

2021

RBWH Research Report

CANCER CARE
SERVICES

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Cancer Care Services



Dr Glen Kennedy
Executive Director RBWH MNHHS

Cancer Care Services (CCS) at RBWH continues to provide expert highly skilled, evidence-based care to patients affected by cancer and non-malignant haematological conditions, including haemophilia.

As a service committed to striving for excellence, our multidisciplinary research team is an integral part of ensuring the provision of cutting-edge treatment to our patients. The Cancer Care research team includes the Allied Health Professions, Cancer Nursing Professorial Precinct, Medical Oncology, Radiation Oncology and Haematology including the Haemophilia Centre and Bone Marrow Transplant Unit. Research is considered core business within Cancer Care, and a vehicle to the facilitation of progressive treatment for our patients.

2021 represented another year of fantastic achievement in research for Cancer Care, despite ongoing COVID challenges. The annual CCS Research Retreat brought together a hybrid (virtual and in person) event, for the first time, saw investigators from CCS and senior hospital and district executives to enable planning to ensure that research remains at the forefront of our service both now and into the future.

Highlights in 2021 include commencement a local clinical trial incorporating locally manufactured chimeric antigen receptor T-cells (CAR-T) as well as participation in several commercial CAR-T studies. Our oncology team has been at the forefront of COVID research into exploring the psychosocial impacts of COVID-19 on oncology workforces during the pandemic.

Our Research Advisory Group (RAG) continued to link and develop cancer research across our district. Ongoing use of a research trial database has significantly improved our ability to track and plan our clinical trial resources more effectively. The Cancer Care Trust committee has allowed the ongoing process of a cancer-care grant round for investigators in 2021 and going forwards into 2022.

Other research highlights for the year are detailed in our separate departmental reports, and I encourage all to read these.

This year's Research Report would not be complete without acknowledging the second year that will forever be remembered by a global pandemic. The pandemic brought along with-it restrictions and situations that have never been seen before and the teamwork and professional response from the Cancer Care Services Team who adapted daily to the changes; taking everything in their stride was something extraordinary to witness.

We look forward to 2022 to continue to strive to expand and embed research within CCS across all patient and disease groups, incorporating new and novel approaches to care within clinical, translational and basic science research programmes and partnerships, aiming to constantly improve clinical outcomes for our patients

A number of notable achievements within Cancer Care Services include:

- ❖ Establishment of a PC2 accredited research laboratory to safely enable innovative vector based genetically modified cellular therapies for the treatment of a variety of blood cancers and provision gene therapy trials in the management of Haemophilia
- ❖ Staff from the Radiation Oncology team were well represented at the Engineering and Physical Sciences in Medicine Conference, 7th to 10th November 2021 at the Brisbane Convention & Exhibition Centre, Brisbane, Australia.
- ❖ There have been sixteen nurse led projects conducted within our department and \$159,530 of competitive funding secured. Cancer care nurses have pursued post-graduate qualifications, and many have commenced and continued research-higher degrees

- ❖ During 2021, Allied Health Professions (AHP) has continued to strengthen its program in cancer care services research. Dr Sarah Anderson was awarded her PhD from The University of Queensland. Sarah's PhD program was titled: "Investigating nutrition support during allogeneic stem cell transplantation" and Dr Sarah Anderson was awarded her PhD from The University of Queensland. Sarah's PhD program was titled: "Investigating nutrition support during allogeneic stem cell transplantation"
- ❖ 2021 was another exciting year for the Queensland Haemophilia Centre (QHC) working in collaboration with the Clinical Research Unit Cancer Care Services and the Cellular Therapy/ BMT Laboratory. We built further on our experience with AAV5-FVIII gene therapy through recruitment and dosing of 3 patients in the BMN 270-303 dosing study. The QHC also continued as an active site in a multi-centre phase 3 study evaluating the efficacy of a factor VIII mimetic (Emicizumab) given via monthly subcutaneous injection. Publication highlights included outcomes of a QLD collaborative study which demonstrated efficacy of an upfront low dose rituximab and steroid approach in treatment of Acquired Haemophilia.

Clinical Research



Professor Steven Lane
Director of Clinical Research CCS
Clinical Haematologist CCS
RBWH

In Metro North Cancer Care Services, we believe that clinical research is a cornerstone of clinical excellence and through this research, we are able to offer world class care to our patients. 2021 was another difficult year with restrictions and lockdowns mandated by the COVID pandemic, however despite these challenges, we have had another outstanding year of research activity and recognition. It is only through the selfless dedication and hard work of our researchers and research support staff that we have been able to maintain this trajectory. Our research activity is detailed below, demonstrating that many hundred patients have received life altering care through recruitment to clinical trials.

In 2021, MNHHS Cancer Care has achieved many research highlights and I would encourage you to look through the departmental reports, but I'll also point out a few outstanding examples.

The cellular therapy program has now grown to include multiple clinical trials using gene modified cellular therapies (CAR-T cells) to patients with blood cancers. Importantly, using the facilities and expertise of the BMT lab, Dr Siok Tey and Dr Cheryl Hutchins have been able to manufacture patient specific CAR-T cells that have now been used to treat patients with advanced blood cancers. RBWH is one of the few sites in Australia with such capacity. In recognition of her role in this, and other projects, Dr Siok Tey was awarded the MNHHS CEO's award at the Research Excellence Awards and recently also was awarded the Metcalf Prize for Stem Research and the Australian Cancer Research Fund Prize for Cancer Research Excellence.

Members of the Division have been lead or senior author on papers in top international journals including Blood , BMT, Blood Advances and have contributed to papers in internationally renowned journals such as Nature Medicine, Journal of Clinical Oncology, Annals of Oncology and many others. We have made key contributions to national guidelines and consensus statements detailing the impact of COVID on stem cell transplantation and molecular profiling of malignancies

Our research excellence has been recognised through research funding from NHMRC including an Investigator grant, co-investigators on Ideas grants and we have led national programs to secure MRFF grant funding. Our clinicians have also received funding from the Queensland Cancer Fund, MNHHS Seed Grant, Cancer Council of Queensland and RBWH Foundation. This independently validates the high quality of our research and demonstrates that we are leading the way nationally. The Metro North HHS Clinician Research Fellowship program has been an incredible innovation to support clinician scientist and this year Dr Andrea Henden (Haematology/BMT) and Dr Teresa Brown (Dietician) have been awarded these prestigious awards.

Through the Research Advisory Group, we have provided a competitive grant review process and awarded funding for investigator led research projects. We look forward to seeing the outcomes of this very exciting research. Specifically, I would like to congratulate those clinicians who have completed or are studying for a research higher degree (PhD or Masters) in the last 12 months.

Looking forward, we hope that 2022 sees a gradual return to usual clinical and research activities and provides opportunities for new academic and clinical collaborations. Our ultimate goal is to see MNHHS Cancer Care firmly established as a world leading centre for the management of patients with cancer.

Allied Health Professions



Dr Clare Burns
Advanced Speech Pathologist (Cancer Care)
Speech Pathology Department

During 2021, Allied Health Professions (AHP) has continued to strengthen its program in cancer care services research. Our research incorporates multidisciplinary teams within the key cancer care service areas of radiation oncology, medical oncology and haematology/BMT. We are dedicated to improving the quality of care and outcomes for our patients and explore new models of care to optimise service delivery. Across 2021 Allied Health Professions have conducted a range of studies engaging both consumers and clinicians to examine current practice, co-design new service models, develop and implement novel practices and integrate technologies to support clinical evaluation and enhance service delivery.

We value our ongoing research partnerships with services across RBWH and local collaborations including QIMR, CSIRO, and the QLD PET Service. We continue to strengthen our collaborations with academic institutions including UQ, QUT, Griffith University, Bond University, and with our research teams based across Australia and internationally.

