Yates, Professor Raymond Chan, Assoc Professor Steven McPhail.
Orrie Dancewicz	PhD, QUT (2014-2018)	Development and Verification of 3 & 4 Dimensional Radiation Dosimetry in Radiotherapy	<b>Scott Crowe,</b> Jamie Trapp, Timothy Markwell
Dr Timothy Liu	MPhil	Oral Squamous Cell Carcinoma with intermediate risk factors	Dr Martin Batstone, <b>Dr Benjamin Chua</b>
Johnny Morales	PhD, QUT (2011-2017)	Independent Monte Carlo analysis for stereotactic radiosurgery treatments	Scott Crowe, Jamie Trapp
Shamirah Nabankema	Masters, QUT (2016)	Wearable in-vivo dosimetry for total body irradiation and total skin electron irradiation	Scott Crowe, Diana Binny, Steven Sylvander
Anthony Orth	Masters, QUT (2016)	Total skin electron therapy treatment techniques	Scott Crowe, Phil Back, Steven Sylvander
Samuel Peet	Masters, QUT (2015-2016)	Estimating dose to cardiac pacemakers and cardioverter-	Scott Crowe, Phil Back, Tanya Kairn

Name	Current Studies University (duration	Research Project Title	Supervisors (RBWH staff in bold)
Samuel Peet	PhD, QUT (2016-2020)	Out-of-field dose in contemporary radiation therapy	Scott Crowe, Jamie Trapp, Tanya Kairn
Zac Pross	PhD, QUT (2016-2020)	Monte Carlo simulation of radiological properties of Fricotan moulding material for brachytherapy	Scott Crowe, Craig Lancaster, Sanna Nilsson
Shaun Smith	Masters, QUT (2015-2016)	Development of three-dimensional dosimetry for radiotherapy	<b>Scott Crowe,</b> Jamie Trapp, Kye-Simeon Masters
Emma Spelleken	Masters, QUT (2016)	Evaluating published film dosimetry methods	<b>Scott Crowe,</b> Bess Sutherland, Tanya Kairn
Timothy Tang	Masters, QUT (2016)	Evaluating patient specific pre-treatment QA practices	Scott Crowe, Alexander Livingstone, Darren Cassidy
Sheldon Uprichard	Masters, QUT (2016-2017)	Acuros XB dose calculations for lung SABR dose treatments	Nigel Middlebrook, Scott Crowe, Kirby Francis
Yongqian Yin	Masters, QUT (2016-2017)	Investigation of interplay in IMRT treatments for breast cancer	Scott Crowe, Steven Sylvander, Tanya Kairn
Somayeh Zolfaghari	Masters, QUT (2016)	Stereotactic radiosurgery for multiple brain metastases: a dose-volume study	Scott Crowe, Tanya Kairn, Mark West

# Current RBWH Research Group / Department Led Research Activity

Name	Type of Fellowship	Research Program	University (years)
Dr Philip Chan		Coordinator Radiation Oncology Research	
Scott Crowe, PhD	Adjunct Associate Professor	School of Chemistry, Physics and Mechanical Engineering	QUT (2015-current)
Rob McDowall		Radiation Oncology / Radiation Therapy	
Michelle Ralston		Radiation Oncology / Radiation Therapy	
Lee Tripcony		Radiation Oncology / Statistics	
Jacqui Keller		Radiation Oncology	
Jennifer Edmunds		Radiation Oncology	
Trang Le		Radiation Oncology	
Charmaine Micklewright		Radiation Oncology	

# Current RBWH Research Group / Department Led Research Activity

RBWH Lead Researchers	Collaborative Researchers  (RBWH staff in bold)	Research Project Title
Christopher Ahern	<b>Jemma Blyth</b> <b>Christopher Walsh</b> Catriona Hargrave	Assessment of breast inter-fraction variation using daily MVCT imaging:
Diana Binny, Craig Lancaster	Sanna Nilsson Scott Crowe Phil Back Zac Pross (QUT)	Improving treatment planning and dose calculations in brachytherapy
Rae Blades Raymond Chan		A cost-effectiveness analysis of a silicone gel (StrataXRT®) for prophylaxis and management of Radiation Induced Skin Injury (RISI) in head and neck cancer patients.
Jemma Blyth Jemma Devereaux Michelle Grogan Sanna Nilsson,	Alica Grigg	Deep inspiration breath hold for breast radiotherapy

RBWH Lead Researchers	Collaborative Researchers  (RBWH staff in bold)	Research Project Title		
Kurt Burrows Jemma Blyth Martin Seng	Edward Fox	Patient Information Kiosk and IPad project		
Josephine Cannon	William McDowall Ben Chua Craig Lancaster Catriona Hargrave	A comparison of different 4DCT reconstructions used for treatment planning and IGRT for lung Stereotactic Ablative Body Radiotherapy (SABR)		
Dr Philip Chan	Dr Paul Thomas Prognostic Value of Assessing Hypoxia in Tumours Using 18FMISO P Dr Robyn Cheuk Course of Radiation Therapy – Proof of Concept Study Dr Michelle Grogan Dr Graeme Dickie			
Scott Crowe	Rachael Wilks Evaluating patient specific quality assurance practices  Steven Sylvander  Tanya Kairn (Genesis Cancer Care),  Jamie Trapp			
Scott Crowe, Samuel Peet	<b>Kirby Francis</b> Somayeh Zolfaghari Emma Spelleken Tanya Kairn Johnny Morales	Improving practices surrounding the use of dosimetric film in radiation therapy		
Scott Crowe Steven Sylvander	<b>Diana Binny</b> Shamirah Nabankema Anthony Orth	Dosimetry of total skin electron therapy treatments for mycosis fungoides		
Dr Maciej Debowski	Dr Catherine Bettington	MRI Imaging after RT - best time to scan post RT to maximise resource usage		
Dr Maciej Debowski	Adj Prof Liz Kenny	Eye speculum case study		
Dr Graeme Dickie Dr Paul Thomas	Dr Olivia Bennett Dr Lesli Kudge	PSMA PET - Impact of PSMA PET on radiotherapy planning in high risk prostate cancer		
Dr Lindy Jeffree	Dr Michael Fay Jennifer Martin <b>Dr Paul Thomas</b> Stephen Rose Nicholas Dowson	Evaluation of the role of valproate in the treatment of high grade glioma		
Craig Lancaster Kate Stewart	Gregory Rattray William McDowall Catriona Hargrave	Deformable image registration using the MIM Software		
Alexander Livingstone	Darren Cassidy Kirby Francis	Developing a Monte Carlo quality assurance system for radiation therapy		
Jenna Luscombe	Jemma Blyth Jessica Bodnar Imelda Calic Catriona Hargrave	Retrospective Evaluation of the impact of variable bladder filling on target volume for patients with Gynaecological cancer treated with VMAT		
Calum Rae	Jemma Blyth Dr. Michelle Grogan Allison Dry Catriona Hargrave	Evaluation of Breast Seroma Changes During Radiation Therapy		
Carly Russell	Nicholas Golusin Kurt Burrows Catriona Hargrave	Retrospective Evaluation of setup errors for Stereotactic Brain RT		

# Collaborative Research Activity involving RBWH Research Group / Department

Collaborative Lead Researchers	RBWH Researchers	Research Project Title
Jamie Trapp (QUT)	Scott Crowe (CCS)	Development of three-dimensional gel dosimetry solutions for radiation therapy