There have been many achievements celebrated by AHP clinician researchers across 2021. Our team has continued to enjoy national and international recognition for its cancer care research, and this year's highlights include:

- ❖ Dr Sarah Anderson was awarded her PhD from The University of Queensland. Sarah's PhD program was titled: "Investigating nutrition support during allogeneic stem cell transplantation"
- ❖ Dr Teresa Brown was awarded a Metro North Clinician Research Fellowship for her research in the field of head and neck cancer supportive care
- ❖ 28 research studies were led by AHP clinician researchers and 22 in collaboration with other teams.
- ❖ Research outcomes have been disseminated through 15 peer reviewed publications and 19 national and international conference presentations.
- ❖ 9 research higher degree students are undertaking study in the field of cancer care services and are supervised by RBWH Allied Health and Cancer Care researchers

Research Awards and Achievements

Recipient (RBWH staff in bold)	Award	Event
Michelle Cottrell, Clare Burns, Amber Jones, Adrienne Young, Ann Rahmann, Sonia Sam, Mark Cruickshank, Kelsey Pateman	Best scientific paper presentation	2021 Success & Failures in Telehealth Conference

Research Grants

Investigator Names (RBWH staff in bold)	RBWH Departments / Research Groups	Research Project Title	Granting Body	Total Awarded (whole all years)	Length of Awards in years and years active
Clare Burns	Speech Pathology	Enhancing speech pathology dysphagia services through telepractice	MNHHS Clinician Fellowship	\$175,000	2019-2022
Marissa Ryan, Christine Carrington, Liz Ward, Clare Burns , Centaine Snoswell, Mhairi Mackinnon	Speech Pathology, Pharmacy, PAH, Centre for Functioning & Health Research, MSH	Development, implementation and evaluation of a Cancer Pharmacy Service for adult patients at the Princess Alexandra Hospital	Princess Alexandra Hospital Foundation Grant	\$25,000	2020-2021
Sarah Andersen , Andrea Henden, Glen Kennedy, Merrilyn Banks	Nutrition and Dietetics, Clinical Haematology RBWH	Prebiotics, microbial diversity and clinical outcomes post allogeneic stem cell transplantation	Nutricia Research Foundation	€ 28 900 (approx. \$46,500)	2021
Sarah Wilson	Speech Pathology	Examination of dysphagia following laryngectomy	RBWH Foundation Postgraduate Scholarship	\$38,082.52	2021
Teresa Brown	Nutrition and Dietetics	A feasibility study to investigate taste changes post-treatment in patients with head and neck cancer and their association with genes and dietary behaviour	RBWH Foundation Postdoctoral Fellowship	\$45,788	2020-2021

Current RBWH Department / Research Group Led Research Activity

Lead Investigator Name (RBWH staff in bold)	Other Study Investigators (RBWH staff in bold)	Research Project Title	Number of RBWH Patients Recruited in 2021	Total number of RBWH Patients Recruited
Claire Blake	Merrilyn Banks (Nutrition & Dietetics) , Mark Appleyard(Gastroenterology)	Cost effectiveness of Dietitian-led PEG service		
Claire Blake	Elise Treleaven, Ally di Bella, Teresa Brown, Adrienne Young (Nutrition & Dietetics) , Jenni Leutenegger (Cancer Care), David Wyld (Cancer Care)	Implementation of patient-led malnutrition screening in the cancer care ambulatory setting		
Claire Blake	Rainbow Lai (UQ), Teresa Brown (Nutrition & Dietetics) , Anita Pelecanos (QIMR), Laura Moroney (Speech Pathology) , Jennifer Helios (Speech Pathology) , David Smith (QIMR), Brett Hughes (Cancer Care) Liz Kenny (Cancer Care), Benjamin Chua (Cancer Care), Judith Bauer (UQ)	Nutrition outcomes and treatment toxicities in patients with head and neck cancer receiving helical intensity-modulated radiotherapy		

Lead Investigator Name (RBWH staff in bold)	Other Study Investigators (RBWH staff in bold)	Research Project Title	Number of RBWH Patients Recruited in 2021	Total number of RBWH Patients Recruited
Claire Blake	Teresa Brown (Nutrition & Dietetics) , Anita Pelecanos (QIMR), Laura Moroney (Speech Pathology) , Jennifer Helios (Speech Pathology) , Brett Hughes (Cancer Care) Liz Kenny (Cancer Care)	Enteral nutrition support and treatment toxicities in patients with head and neck cancer receiving helical intensity-modulated radiotherapy with concurrent chemotherapy or surgery		
Claire Blake	Joanne Hiatt, Emma Osland (Nutrition & Dietetics) , Kay Lasenby (Gastro)	Consumer Engagement of gastrostomy service design and evaluation		
Clare Burns	Annie Hill (UQ), Liz Ward (CFAHR; UQ), Lynell Bassett (Speech Pathology) ; Kate Hacking (MNHHS); Michelle Slee (MNHHS); Brooke Cowie (MNHHS); Wendy Luttrell (MNHHS)	Examining stakeholder perceptions of an asynchronous telepractice program for the delivery of dysphagia rehabilitation	N/A	23
Clare Burns	Liz Ward (UQ), Claire Blake (Nutrition & Dietetics) , Liz Kenny (Cancer Care), Rachael Villiers (CQHHS), Mia Hemingbrough (CQHHS), Tracy Comans (UQ), Kerrie-Anne Frakes (CQHHS), Phil Greenup (QH)	Implementation of a telepractice service providing specialist swallowing, nutrition, and communication intervention for patients with head and neck cancer	N/A	69
Clare Burns	Annie Hill (UQ), Liz Ward (CFAHR; UQ), Sanjeewa Kularatna (AusHSI QUT)	Pilot trial of an integrated speech pathology telepractice service for dysphagia rehabilitation.	9	13
Clare Burns	Liz Ward (CFAHR; UQ), Jasmine Foley (UQ), Rebecca Nund (UQ), Laurelie Wall (Metro South HHS), Dr Maurice Stevens (ENT), Dr Lizbeth Kenny (Cancer Care)	Understanding the Regional and Remote Head and Neck Cancer (HNC) Patient Services Journey	N/A	91
Dwayne Garcia	Elise Treleaven, Claire Blake, Natasha O'Hanlon (Nutrition & Dietetics)	Review of current practice: Nutrition and Dietetics management of Medical Oncology Inpatients at the Royal Brisbane and Women's Hospital		
Emilie Croisier	Teresa Brown (Nutrition & Dietetics) , A Grigg, P Chan, J Goh, Judy Bauer (UQ)	Dietary counselling to increase soluble fibre in patients with gynaecological cancers undergoing pelvic radiotherapy: a feasibility study		
Joanne Hiatt	Teresa Brown, Merrilyn Banks (Nutrition & Dietetics) , Judy Bauer (UQ)	Patient Experience of Nutrition Care across three treatment modalities for the management of head and neck cancer.		
Joanne Hiatt	Angela Byrnes (Nutrition & Dietetics)	Implementation of enteral feeding protocol for patients on 8AN		
Joanne Hiatt	Teresa Brown, Merrilyn Banks, Adrienne Young, (Nutrition & Dietetics) Judy Bauer (UQ)	Improving accessibility of nutrition care and peer support following head and neck cancer treatment using experience-based co-design online		

Lead Investigator Name (RBWH staff in bold)	Other Study Investigators (RBWH staff in bold)	Research Project Title	Number of RBWH Patients Recruited in 2021	Total number of RBWH Patients Recruited
Leonie Naumann (Physiotherapy)	Jennifer Paratz (Physiotherapy), Michelle Cottrell (Physiotherapy) Clare Burns (Speech Pathology), Hildegard Ruel-Hirche (Physiotherapy), Anna Finnane (UQ), Tracy Comans (UQ), Trevor Russell (UQ)	A telehealth model for education and monitoring of early lymphoedema detection and shoulder dysfunction in patients after breast cancer surgery: A pilot cohort study	N/A	47
Leonie Naumann	Hildegard Ruel-Hirche (Physiotherapy), Amanda Pigott (UQ), Jodie Nixon (PAH)	Advanced lymphedema course quality evaluation		
Michelle Cottrell	Perry Judd (Physiotherapy), Sue Laracy (Occupational Therapy), Cate Carter, Jacqueline Nix, Leonie Naumann (Physiotherapy), Robyn Scheer (Occupational Therapy), Jennifer Strong (Occupational Therapy), Sonia Sam (Physiotherapy)	Prospective surveillance and early intervention for lymphoedema (SAIL) in Breast Cancer patients: an evaluation of a standardised model of care in Metro North Hospital and Health Service.	PREM survey: 19 patients	
Natalie Moran	Claire Blake, Elise Treleaven	Review of current practice: Nutrition and Dietetics management of Haematology Inpatients at the Royal Brisbane and Women's Hospital		
Rebecca Fichera	Chin Chin Sarah Siow (QUT), Helen MacLaughlin, Claire Blake (Nutrition & Dietetics)	Outcomes of nutrition and physical activity-based cancer survivorship programs – a systematic review		
Sarah Andersen	Rebecca Fichera, Teresa Brown, (Nutrition & Dietetics), Glen Kennedy (Haematology), David Williams (Haematology)	Audit of new nutrition support protocol for allogeneic transplantation		
Sarah Andersen	Teresa Brown, Rebecca Fichera (Nutrition & Dietetics), Glen Kennedy (CCS), Frederik Steyn (Neurology & UQ),	Energy expenditure in patients undergoing allogeneic stem cell transplantation		
Sarah Andersen	Andrea Henden (Haematology) Glen Kennedy (Haematology) Merrilyn Banks (Nutrition & Dietetics)	Prebiotics, microbial diversity and clinical outcomes post allogeneic stem cell transplantation		
Sarah Andersen	Teresa Brown, Judy Bauer (Nutrition & Dietetics)	Systematic review of vitamin requirements during stem cell transplantation		
Sarah Wilson	Clare Burns (Speech Pathology), Bena Brown (PAH, UQ)	Development of clinical and videofluoroscopic assessment tools for the evaluation of dysphagia following laryngectomy: An e-Delphi process	N/A	2
Shana Taubert	Clare Burns (Speech Pathology), Liz Ward (CFAHR; UQ), Lynell Bassett (Speech Pathology)	Videofluoroscopic Swallow Study referral processes at RBWH	N/A	58

Lead Investigator Name (RBWH staff in bold)	Other Study Investigators (RBWH staff in bold)	Research Project Title	Number of RBWH Patients Recruited in 2021	Total number of RBWH Patients Recruited
Teresa Brown,	Daniel Hwang (UQ), Elise Treleaven (Nutrition & Dietetics) , Brett Hughes (Cancer Care), Liz Kenny (Cancer Care), Charles Lin (Cancer Care), Penny Webb (QIMR), Anita Pelecanos (QIMR), Judy Bauer (UQ)	A feasibility study to investigate taste changes post treatment in patients with head and neck cancer and their association with genes and dietary behaviour		
Teresa Brown	Merrilyn Banks (Nutrition & Dietetics) , Brett Hughes (Cancer Care), Charles Lin (Cancer care), Liz Kenny (Cancer Care), Louise Campbell (Qld PET Service), Judy Bauer (Nutrition & Dietetics)	Assessment of sarcopenia and malnutrition in patients with head and neck cancer undergoing treatment of curative intent – implications for practice		

Collaborative Research Activity Involving RBWH Department / Research Group

Lead Investigator Name (RBWH staff in bold)	Other Study Investigators (RBWH staff in bold)	Research Project Title	Number of RBWH Patients Recruited in 2021	Total number of RBWH Patients Recruited
Alex Molassiotis (Hong Kong)	Teresa Brown (Nutrition & Dietetics) , Ray Chan (PAH), Angela Byrnes, Rebecca Fichera (Nutrition & Dietetics) , Patsy Yates (QUT), Andrea Marshall (Griffith), Liz Isenring (Bond University), David Wyld (Cancer Care), Melissa Eastgate (Cancer Care)	A patient-family-centred intervention to promote nutrition in advanced cancer patients: a pilot randomised controlled trial		
Ashleigh Scott (RBWH), Glen Kennedy (RBWH), Katie McMahon (RBWH), Olivier Salvado (CSIRO),	Ada Lo, Kate Thompson (Psychology)	MINERAL: Magnetic Resonance Imaging and Quantitative susceptibility mapping (MRI-QSM) of brain iron to identify chemotherapy-associated neurocognitive impairment (CANI) in Acute Myeloid Leukemia (AML).	4	
Elise Gane (PAH)	Shaun O'Leary (Physiotherapy) , Caroline Speksnijder	Neck rehabilitation after neck dissection for head and neck cancer: a pilot intervention study		
Elizabeth Ahern (Monash)	Teresa Brown (Nutrition & Dietetics) , Brett Hughes (Cancer Care), Louise Campbell (PET), Merrilyn Banks (Nutrition & Dietetics) , Charles Lin (Cancer Care), Liz Kenny (Cancer Care), Judy Bauer (UQ)	Impact of early proactive nutrition intervention on survival outcomes at 1,3- and 5-years post treatment for head and neck cancer		
Heidi White (Physiotherapy)	Rebecca Fichera, Elise Treleaven, Claire Blake, (Nutrition & Dietetics), Leonie Naumann (Physiotherapy)	Implementing sarcopenia screening in the oncology day therapy unit		

Lead Investigator Name (RBWH staff in bold)	Other Study Investigators (RBWH staff in bold)	Research Project Title	Number of RBWH Patients Recruited in 2021	Total number of RBWH Patients Recruited
Heshani Mediwake (RBWH), Glen Kennedy (RBWH), Siok Tey (RBWH)	Ada Lo, Harriet Bodimeade (Psychology)	NCA in CARTs: Neurocognitive assessment in patients undergoing chimeric antigen receptor therapy	10	
Irene Deftereos (Western Health Melbourne)	Nicole Kiss (Uni Melbourne), Justin Yenug (Uni Melbourne), Vanessa Carter (Western Health), Teresa Brown , Sharon Carey (RPA)	Awareness and perceptions of nutrition support in upper gastrointestinal cancer surgery: A national survey of multidisciplinary clinicians		
Judy Bauer (UQ)	Nathan Baldwin (UQ), Merran Findlay (Sydney), Teresa Brown (Nutrition & Dietetics)	Evaluation of implementation, enablers and barriers for the "Evidence-based guidelines for the nutritional management of adult patients with head and neck cancer."		
Liz Ward (CFAHR/UQ)	Clare Burns (Speech Pathology) , Kellie Hancock (PAH), Jenny Boxall (PAH), Rachelle Robinson (Prince of Wales Hospital), Molly Barnhart (Prince of Wales Hospital), Penny Stabler (Gold Coast University Hospital)	Changes in pulmonary outcomes of implementing a day and night regimen with heat and moisture exchangers (HMEs) and their adhesives	18	18
Liz Ward (CFAHR/UQ)	Clare Burns (Speech Pathology) , Laurie Wennerholm (White Plains Hospital New York, UQ)	Examining international laryngectomy care during the COVID-19 pandemic: Informing a consensus-driven pathway for speech language pathology management	N/A	N/A
Liz Ward (CFAHR/UQ)	Jasmine Jones (UQ), Clare Burns (Speech Pathology) , Laurelie Wall (UQ), Rebecca Nund (UQ), Nicky Graham (QH), Wendy Comben (THHHS), Emily Missenden (NWHHS)	Enhancing Speech Pathology Workforce and Service Capabilities to Deliver Services to Patients with Head and Neck Cancer	N/A	N/A
Marissa Ryan (PAH)	Christine Carrington (PAH), Liz Ward CFAHR/UQ), Centaine Snoswell (UQ), Clare Burns (Speech Pathology) , Mhairi Mackinnon (PAH)	Development, implementation and evaluation of a Cancer Pharmacy Service for adult patients at the Princess Alexandra Hospital	N/A	N/A
Michelle Cottrell (Physiotherapy)	Clare Burns (Speech Pathology) , Amber Jones (Occupational Therapy) , Adrienne Young (AHP) , Sonia Sam (AHP) , Mark Cruickshank (AHP) , Kelsey Pateman (AHP)	Rapid implementation of telehealth in response to COVID-19: An evaluation of the Allied Health experience	232	232
Nicole Gavin (Cancer Care)	Glen Kennedy (Cancer Care), David Patterson (Infectious Diseases), Claire Rickard (Griffith Uni), Sarah Andersen, (Nutrition & Dietetics) Elise Button (Cancer Care), Rebecca Lippiatt (Cancer Care)	Exploring changes in gastrointestinal tract microbiome and their influence on mucosal barrier injury laboratory confirmed bloodstream infection in patients diagnosed with high risk features of acute myeloid leukaemia		