Collaborative Lead Researchers	RBWH Researchers	Research Project Title
Jamie Trapp (QUT)	Scott Crowe (CCS)	Investigation of issues surrounding small field dosimetry in radiation therapy
Tanya Kairn (Genesis Cancer Care)	Scott Crowe (CCS)	Bulk evaluation of dosimetric quality of radiotherapy treatment plans
Vincent Grégoire (EORTC)	Adj Prof L Kenny (CCS DRO)	NIMORAL - TROG 14.03 (1219-ROG-HNCG) A blind randomized multicenter study of accelerated fractionated chemo-radiotherapy with or without the hypoxic cell radiosensitizer nimorazole (Nimoral), using a 15 gene signature for hypoxia in the treatment of squamous cell carcinoma of the head and neck
Danny Rischin (PMCC)	Adj Prof L Kenny (CCS DRO)	HPV – TROG 12.01 A randomised trial of Weekly Cetuximab And Radiation Versus Weekly Cisplatin and Radiation in Good Prognosis Locoregionally Advanced HPV– Associated Oropharyngeal Squamous Cell Carcinoma
Chamindie Punyadeera (QUT)	Adj Prof L Kenny (CCS DRO)	SPIT Study A simple saliva test to diagnose head and neck cancer at an early stage - head and neck cancer detection is a spitting distance away
Prof Rajiv Khanna (QIMR)	Adj Prof L Kenny (CCS DRO)	P2191 Development of an Adoptive T Cell Therapy for HPV-Associated Malignancies
Chamindie Punyadeera (QUT)	Adj Prof L Kenny (CCS DRO)	JNJ Saliva Study Developing an Oral Rinse Method to Detect Human Papillomavirus
Scott Williams and Paul Nguyen (NHMRC)	Dr P Chan (CCS DRO)	ENZARAD Randomised phase 3 trial of enzalutamide in androgen deprivation therapy with radiation therapy for high risk, clinically localised, prostate cancer
Kumar Gogna (RO Mater)	Dr C Bettington (CCS DRO	SPLIT COURSE A single arm, prospective Phase II study of Split-Course Pelvic Radiotherapy for Locally Progressive, Castrate Resistant Prostate Cancer
Assoc Prof Margot Lehman (PAH)	Dr P Chan (CCS DRO)	P LUNG - TROG 11.03 A randomised phase III trial of High Dose Palliative Radiotherapy (HDPRT) versus concurrent Chemotherapy HDPRT (C-HDPRT) in patients with good performance status, locally advanced / small volume metastatic NSCLC not suitable for radical chemo-radiotherapy
A/Prof Christine Paul (UON)	Dr P Chan (CCS DRO)	OPAL A randomised controlled trial of online versus telephone-based information and support: Can electronic platforms deliver effective care for lung cancer patients?"
Dr Gianluca Severi (Cancer Council Victoria)	Dr L Jeffree (CCS DRO)	AGOG Australian Genomics and Clinical Outcome of Glioma – Epidemiology Study
Professor Gerald B. Fogarty (ANZMTG)	Dr R Allison (CCS DRO)	WBRT - ANZMTG 01/07 TROG 08.05 Whole Brain Radiotherapy following local treatment of intracranial metastases of melanoma- A randomised phase III trial
Dr Karen Lim (Liverpool Cancer Therapy Centre)	Dr P Chan (CCS DRO)	GYNAE MRI Developing methods to allow adaptive radiotherapy for gynaecological cancers with MRI (cervix)
Assoc Prof Peter Graham (SGH)	Dr R Cheuk (CCS DRO)	STARS - TROG 08.06 A randomised comparison of anastrozole commenced before and continued during adjuvent radiotherapy for breast cancer versus anastrozole and subsequent anti-oestrogen therapy delayed until after radiotherapy. (STARS - Study of Anastrozole and Radiotherapy Sequencing)
A/Prof Boon Chua (PMCC)	Adj Prof L Kenny (CCS DRO)	DCIS - TROG 07.01 A randomised phase III study of radiation doses and fractionation schedules in non-low risk ductal carcinoma in situ (DCIS) of the breast
A/Prof Michael Mac Manus (PMCC)	Dr G Pratt (CCS DRO)	MZL - TROG 05.02 A prospective single arm trial of involved field radiotherapy alone for stage I-II low grade non-gastric marginal zone lymphoma.
L. Mileshkin (PMCC)	Dr R Cheuk (CCS DRO)	PORTEC - 3 - TROG 08.04 ANZGOG A Randomised phase III trial comparting concurrent chemoradiation and adjuvant chemotherapy with pelvic radiation alone in high risk and advanced stage endometrial carcinoma.
Prof Jim Denham (NMH)	Adj Prof L Kenny (CCS DRO)	RADAR - TROG 03.04 A Randomised Trial Investigating the Effect on Biochemical (PSA) Control and Survival of Different Durations of Adjuvant Androgen Deprivation in Association with Definitive Radiation Treatment for Localised Carcinoma of the Prostate
Dr Maria Pearse (Auckland City Hospital)	Dr C Lin (CCS DRO)	RAVES - TROG 08.03 Radiotherapy Adjuvant versus Early Salvage. A phase III multi-centre randomised trial comparing adjuvant radiotherapy (RT) with early salvage RT in patients with positive margins or extraprostatic disease following radical prostatectomy
A/Prof Michael Poulsen (RO mater)	Dr G Dickie (CCS DRO)	MP3 - TROG 09.03 A Phase II Efficacy Study of Chemo-radiotherapy in PET Stage II and III Merkel Cell Carcinoma of the Skin
Dr Gail Ryan (PMCC)	Dr R Allison (CCS DRO)	TROG 06.01 Primary chemotherapy with Temozolomide vs. Radiotherapy in patient's with Low Grade Gliomas after stratification for genetic 1P loss: A phase III Study.
A/Prof Sandro Porceddu (PAH)	Adj Prof L Kenny (CCS DRO)	POST - TROG 05.01 Post-operative concurrent chemo-radiotherapy versus post- operative radiotherapy in high-risk cutaneous squamous cell carcinoma of the head and neck