Lead Investigator Name (RBWH staff in bold)	Other Study Investigators (RBWH staff in bold)	Research Project Title	Number of RBWH Patients Recruited in 2021	Total number of RBWH Patients Recruited
Oliver Ritchie (UQ)	Teresa Brown, Merrilyn Banks (Nutrition & Dietetics) , Brett Hughes (Cancer Care), Charles Lin (Cancer care), Liz Kenny (Cancer Care), Louise Campbell (Qld PET Service), Judy Bauer (UQ)	Comparison of body composition methods in head and neck cancer patients undergoing chemoradiotherapy – PET-CT vs BIA		
Shu Fen Lee (Cancer Care)	Melissa Eastgate (Cancer Care), David Wyld (Cancer Care), Teresa Brown (Nutrition & Dietetics)	Patient perceptions of diet and cancer – survey of cancer care patients		
Tessa Funk (UQ)	Liana Tunzi (UQ), Merran Findlay (RPA), Teresa Brown, (Nutrition & Dietetics) , Judy Bauer (UQ)	Optimal frequency of individualised nutrition counselling in HNC patients pre/during/post treatment - A systematic review		
Xiaodan Ye (UQ)	Yuan-Chin Chang (UQ), Merran Findlay (RPA), Teresa Brown (Nutrition & Dietetics) , Judy Bauer (UQ)	Does gastrostomy impact duration of tube use, tube complications and dysphagia? - A systematic review		

Research Publications

Publications in 2021

Journal Articles (RBWH staff in bold)

1. Beck AK, Baker AL, Carter G, Robinson L, McCarter K, Wratten C, **Bauer J** et al. Is fidelity to a complex behaviour change intervention associated with patient outcomes? Exploring the relationship between dietitian adherence and competence and the nutritional status of intervention patients in a successful stepped-wedge randomised clinical trial of eating as treatment (EAT). *Implement Sci.* 2021;16(1):46.
2. **Blake C**, Edwards A, **Treleaven E**, **Brown T**, Hughes B, Lin C, et al. Evaluation of a novel pre-treatment model of nutrition care for patients with head and neck cancer receiving chemoradiotherapy. *Nutr Diet.* 2021. doi.org/10.1111/1747-0080.12714.
3. Cottrell M, **Burns CL**, Jones A, Rahmann A, Young A, Sam S, et al. Sustaining allied health telehealth services beyond the rapid response to COVID-19: Learning from patient and staff experiences at a large quaternary hospital. *J Telemed Telecare.* 2021;27(10):615-24.
4. **Croisier E**, D'Cunha K, **Brown T**, **Bauer J**. Exploration of current dietetic practices for patients with gynaecological cancers undergoing radiotherapy in Australia: a cross-sectional survey. *Support Care Cancer.* 2021;29(11):6171-4.
5. Edwards A, Baldwin N, Findlay M, **Brown T**, **Bauer J**. Evaluation of the agreement, adoption, and adherence to the evidence-based guidelines for the nutritional management of adult patients with head and neck cancer among Australian dietitians. *Nutr Diet.* 2021.
6. Edwards A, Santos C, Chen A-, **Bauer J**, **Banks M**. Nutritional interventions for oral mucositis: a systematic literature review. *Nutr Diet* 2021;78(1):101-114.
7. Findlay M, **Bauer J**, Shaw T, White K, Lai M, Rankin NM. "There's a lot of talent in the room but it's only really the medical talent that gets heard": a qualitative exploration of multidisciplinary clinicians' perspectives of optimal nutrition care of patients with head and neck cancer. *Support Care Cancer.* 2021;29(11):6399-409.
8. Findlay M, White K, Stapleton N, **Bauer J**. Is sarcopenia a predictor of prognosis for patients undergoing radiotherapy for head and neck cancer? A meta-analysis. *Clin Nutr.* 2021;40(4):1711-8.
9. Foley J, Ward EC, **Burns CL**, Nund RL, Wishart L, Graham N, et al. Speech pathology service enhancement for people with head and neck cancer living in rural areas: Using a concept mapping approach to inform service change. *Head Neck.* 2021;43(11):3504-21.

Journal Articles (RBWH staff in bold)

10. **Hiatt J, Young A, Brown T, Banks M, Bauer J.** Exploring dyadic management of nutrition care throughout and beyond head and neck cancer treatment. *J Clin Nurs.* 2021. doi: 10.1111/jocn.16096
11. Molassiotis A, **Brown T**, Cheng HL, **Byrnes A**, Chan RJ, Wyld D, et al. The effects of a family-centered psychosocial-based nutrition intervention in patients with advanced cancer: the PiCNIC2 pilot randomised controlled trial. *Nutr J.* 2021;20(1):2.
12. Ryan M, Carrington C, Ward EC, **Burns CL**, Cuff K, Mackinnon M, et al. Changing from telephone to videoconference for pre-treatment pharmacist consults in cancer services: Impacts to funding and time efficiency. *J Telemed Telecare.* 2021;27(10):680-4.
13. Ward EC, **Burns CL**, Gray A, Baker L, Cowie B, Winter N, et al. Establishing Clinical Swallowing Assessment Services via Telepractice: A Multisite Implementation Evaluation. *Am J Speech Lang Pathol.* 2021;30(6):2456-64.
14. Vangelov B, **Bauer J**, Kotevski D, Smee RI. The use of alternate vertebral levels to L3 in computed tomography scans for skeletal muscle mass evaluation and sarcopenia assessment in patients with cancer: a systematic review. *Br J Nutr.* 2021;1-14.
15. Ye X, Chang YC, Findlay M, **Brown T, Bauer J.** The effect of timing of enteral nutrition support on feeding outcomes and dysphagia in patients with head and neck cancer undergoing radiotherapy or chemoradiotherapy: A systematic review. *Clin Nutr ESPEN.* 2021;44:96-104.

Keynote or Plenary Lectures given in 2021

Date	Title
03/2021	Burns, C.L. Overview of the evidence for assessment and management of adult dysphagia via telehealth, as part of a plenary session 'Telehealth: History, Logistics and Evidence Prior and During COVID-19'. <i>Dysphagia Research Society, March 9-12, 2021. Virtual conference hosted from Chicago, USA</i>

Cancer Nursing



Michael Smith
Director Cancer Nursing

Cancer Care Nursing Research has continued to be impacted by the COVID-19 pandemic throughout 2021. Despite these challenges there has been a number of significant achievements made by the Cancer Care Nursing Research team. There have been sixteen nurse led projects conducted within our department and \$159,530 of competitive funding secured. Cancer care nurses have pursued post-graduate qualifications, and many have commenced and continued research-higher degrees. There are currently three nurses enrolled in a Doctor of Philosophy and two enrolled in Research Master's degrees. Key highlights of 2021 were Dr Natasha Roberts completing her PhD and Robyn Matthews completing her Research Master's Degree. The Research Internship Program has continued to support cancer care nurses to conduct clinically relevant research projects. Cancer Care Research has continued to foster relationships with academic institutions, including QUT, UQ, Griffith, USQ, QIMR, Microba and with distinguished academics, such as Professor Patsy Yates. Notably, the Cancer Care Nurse Researchers collaborated with UQ Public Health students to create evidence-based resources for patients and a communication toolkit for clinicians regarding the COVID-19 vaccines. During 2021 the Cancer Care Nurse Researcher's welcomed a new member, with Robyn Matthews joining the team. Robyn brings a wealth of clinical, education and research knowledge to the role and we look forward to her growing her body of work.

Research Awards and Achievements

Recipient (RBWH staff in bold)	Award	Event
Dr Natasha Roberts	2021 Metro North Clinician Research Fellow- Addressing unmet needs in prostate cancer care	Metro North Hospital and Health Service
Dr Natasha Roberts	Outstanding Thesis Award- <i>"Implementing patient reported outcomes in a medical oncology setting"</i>	QUT, Doctor of Philosophy Examiners
Robyn Matthews	Best Oral Presentation	CCS Research Retreat

Research Grants

Investigator Names (RBWH staff in bold)	RBWH Departments / Research Groups	Research Project Title	Granting Body	Total Awarded (whole all years)	Length of Awards in years and years active
Brigid Scanlon, David Wyld, Jo Durham, Mark Brough	CCS Nursing Research	Equity across the cancer care continuum for Culturally and Linguistically Diverse migrants living in Australia	RBWH Foundation Post Graduate Scholarship	\$39, 871	2022

Investigator Names (RBWH staff in bold)	RBWH Departments / Research Groups	Research Project Title	Granting Body	Total Awarded (whole all years)	Length of Awards in years and years active
Boyte F, Gavin NC, Smith M, Hayes T, Fenton M, Partridge G, Kennedy G, Eastgate M, Alexander A, Egan E, Jones L, Button E	CCS Nursing Research	The Priming Practice Study: will priming intravenous tubing with monoclonal antibodies reduce chair time in the outpatient setting?	2021 Metro North Cancer Care Services Research Project Grants	\$30,267.12	2021-2022
Curtis K, Gavin NC , Fuller F	CCS Nursing Research	Cancer Nurses' Society of Australia Vascular Access Devices: Evidence-Based Clinical Practice Guidelines	ICU Medical Educational Grant	\$41, 000	2021-2022
Elise Button , Claudia Virdun, Patsy Yates, Alison Mudge , Jane Philips, Hannah Carter, Paul Moran , David Wyld , Carol Douglas , Karen Kasper	CCS Nursing Research	Improving the quality of hospital care for people with serious illness through the use of audit and feedback of patient experience data and ward-based facilitation: an implementation pilot study	Metro North Collaborative Grant – Queensland University of Technology	\$49, 392	2022-2023

Current RBWH Department / Research Group Led Research Activity

Lead Investigator Name (RBWH staff in bold)	Other Study Investigators (RBWH staff in bold)	Research Project Title	Number of RBWH Patients Recruited in 2021	Total number of RBWH Patients Recruited
Nicole Gavin, Veronica Percival, Elise Button, Jenni Leutenegger, Cameron Curley, Grant Partridge		Post-dural puncture headache following lumbar puncture with/without intrathecal chemotherapy, how long should patients remain recumbent? A pilot randomised controlled trial (The PLANE Study)	100	100
Francesca Boyte, Nicole Gavin, Glen Kennedy, Grant Partridge, Therese Hayes, Elise Button		Will priming intravenous administration sets with monoclonal antibodies reduce the incidence of hypersensitivity reactions? A randomised Controlled Trial	128	128
Andrea Lane, Nicole Gavin, Emily Russell, Paul Klages, Tracy Glynn, Melissa Eastgate, Jenni Leutenegger, Eve Hutchinson, Amanda Sutherland	Carolina Sandler (QUT IHBI), Samantha Keogh (QUT IHBI), Bronwyn Clark (UQ), Greg Merlo (UQ), Jaimi Greenslade (RBWH) and Krispin Hajkowicz (RBWH)	A Pilot Randomised Controlled Trial exploring the administration of intravenous antibiotics via stationary intravenous pole and pump versus portable CADD pump to improve patient outcomes and hospital-acquired complications in patients diagnosed with cancer (The Active Trial)	0	0

Lead Investigator Name (RBWH staff in bold)	Other Study Investigators (RBWH staff in bold)	Research Project Title	Number of RBWH Patients Recruited in 2021	Total number of RBWH Patients Recruited
Midori Nagasaki, Karen Whitfield, Glen Kennedy, Alexandra Clavarino, Nicole Gavin		Improving mucositis care in people undergoing stem cell transplantation	67	67
Elise Button, Josh Byrnes, James Hughes, Patsy Yates, Brigid Scanlon, Michael Smith, Nicole Gavin, David Wyld	Glen Kennedy, Cameron Curley, John Burke, Mercedes Ray, Susanne Chaffey, Paul Moran, Eileen Fennelly, Kieren Barker, Therese Hayes, Kristen Lorrimer	Cancer Care Services Emergent Care project	700	700
Robyn Matthews, Patsy Yates, Ray Chan, Elise Button		Examining the factors influencing self-efficacy of health care professionals towards end-of-life care in acute care settings.	343	343
Justine Leach, Raymond Chan, Elise Button, Patsy Yates		Gathering evidence to inform a nurse-led clinic for patients receiving ambulatory cancer care in a satellite community cancer centre	0	0
Brigid Scanlon and David Wyld	Jo Durham (QUT), Mark Brough (QUT)	Equity across the cancer care continuum for culturally and linguistically diverse migrants living in Australia	0	0
Mary-Ellen Yarker	Carol Windsor (QUT) and Jennifer Fox (QUT)	The role of oncology nurse in shared decision making for patients undergoing radiation and/or chemotherapy treatment	0	0
Judy Avery	Sonya Osborne (USQ), Aletha Ward (USQ), Catriona Brooker (USQ)	Nurse-led debriefing with hospital nurses in the workplace	0	0
Natasha Roberts, Michael Smith, David Wyld, Teresa Brown, Leonie Naumann, Erin Molloy, Suzette Fox, Greg Lewis, Mandy Fairclough, Maree Gier, Kieren Barker, Therese Hayes, Jenni Leutenegger, Nicole Gavin and Elise Button.	Gary Power (RBWH Consumer) and Helene Jacmon (Consumer representative)	A co-designed implementation science strategy with clinicians, consumers and researchers to structure improved nurse-led symptom management in medical oncology care	0	0
Brigid Scanlon, Nicole Gavin, Elise Button, Midori Nakagaki, Paul Firman, David Wyld.	Jo Durham (QUT)	The OnCoVax study: COVID-19 vaccine hesitancy and perspectives amongst an oncology population.	201	201
Kathy You	Natasha Roberts, Elizabeth Ahern, David Wyld, Zarnie Lwin	Factors impacting clinical trial participation	0	0
Amy Ives	Natasha Roberts, McCarthy AL	Using experience-based co-design model to construct an oncology trials unit in Australia	0	0