## **Research Awards and Achievements**

Recipient	Award	Event
Adj Prof Lizbeth Kenny	Distinguished Fellow	Cardiovascular and Interventional, Radiology Society of Europe
Scott Crowe	2016 Bob Fitchew Award	Australasian College of Physical Scientists & Engineers in Medicine Queensland Branch Symposium
Josephine Cannon	ASMIRT Qld Branch Best SPP Presentation	Qld Radiation Therapy Weekend Conference: [Brisbane Novotel : October 14-16 <sup>th</sup> , 2016]
Dr Yuvnik Trada	CE Eddy Prize	RANZCR Annual Scientific Meeting

## **Research Grants Awarded**

Investigators (RBWH staff in bold)	RBWH Research Groups / Departments	Project Title	Granting Body	Amount in 2016	Total Amount (years)
Steve Sylvander	Radiation Oncology	Catalyst optical surface monitoring system	New Technology	\$72,000	\$528,000 (2015-2017)
Lizbeth Kenny	Radiation Oncology	MIM Maestro Deformable Registration. Deformable registration software allows for elastic accurate registration of PET/CT, contrast CT, CBCT/ MVCT, MRI dose and contour objects onto radiation treatment planning CT scans to facilitate accurate delineation of the volume of cancer requiring radiation treatment along with dose accumulation for adaptive treatment or instances of recurrence	NTFEP	\$473,000	\$473,000 (2015-2017)
Graeme Dickie	Radiation Oncology	QCOG Cancer Clinical Trial Data Manager Grant	Queensland Clinical Oncology Group	\$78,500	\$78,500 (2016)
Benjamin Chua, Bryan Day, Stephen Rose, Paul Thomas, Lindy Jeffree, Yi-Chieh Lim, Po-ling Inglis, Zarnie Lwin, Jacqui Keller	Radiation Oncology	Using molecular-guided PET/ MRIUsing molecular-guided PET/ MRI imaging to target hypoxia in glioblastoma: A preclinical study to identify novel pathways and define molecular signatures associated with hypoxia and poor patient outcome	HIRF seed research funding	\$66,498	\$66,498 (2017)
Lizbeth Kenny	Radiation Oncology	CXCR4 PET for nodal staging of resectable mucosal head and neck squamous cell carcinoma (HNSCC)	HIRF seed research funding	\$56,017.50	\$56,017.50 (2017)
<b>Craig Lancaster, Scott Crowe,</b> Tanya Kairn, Jamie Trapp, <b>Robyn Cheuk</b>	Radiation Oncology Medical Physics	Estimating and minimising foetal dose from radiotherapy treatments delivered to pregnant cancer patients	RBWH Foundation	\$40,000	\$40,000 (2016)
Lizbeth Kenny	Radiation Oncolog	Unless contraindicated, all patients receiving radical head and neck cancer chemoradiation at RBWH, undergo a FDG PET CT and FDG PET MRI for fusion to planning CT scans. This has the potential to help determine acquisition algorithims for head and neck PET MRI. This would then also be of value to teh PET MRI team at PAH and of commercial importance to our industry partner	HIRF seed research funding	\$35,090	\$35,090 (2017)

Investigators (RBWH staff in bold)	RBWH Research Groups / Departments	Project Title	Granting Body	Amount in 2016	Total Amount (years)
Samuel Peet	Radiation Oncolog	Out-of-field dose in contemporary radiation therapy	RBWH post-grad research scholarship	\$33,884	\$33,884 (2017)
Kumar Gogna Catherine Bettington	Radiation Oncology	A single arm, prospective Phase II study of Split-Course Pelvic Radiotherapy for Locally Progressive, Castrate Resistant Prostate Cancer	RANZCR - Ferring Pharmaceuticals Grant	\$25,000	\$25,000 (2015-2017)
Jemma Devereaux	Radiation Oncology	Implementation of Deep Inhalation Breath Hold	RBWH Foundation and CCS Fundraising Committee	\$2,000	\$2,000 (2016)
Jennifer Edmunds	Radiation Oncology	Study Coordinator scholarship	ANZUP Clinical trials	\$550	\$550 (2016)