Collaborative Research Activity Involving RBWH Department / Research Group

Lead Investigator Name (RBWH staff in bold)	Other Study Investigators (RBWH staff in bold)	Research Project Title	Number of RBWH Patients Recruited in 2021	Total number of RBWH Patients Recruited
Amanda Ullman (GU/AVATAR), Nicole Marsh (RBWH/AVATAR), Emily Larsen (GU/AVATAR), Claire Rickard (GU/AVATAR)	Natasha Roberts	Consumer-led innovation to implement improvements in central venous access device management: the Vascular Access Project	19	19
Haryana Dhillon, Ian Davis, Craig Gedy, (Australia New Zealand Urogenital and Prostate Cancer Trials Group)	Natasha Roberts	Patient Experience of Participating in a Clinical Trial	0	27
Prostate Cancer Clinical Trials Consortium, LLC (PCCTC)	Natasha Roberts, Jeffrey Goh, Aneta Suder	IRONMAN: International registry for men with advanced prostate cancer	2	8
Claudia Virdun, Jane Phillips, Tim Luckett, Patsy Yates, Natalie Roset.	Elise Button	Acceptability of a tool to measure experience of care in people with serious illness in the Australian hospital setting to inform a multi-site stepped wedge cluster randomised controlled trial.	80	80

Research Publications

Publications in 2021

Journal Articles (RBWH staff in bold)

- Rickard CM, **Marsh NM**, Larsen EN, McGrail M, Graves M, Runnegar N, Webster J, Corley C, McMillan D, Gowardman J, Long D, Fraser J, Gill F, Young J, Murgo M, Alexandrou E, Choudhury MA, Chan R, **Gavin N**, Daud A, Palermo A Rego A & Playford EG (2021) Effect of infusion set replacement intervals on central and arterial vascular catheter related bloodstream infections: a randomised controlled trial (RSVP Trial). *Lancet* 397(10283) 1447-1458. DOI: [https://doi.org/10.1016/S0140-6736\(21\)00351-2](https://doi.org/10.1016/S0140-6736(21)00351-2)
- Button E, Gavin N, Bates T**, Ahmed D, **Nasato G, Wyld D, Kennedy G, Fennelly E, Smith M, Northfield S**, Yates P. Prospective cohort study of Australian cancer care services-led model of emergent care. *Australian Health Review*. <https://doi.org/10.1071/AH20346>
- Scanlon B**, Brough M, **Wyld D**, Durham J. Equity across the cancer care continuum for culturally and linguistically diverse migrants living in Australia: a scoping review. *Globalization and Health*. 2021;17(1). DOI: <https://doi.org/10.1186/s12992-021-00737-w>
- Rickard CM, Flynn J, Larsen E, Mihala G, Playford EG, Shaw J, Keogh S, Ullman A, Zhang L, **Gavin NC**, Kleidon T, Chopra V, McCarthy S, Kuerten Rocha P & Marsh N (2021) Needleless connector decontamination for prevention of central venous access device infection: a pilot randomized controlled trial. *American Journal of Infection Control* 49 269-273. DOI: 10.1016/j.ajic.2020.07.026
- Nakagaki M, Gavin NC**, Clavarion A, **Kennedy GA** & Whitfield K (2021) A real-world accuracy of oral mucositis grading in patients undergoing hematopoietic stem cell transplantation. *Supportive Care in Cancer* DOI: <https://doi.org/10.1007/s00520-021-06654-3>
- Nakagaki M, Gavin NC, Hayes T, Fichera R, Stewart C, Naumann L, Brennan J, Perry N, Foley E, Crofton E, Brown C, Leutenegger J & Kennedy GA** (2021) Implementation and evaluation of a nurse-allied health clinic for patients after haematopoietic stem cell transplantation. *Supportive Care in Cancer* DOI: <https://doi.org/10.1007/s00520-021-06461-w>

Journal Articles (RBWH staff in bold)

7. Roydhouse, J, Cohen, M, Eshoj, H, Corsini, N, Yucel, E, Rutherford, C, Wac, K, Berrocal, A, Lanzi, A, Nowinski, C, **Roberts, NA**, Kassianos, A, Sébille, V, Mercieca-Bebber, R. (2021). The use of proxies and proxy-reported measures: a report of the international society for quality of life research (ISOQOL) proxy task force. *Quality of Life Research*, doi: 10.1007/s11136-021-02937-8. Online ahead of print.

8. Gasper, H, Ahern, E, **Roberts, NA**, Chan, B, Hughes, B, Kennedy, G, Wyld, D, Eastgate, M, Lwin, Z. (2021). A semi-qualitative research protocol to explore cancer care workforce perceptions of the health system response to COVID 19 preparations in South-East Queensland, Australia. *BMJ Open* 11(5), e044655

9. Ives, A, Putzai, T, Keller J, Ahern, E, Chan, B, Gasper, H, Wyld, D, Kennedy, G, Dickie, G, Lwin, Z, **Roberts, NA**. (2021). Resilience and ongoing quality care for cancer clinical trials during Covid-19: experience from a tertiary hospital in Australia. *Asia Pacific Journal of Clinical Oncology*, doi: 10.1111/ajco.13570. Online ahead of print.

10. **Roberts, NA**, Janda, M, Stover, A, Alexander, K, Wyld, D, Mudge, A, PROMs and PREMs in Clinical Practice Implementation Science Working Group. (2021). Using the Integrated Promoting Action Research in Health Services (iPARIHS) Framework to evaluate implementation of Patient Reported Outcome Measures (PROMs) into routine care in a medical oncology outpatient department. *Quality of Life Research* 30(11), 3063-3071

11. Stover AM, Haverman L, van Oers H, Greenhalgh J, Potter CM, ISOQOL PROMs and PREMs in Clinical Practice Implementation Science Working Group. (2021). Using an implementation science approach to implement and evaluate Patient-Reported Outcome Measures (PROM) initiatives in routine care settings. *Quality of Life Research* 30(11), 3015-3033. (**Roberts NA** is a working group member).

12. Van Oers, HA, Teela, L, Schepers, SA, Grootenhis, MA, Haverman, L, the ISOQOL PROMs and PREMs in Clinical Practice Implementation Science Group. (2021). A retrospective assessment of the KLIK PROM portal implementation using the Consolidated Framework for Implementation Research (CFIR). *Quality of Life Research*, 30(11), 3049-3061. (**Roberts NA** is a working group member).

13. Manilili, K, Santana, MJ, the PROMs and PREMs in clinical practice implementation science working group. (2021). Using implementation science to inform the intergration of electronic patient-reported experience measures (ePREMs) into healthcare quality improvement: description of a theory-based application to primary care. *Quality of Life Research* 30(11), 3073-3084. (**Roberts NA** is a working group member).

Keynote or Plenary Lectures given in 2021

Date	Title
06/2021	Gavin NC, Northfield S, Sommerville M , Mihala G, Campbell J, Larsen E, Ullman A, Kleidon T, Marsh N & Rickard C. Estimating Prevalence of Impaired Skin surrounding DevicEs in cancer care: the results of a prospective study. Cancer Nurses' Society of Australia 2021 Brisbane.

Haematology & BMT



Dr Cameron Curley
Deputy Director Clinical
Haematology & BMT

The Department of Haematology and BMT is committed to providing exceptional care for patients with blood disorders and cancers in an environment that drives research in cutting edge diagnostics, prognostication and therapeutics. 2021 marked the dawn of a new era within the department with the establishment of a PC2 accredited research laboratory to safely enable innovative vector based genetically modified cellular therapies for the treatment of a variety of blood cancers and provision gene therapy trials in the management of Haemophilia. The local manufacture on site and provision of a novel CD19 chimeric antigen receptor T cell trial (CAR-T therapy) as part of a ground-breaking local phase 1 study for patients with advanced untreatable B cell malignancies represents an important achievement of the department this year, demonstrating the commitment of a broad-based team of specialists, scientists, and nurses.

A number of notable funding grants were attained in 2021 including:

- ❖ NHMRC investigator grant - 2021-2025 (\$1.9 million)
- ❖ MRFF clinical trials activity – 2021-2025 (\$2.69 million)
- ❖ RBWH foundation grants - \$ 44k and 45k

A commitment to the integration of personalised medicine in the management of blood cancers through the use of genomics by next generation sequencing was evident with the completion of the QLD myeloid genomics project in 2021. The project lead by the department of Haematology and BMT sequenced over 300 patients with myeloid malignancy and assessed the impacts of complex mutational data and analysis on prognostication and management. The results demonstrated an exemplar in the implementation and integration of complex somatic mutational analysis into frontline cancer care.