## **2016 Research Publications**

Type (Journal article / Publication information (RBWH staff in bold)				
Publication information (RBWH staff in bold)				
<b>Binny D, Lancaster CM</b> , Kairn T, Trapp JV, <b>Back P, Cheuk R, Crowe SB</b> . Investigating the use of image thresholding in brachytherapy catheter reconstruction. Australas Phys Eng Sci Med. 2016;39(4):913-919.				
<b>Binny D, Lancaster CM</b> , Kairn T, Trapp JV, Crowe SB. Monitoring Daily QA3 constancy for routine quality assurance on linear accelerators. Physica Medica. 2016;32(11):1479-1487.				
Bridge P, <b>Crowe SB</b> , Gibson G, Ellemor NJ, Hargrave C, Carmichael M. A virtual radiation therapy workflow training simulation. Radiography. <b>2016</b> ;22(1):e59-e63				
Brown T, Getliffe V, Banks M, Hughes B, Lin C, <b>Kenny L</b> , Bauer J. Validation of an updated evidence based protocol for proactive gastrostomy tube insertion in patients with head and neck cancer. European Journal of Clinical Nutrition, 2016. doi:10.1038/ejcn.2015.230				
Brown TE, Crombie J, Spurgin A-L, <b>Tripcony L, Keller J</b> , Hughes BGM, Dickie G, Kenny LM, Hodge RA. Improving guideline sensitivity and specificity for the identification of proactive gastrostomy placement in patients with head and neck cancer. DOI 10.1002/hed.24184. Head Neck. 2016 Apr;38 Suppl 1:E1163-71				
Croker J, <b>Chua B</b> , Bernard A, Allon M, Foote M. Treatment of brain oligometastases with hypofractionated stereotactic radiotherapy utilising volumetric modulated arc therapy. Clin Exp Metastasis. 2016 Feb;33(2):125-32.				
<b>Crowe SB,</b> Kairn T. Women in Medical Physics: a preliminary analysis of workforce and research participation in Australia and New Zealand. Australas Phys Eng Sci Med. 2016;39(2):525-532.				
<b>Crowe SB</b> , Sutherland B, <b>Wilks R, Sylvander S</b> , Seshadri V, Trapp JV, Kairn T. Relationships between gamma criteria and action levels: Results of a multi-center audit of gamma agreement index results. Med Phys. 2016;43(3):1501-1506.				
<b>Dickie GJ</b> , Askew J, Ha T. EP-1036: Glottic carcinoma stage T1 radiotherapy. Radiotherapy and Oncology. April 2016 volume 119, Supplement 1, Page S501.				
Kairn T, Aland T, <b>Crowe SB</b> , Trapp JV. Use of electronic portal imaging devices for electron treatment verification. Australas Phys Eng Sci Med. 2016;39(1):199-209.				
Kairn T, Charles PH, <b>Crowe SB</b> , Trapp JV. Effects of inaccurate small field dose measurements on calculated treatment doses. Australas Phys Eng Sci Med. 2016;39(3):747-753.				
Kairn T, <b>Crowe SB</b> , Langton CM, Trapp JV. Bulk evaluation and comparison of radiotherapy treatment plans for breast cancer. Australas Phys Eng Sci Med. 2016;39(3):633-644.				
Kairn T, Papworth D, <b>Crowe SB</b> , Anderson J, Christie DRH. Dosimetric quality, accuracy and deliverability of modulated radiotherapy treatments for spinal metastases. Med Dosim. 2016;41(3):258-266.				
<b>Kenny L</b> and Adam, A. Image Guided Therapy: The importance of local tumour control. European Journal of Surgical Oncology, February 2016. doi:org/10.1016/j.ejso.2016.01.021				
Morales JE, Butson M, <b>Crowe SB</b> , Hill R, Trapp JV. An experimental extrapolation technique using Gafchromic EBT3 film for relative output factor measurements in small x-ray fields. Med Phys. 2016;43(8):4687-4692.				