There were a number of notable publications from the department in 2021 including:

Final results of the phase 3 placebo-controlled study investigating the role of Tocilizumab in the prevention of GVHD post allogeneic HSCT. This publication was the culmination of many years work and collaboration between QIMR Berghofer and the Haem/BMT clinical trials unit. Other important publications of the year included novel insights into understanding GVHD, TP53 mutated myeloid malignancy and management of bleeding disorders undergoing dental procedures.

A number of important collaborations continued to be fostered with partners over the year including: QIMR Berghofer, UQCCR, Australian Leukaemia and Lymphoma Group, Australia New Zealand Transplant and Cellular Therapies (ANZTCT), Herston Imaging Research Facility and other clinical units including department of Dietetics.

Research Awards and Achievements

Recipient (RBWH staff in bold)	Award	Event
Associate Professor Steven Lane	2021 (2020) Metcalf Prize for Stem Cell Research	The National Stem Cell Foundation of Australia awards the annual Metcalf Prizes for Stem Cell Research to scientists who have shown leadership in the study of these vital cells that give rise to all mature cells in the body.
Siok Tey	2021 Metcalf Prize for Stem Cell Research	The National Stem Cell Foundation of Australia awards the annual Metcalf prizes.
Siok Tey	Chief Executive Award	Research Excellence Awards 2021

Research Grants

Investigator Names (RBWH staff in bold)	RBWH Departments / Research Groups	Research Project Title	Granting Body	Total Awarded (whole all years)	Length of Awards in years and years active
Ashleigh Scott	Haematology/BMT	Using novel brain imaging to define mechanisms of persisting central nervous system toxicity ("Chemobrain") following allogeneic progenitor cell transplantation. "Mineral" study	RBWH Foundation Diamond Care Grants	\$40,000	2018-2021
Ashleigh Scott	Haematology/BMT	RBWH Postgraduate Research Scholarship	RBWH	\$44,000	2018-2021
Siok Tey David Gottlieb Glen Kennedy	Haematology/BMT	A phase I clinical study of adoptive transfer of regulatory T cells (Tregs) and low-dose interleukin-2 (IL-2) for the treatment of chronic graft-versus-host disease (GVHD): gene-marking to inform rational combination therapy	NHMRC	\$878,748	2019-2021
Siok Tey	Haematology/BMT	Phase I Clinical Trial of MB.CART19.1 CD19 Chimeric Antigen Receptor (CAR) T Cells in Relapsed or Refractory CD19-Positive Haematological Malignancy	NTFEP - New Technology Funding and Evaluation Program from the Clinical Excellence Division of Queensland Government	\$406,000	2018-2021
Steven Lane	Haematology/BMT	Understanding Chemoresistance in AML	CSL Centenary Fellowship	\$1.25m	2017-2021
Heshani Mediwake	Cancer Care Services	Novel therapies in haematological malignancies	RBWH Foundation grant	\$ 45,992.57	2020-2021
Steven Lane	Haematology/BMT Cancer Care Services	Translation of genetic findings to improve outcomes for patients with blood cancers.	NHMRC Investigator Grant, L1.	\$1,913,403	2021-2025
Steven Lane	Haematology/BMT Cancer Care Services	Rare Cancers and Unmet Need: MoST-LLy, Molecular Screening and Therapeutics in	MRFF Clinical Trials Activity	\$2,688,736.40	2021-2025

Current RBWH Department / Research Group Led Research Activity

Lead Investigator Name (RBWH staff in bold)	Other Study Investigators (RBWH staff in bold)	Research Project Title	Number of RBWH Patients Recruited in 2021	Total number of RBWH Patients Recruited
Andrea Henden	Cameron Curley, Siok Tey, Elango Subramonia Pillai, Ashleigh Scott, Steven Lane, Cheryl Hutchins, Glen Kennedy, Jason Butler, Heshani Mediwake, Kirk Morris	Chimeric Antigen Receptor-T cell Observational Study - CARTOS	4	4
Andrea Henden	Cameron Curley, Siok Tey, Patrick Harris, Robert Bird, Adam Stewart, David Paterson	COVID-19 Vaccine Efficacy in patients with Haematological Malignancy - COVEM	28	28
Ashleigh Scott	Glen Kennedy, Siok Tey, Paul Thomas, David Pattison	Pilot study of 18FGE-180-PET to assess acute gastrointestinal graft versus host disease	0	8
Ashleigh Scott	Leo Francis	TSPO in aGVHD – Histological features and anti-TSPO immunohistochemistry (anti-TSPO IHC) in acute gastrointestinal graft versus host disease (GI-GVHD)	0	0
Ashleigh Scott	Glen Kennedy, Katie McMahon, Olivier Salvado, Kate Thompson, Ada Lo	MINERAL: Magnetic Resonance Imaging and Quantitative Susceptibility Mapping (MRI-QSM) of brain iron to identify Chemotherapy-Associated Neurocognitive Impairment (CANI) in Acute Myeloid Leukaemia (AML)	4	20
Ashleigh Scott	Andrea Henden, Cameron Curley, Elango Subramonia Pillai, Glen Kennedy, Jason Butler, Siok Tey	Takeda GRAPHITE - Vedolizumab-3035 - A Randomized, Double-Blind, Placebo-Controlled, Multicenter Study to Evaluate the Efficacy and Safety of Vedolizumab in the Prophylaxis of Intestinal Acute Graft-Versus-Host Disease in Subjects Undergoing Allogeneic Hematopoietic Stem Cell Transplantation	3	7
Glen Kennedy	Simon Durrant, Jason Butler, James Morton, Ashish Misra, Siok Tey, Elango Subramonia Pillai, Cameron Curley	TCZ II - 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)	0	7
Glen Kennedy	Sanjoy Paul, David Ritchie, David Gottlieb, John Moore, Julian Cooney, Simon Durrant, Jason Butler, James Morton, Ashish Misra, Siok Tey, Elango Subramonia Pillai, Cameron Curley	TCZ III - 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)	0	105

Lead Investigator Name (RBWH staff in bold)	Other Study Investigators (RBWH staff in bold)	Research Project Title	Number of RBWH Patients Recruited in 2021	Total number of RBWH Patients Recruited
Glen Kennedy	Andrea Henden, Ashleigh Scott, Cameron Curley, Elango Subramonia Pillai, Jason Butler, Siok Tey	NKARTA - A Phase 1 Study of NKX019, a CD19 Chimeric Antigen Receptor Natural Killer (CAR NK) Cell Therapy, in Subjects with B-cell Malignancies	1	1
Heshani Mediwake	Glen Kennedy, Siok Tey	Patient reported outcomes (PROs) in patients undergoing chimeric antigen receptor T cell therapies (CAR Ts)	8	11
Heshani Mediwake	Glen Kennedy, Siok Tey	Neurocognitive assessment in patients undergoing chimeric antigen receptor therapy (NCA's in CarTs)	8	11
Jane Mason	Nick Weber, Michelle Spanevello	BioMarin BMN 270-301 - A Phase 3 Open-Label, Single-Arm Study To Evaluate The Efficacy and Safety of BMN 270, an Adeno-Associated Virus Vector-Mediated Gene Transfer of Human Factor VIII in Hemophilia A Patients with Residual FVIII Levels = 1 IU/dL Receiving Prophylactic FVIII Infusions.	0	5
Jane Mason	Nicholas Weber, Michelle Spanevello, Sally Campbell	BMN 270-303: A Phase 3b, Single Arm, Open-Label Study to Evaluate the Efficacy and Safety of BMN 270, an Adeno-Associated Virus Vector-Mediated Gene Transfer of Human Factor VIII, with Prophylactic Corticosteroids in Hemophilia A Patients.	2	3
Jane Mason	Sally Campbell, Nicholas Weber, Michelle Spanevello, Beryl Zeissink, Alex Connolly	Roche HAVEN4 : A Study to Evaluate the Efficacy, Safety Pharmacokinetics, and Pharmacodynamics of Emicizumab Given Every 4 Weeks in Participants With Hemophilia A.	0	2
Jason Butler	Cameron Curley, Glen Kennedy, Elango Subramonia Pillai, Siok Tey, Nicholas Weber, Kirk Morris, Ashleigh Scott	Novartis E2202 ELARA - A Phase II, single arm, multicenter open label trial to determine the efficacy and safety of tisagenlecleucel (CTL019) in adult patients with refractory or relapsed follicular lymphoma	0	3
Jason Butler	Ashleigh Scott, Nicholas Weber, Cameron Curley, Elango Subramonia Pillai, Kirk Morris	PLIMATH - A multi-centre Phase II study to determine the response kinetics, safety and efficacy of pembrolizumab as frontline treatment of patients with Hodgkin Lymphoma considered unsuitable for ABVD	0	5