Type (Journal article / Book / Book chapter / Letter)	Publication information (RBWH staff in bold)			
Journal article	Moroney LB, Helios J, Ward EC, Crombie J, Wockner LF, Burns CL, Spurgin A-L, Blake C, <b>Kenny L</b> , and Hughes BGM. Patterns of dysphagia and acute toxicities in patients with head and neck cancer undergoing helical IMRT +/-concurrent chemotherapy. Oral Oncology, November 2016. doi.org/10.1016/j.oraloncology.2016.11.009			
Journal article	Nottage MK, Lin C, Hughes BG, <b>Kenny L</b> , Smith DD, Houston K, Francesconi A. Prospective study of definitive chemoradiation in locally or regionally advanced squamous cell carcinoma of the skin. Head and Neck, December <b>2016</b> . doi: 10.1002/hed.24662			
Journal article	<b>Peet SC, Wilks R,</b> Kairn T, Trapp JV, <b>Crowe SB</b> . Calibrating radiochromic film in beams of uncertain quality. Med Phys. 2016;43(10):5647-5652.			
Journal article	<b>Peet SC, Wilks R</b> , Kairn T, Crowe SB. Measuring dose from radiotherapy treatments in the vicinity of a cardiac pacemaker. Physica Medica 2016;32(12):1529-1536.			
Journal article	Punyadeera C, Kulasinghe A, <b>Kenny L</b> , Perry C, Thiery J-P, Jovanovic L, Vela I, Nelson C: Impact of label-free technologies in head and neck cancer circulating tumour cells. Oncotarget, November <b>2016</b> . doi:10.18632/oncotarget.12086			
Journal article	Ringash J, Fisher R, Peters L, Trotti A, O'Sullivan B, Corry J, <b>Kenny L</b> , Van Den Bogaert W, Wratten C, Rischin D. Effect of p16 Status on the Quality-of-Life Experience During Chemoradiation for Locally Advanced Oropharyngeal Cancer: A Substudy of Randomized Trial Trans-Tasman Radiation Oncology Group (TROG) 02.02 (HeadSTART). Int J Radiat Oncol Biol Phys. 2016 Mar 23.			
Journal article	Schmidt H, Kulasinghe A, <b>Kenny L</b> , Punyadeera C. The development of a liquid biopsy for head and neck cancers. Oral Oncology, October 2016. doi: 10.1016/j.oraloncology.2016.07.014			
Journal article	Schlumberger M, Jarzab B, Cabanillas ME, Robinson B, Pacini F, Ball DW, McCaffrey J, Newbold K, <b>Allison R</b> , Martins RG, Licitra LF, Shah MH, Bodenner D, Elisei R, Burmeister L, Funahashi Y, Ren M, O'Brien JP, Sherman SIA Phase II Trial of the Multitargeted Tyrosine Kinase Inhibitor Lenvatinib (E7080) in Advanced Medullary Thyroid Cancer Clin Cancer Res. 2016 Jan 1;22(1):44-53.			
Journal article	Vinod SK, Lim K, Bell L, Veera J, Ohanessian L, Juresic E, Borok N, <b>Chan P</b> , Chee R, Do V, Govindarajulu G, Sridharan S, Johnson C, Moses D, Van Dyk S, Holloway L. High-risk CTV delineation for cervix brachytherapy: Application of GECESTRO guidelines in Australia and New Zealand. J Med Imaging Radiat Oncol. 2017 Feb;61(1):133-140			

# 2016 Conference Presentations - Invited Speaker, Oral and Poster

Type (Oral / Poster / Invited)	Presentation information (RBWH staff in bold)			
Oral	<b>Ahern, C.</b> Assessment of breast inter-fraction variation using daily MVCT imaging. Qld Radiation Therapy Weekend Conference, Brisbane, October 2016			
Oral	<b>Ahern, C.</b> Assessment of breast inter-fraction variation using daily MVCT imaging. Australian Institute of Radiography (AIR) Graduate Presentation Day. Brisbane, November 2016			
Oral	<b>Baker J.</b> Clinical Considerations when Transitioning from Pencil Beam to Collapsed Cone in Oncentra Masterplan for Planning Breast Treatment. ASMMIRT 2016 Conference. Brisbane, April 2016			
Oral	<b>Binny D, Lancaster CM, Sylvander SR</b> , Kairn T, Trapp JV, Crowe S. Efficiency of dose control system and quality assurance in Tomotherapy treatments. International Conference on Medical Physics, Bangkok, Thailand, December 2016			
Oral	Burrows K. Patient Education- Less Paper More Pictures: ASMMIRT 2016 Conference. Brisbane, April 2016			
Oral	<b>Cannon J.</b> A comparison of different 4DCT reconstructions used for treatment planning and IGRT for lung Stereotactic Ablative Body Radiotherapy (SABR). Queensland Radiation Therapy Weekend Conference, Brisbane, October 2016.			
Oral	<b>Crowe SB</b> , Tang TLS, <b>Sylvander SR</b> , Kairn T. Measuring very small field output factors with a Roos chamber. Engineering and Physical Sciences in Medicine, Sydney, November 2016			
Oral	<b>Dancewicz O, Sylvander SR</b> , Markwell TS, <b>Crowe SB</b> , Trapp JV. Radiological properties of 3D printed materials in kilovoltage and megavoltage photon beams. Engineering and Physical Sciences in Medicine, Sydney, November 2016			
Oral	Kairn T, <b>Crowe SB</b> . Verification and validation of in-house film dosimetry code. International Conference on the use of Computers in Radiation Therapy, London, June 2016.			
Oral	<b>Hoffman C</b> . The Use of High Dose Rate Brachytherapy for a Paediatric Perianal Rhabdomyosarcoma. ASMMIRT 2016 Conference. Brisbane, April 2016]			

Type (Oral / Poster / Invited)	Presentation information (RBWH staff in bold)			
Oral	<b>Luscombe J</b> . Retrospective Evaluation of the impact of variable bladder filling on target volume for patients with Gynaecological cancer treated with VMAT. Australian Institute of Radiography (AIR) Graduate Presentation Day. Brisbane, November 2016			
Oral	<b>Luscombe J</b> . Retrospective Evaluation of the impact of variable bladder filling on target volume for patients with Gynaecologica cancer treated with VMAT. Queensland Radiation Therapy Weekend Conference. Brisbane, October 2016			
Oral	<b>McCoola B</b> . The Evaluation of a Paediatric Radiation Oncology Model of Care to Decrease Anaesthesia Rates. ASMMIRT 2016 Conference. Brisbane, April 2016			
Oral	<b>Russell C</b> . Retrospective Evaluation of setup errors for Stereotactic Brain RT. Australian Institute of Radiography (AIR) Graduate Presentation Day. Brisbane, November 2016			
Oral	<b>Russell C.</b> Retrospective Evaluation of setup errors for Stereotactic Brain RT. Queensland Radiation Therapy Weekend Conference. Brisbane, October 2016			
Oral	Zolfaghari S, <b>Crowe SB</b> , Papworth D, West M, Kairn T. Testing the limits of stereotactic radiosurgery for multiple brain metastases. Engineering and Physical Sciences in Medicine, Sydney, November 2016			
Poster	Asena A, Smith ST, Kairn T, <b>Crowe SB</b> , Franich RD, Trapp JV. Reduction of artefacts caused by missing ray-sum data in optical-CT imaging of implants in gel dosimeters. International Conference on 3D Radiation Dosimetry, Galveston, USA, November 2016			
Poster	<b>Chua B, Jeffree L</b> , Thomas P, Goodman S, Lwin Z. Diagnostic performance of 18-fludeoxyglucose positronemission tomography (FDG-PET) in evaluation of glioma. Society of Neuro-Oncology annual meeting, Arizona November 2016			
Poster	Kairn T, Asena A, <b>Crowe SB, Livingstone A</b> , Papworth D, Smith ST, Sutherland B, Sylvander S, Franich RD, Trapp JV. Can a commercial gel dosimetry system be used to verify stereotactic spinal radiotherapy treatment dose distributions? International Conference on 3D Radiation Dosimetry, Galveston, USA, November 2016			
Poster	Kairn T, <b>Crowe SB</b> . Application of data mining to clinical protocol design: Are breath-hold techniques beneficial for prone bre radiotherapy patients? International Conference on the use of Computers in Radiation Therapy, London, UK, June 2016.			
Poster	Kairn T, <b>Crowe SB</b> . Clinical application of data mining: Evaluation and comparison of radiotherapy treatment plans for breast cancer. Engineering and Physical Sciences in Medicine, Sydney, November 2016			
Poster	Kirabo SN, <b>Binny D</b> , Jafari S, <b>Sylvander SR, Crowe SB</b> . In-vivo dosimetry for total skin electron treatments using wearable glass beads. Engineering and Physical Sciences in Medicine, Sydney, November 2016			
Poster	Kirabo SN, <b>Crowe SB, Binny D,</b> Jafari SM, <b>Sylvander SR</b> . Wearable glass beads in in-vivo dosimetry for total body irradiation and total skin electron irradiation. International Conference on Dosimetry and its Applications, Surrey, UK, July 2016.			
Poster	Liu T, Batstone M, <b>Chua B</b> . The Utility of Post-Operative Radiotherapy in Intermediate Risk Oral Squamous Cell Carcinoma. ANZHNCS in Auckland. October 2016			
Poster	<b>McCoola B, Outhwaite J-A</b> . The Use of Behavioural Therapy to reduce general anaesthesia in paediatric RT. Cancer Care Services Research Retreat. Brisbane, November 2016			
Poster	Moroney L, Helios J, Ward E, Crombie J, Pelecanos A, Burns C, Spurgin A-L, Blake C, <b>Kenny L</b> , Hughes B. Patterns of dysphagia and acute toxicities in patients with oropharyngeal carcinoma undergoing helical IMRT +/- concurrent chemotherapy. ANZHNCS in Auckland. October 2016			
Poster	Orth AG, <b>Sylvander SR, Crowe SB</b> . Comparative study of total skin electron therapy (TSET) treatments of Mycosis Fungoides. Engineering and Physical Sciences in Medicine, Sydney, November 2016			
Poster	Peet S, Wilks R, Kairn T, Crowe SB. Characterising and estimating doses near cardiac devices during radiotherapy treatments. Engineering and Physical Sciences in Medicine, Sydney, November 2016			
Poster	Shanker M, <b>Chua B</b> , Panizza B, Proceddu S. Complications from neck dissections post PET/CT directed neck management protocol: An analysis of patients with neck positive PET/CT post definitive chemoradiotherapy" - Poster presented at European Congress of Radiology, Vienna, Mar 2016, manuscript submitted to Asia-Pacific Journal of Clinical Oncology			
Poster	<b>Trinh HM</b> , Moroney L, Crombie J, Ward E, <b>Tripcony L, Choma K, Dickie G, Chua B</b> . Outcomes of hypopharynx cancer treated definitively using helical intensity modulated radiation therapy. Australian Head & Neck Cancer Society (ANZHNCS) ASM in Auckland. October 2016			
Poster	Wilks R, Nilsson S. HDR afterloader quality assurance using helical diode array. Engineering and Physical Sciences in Medicine, Sydney, November 2016			
Poster	Zolfaghari S, Papworth D, West M, <b>Crowe SB</b> , Kairn T. Testing the limits of stereotactic radiosurgery for multiple brain metastases. Queensland Radiation Therapist Weekend, Brisbane, October 2016			
Invited	<b>Crowe SB</b> . Radiotherapy in the Millennium and Beyond. Trans-Tasman Radiation Oncology Group Annual Scientific Meeting Clinical Research Workshop, Brisbane, March 2016			
Invited	Dry A. Interview Preparation & Expectations. Early Careers Forum. Brisbane, September 2016			
Invited	Keller J. Information access for clinical trials. Trans Tasman ROG ASM, Brisbane, 14 March 2016			

Type (Oral / Poster / Invited)	Presentation information (RBWH staff in bold)		
Invited	<b>Kenny L</b> . Quality Assurance in Interventional Oncology: it's not just about the kit. Radiological Society of North America. Chicago USA. November 2016		
Invited	Kenny L. The Importance of Local Cure. RANZCR ASM, Gold Coast, Australia. October 2016		
Invited	<b>Kenny L</b> . Treating Wisely – Reviewing the evidence and reporting on patient outcomes. HealthPACT Forum, Brisbane, October 2016		
Invited	<b>Kenny L.</b> The CIRSE QA System for Interventional Oncology: as essential step to credibility in cancer care. CIRSE, Barcelona, Spain September 2016		
Invited	<b>Kenny L</b> . Quality Assurance and Interventional Oncology: what radiation therapy can teach us. World Congress of Interventional Oncology, Boston, USA. Jun 2016		
Invited	Kenny L. It takes more than technology to be an oncologist. Harvard Medical School, Boston, USA. Jun 2016		
Invited	Kenny L. CIRSE Practice Standards for Interventional Oncology – an essential step for credibility in cancer care. ECIO, Dublin, Ireland. Apr 2016		
Invited	Kenny L. The Impact of Treatment on Cancer Cure. European Medicines Agency, London, England. Apr 2016		

# Research Publications / Presentations Summary Table

Research Group / Department	Publications		Presentations National and International	
	Journal Articles	<b>Books and Chapters</b>	Oral	Poster
Radiation Oncology	24	0	27	16