Lead Investigator Name (RBWH staff in bold)	Other Study Investigators (RBWH staff in bold)	Research Project Title	Number of RBWH Patients Recruited in 2021	Total number of RBWH Patients Recruited
Jason Butler	Cameron Curley, Simon Durrant, Kirk Morris, Elango Subramonia Pillai, Siok Tey, Nicholas Weber, Glen Kennedy	Acerta 308 ECHO – A Phase 3, Randomized, Double blind, Placebo controlled, Multicenter Study of BR alone Versus in Combination with Acalabrutinib (ACP 196) in Subjects with Previously Untreated Mantle Cell Lymphoma	0	3
Jason Butler	Cameron Curley, Simon Durrant, Elango Subramonia Pillai, Siok Tey, Nicholas Weber, Kirk Morris	Amgen Candor 275 – Randomized, Open-label, Phase 3 Study Comparing Carfilzomib, Dexamethasone, and Daratumumab to Carfilzomib and Dexamethasone for the Treatment of Patients With Relapsed or Refractory Multiple Myeloma	0	5
Jason Butler	Andrea Henden, Ashleigh Scott, Cameron Curley, Elango Subramonia Pillai, Glen Kennedy, Siok Tey	Janssen CARTITUDE 4 - A Phase 3 Randomized Study Comparing JNJ-68284528, a Chimeric Antigen Receptor T cell (CAR-T) Therapy Directed Against BCMA, vs Pomalidomide, Bortezomib and Dexamethasone (PVD) in Subjects with Relapsed and Lenalidomide-Refractory Multiple Myeloma	4	4
Jason Butler	Cameron Curley, Kirk Morris, Simon Durrant, Nicholas Weber, Elango Subramonia Pillai, Ashleigh Scott	Karyopharm BOSTON - A Phase 3 Randomized, Controlled, Open-Label study of Selinexor, Bortezomib, and Dexamethasone (SVD) Versus Bortezomib and Dexamethasone (VD) In Patients With Relapsed or Refractory Multiple Myeloma (RRMM)	0	3
Jason Butler	Siok Tey, Glen Kennedy, Cameron Curley, Elango Subramonia Pillai, Ashleigh Scott, Simon Durrant, James Morton	Novartis REACH 2 – A phase III randomized open-label multi-center study of ruxolitinib vs. best available therapy in patients with corticosteroid-resistant acute graft vs. host disease after allogeneic stem cell transplantation	0	10
Kirk Morris		Lymphoma in pregnant women: the Australian experience	3	3
Nicholas Weber	Jason Butler, Ashish Misra, Kirk Morris, Cameron Curley, Elango Subramonia Pillai	Beigene 304 - An International, Phase 3, Open-label, Randomized Study of BGB 3111 Compared with Bendamustine plus Rituximab in Patients with Previously Untreated Chronic Lymphocytic Leukemia or Small Lymphocytic Lymphoma	0	2

Lead Investigator Name (RBWH staff in bold)	Other Study Investigators (RBWH staff in bold)	Research Project Title	Number of RBWH Patients Recruited in 2021	Total number of RBWH Patients Recruited
Nicholas Weber	Jason Butler, Kirk Morris	DREAMM 7 - A Multicenter, Open-Label, Randomized Phase III Study to Evaluate the Efficacy and Safety of the Combination of Belantamab Mafodotin, Bortezomib, and Dexamethasone (B-Vd) Compared with the Combination of Daratumumab, Bortezomib and Dexamethasone (D-Vd) in Participants with Relapsed/Refractory Multiple Myeloma	2	5
Simon Durrant	Jason Butler, Cameron Curley, Glen Kennedy, Kirk Morris, Elango Subramonia Pillai, Nicholas Weber	Abbvie M14-031 BELLINI – 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	0	1
Simon Durrant	Jason Butler, Elango Subramonia Pillai, Cameron Curley, Glen Kennedy, Nicholas Weber, Kirk Morris	Amgen 292 VERDI – A Phase 2/3 Multi-center Study Comparing Blinatumomab to Standard of Care in Subjects with Relapsed/Refractory Aggressive B-Cell Non Hodgkin Lymphoma	0	2
Siok Tey	Glen Kennedy, Cameron Curley, Jason Butler, Elango Subramonia-Pillai, Ashleigh Scott, Simon Durrant, James Morton	CSL Behring MODULAATE - A Phase 2/3, Multicenter, randomized, Double-blind, placebo-controlled, study to evaluate the safety and efficacy of Alpha-1 AntiTrypsin for the prevention of graft-versus-host disease in patients receiving hematopoietic cell transplant	0	4
Siok Tey	Jason Butler, Cameron Curley, Elango Subramonia-Pillai, Ashleigh Scott	PCYC 1140 INTEGRATE – A Randomized, Double-Blind Phase 3 Study of Ibrutinib in Combination With Corticosteroids versus Placebo in Combination With Corticosteroids in Subjects with New Onset Chronic Graft Versus Host Disease (cGVHD)	0	3
Siok Tey	Glen Kennedy, Simon Durrant, James Morton, Jason Butler, Elango Subramonia-Pillai, Cameron Curley, Ashish Misra	IL-17 – Observational study of IL-17-related cytokines in stem cell transplantation	0	287
Siok Tey	Glen Kennedy, Cheryl Hutchins	TREG Apheresis - Developing a method to generate regulatory T cells from healthy donors	2	5

Lead Investigator Name (RBWH staff in bold)	Other Study Investigators (RBWH staff in bold)	Research Project Title	Number of RBWH Patients Recruited in 2021	Total number of RBWH Patients Recruited
Siok Tey	Glen Kennedy, Simon Durrant, James Morton, Jason Butler, Elango Subramonia-Pillai, Cameron Curley, Ashish Misra	IR Auto – Observational study of immune reconstitution in patients undergoing autologous stem cell transplantation	0	17
Siok Tey	Glen Kennedy, Simon Durrant, James Morton, Jason Butler, Elango Subramonia-Pillai, Cameron Curley, Ashish Misra	HAPLO - A Phase I Study of Haploidentical Haematopoietic Stem Cell Transplantation with Add-Back of Donor T Cells Transduced with Inducible Caspase 9 Suicide Gene in Patients with Poor Risk Haematological Malignancies	0	6
Siok Tey	Glen Kennedy, Cheryl Hutchins	Generating Chimeric Antigen Receptor (CAR T) cells from healthy volunteers	0	3
Siok Tey	Andrea Henden, Ashleigh Scott, Cameron Curley, Cheryl Hutchins, Elango Subramonia Pillai, Glen Kennedy, Heshani Mediwake, James Morton, Jason Butler, Kari Mudie;	Phase I Clinical Trial of MB.CART19.1 CD19 Chimeric Antigen Receptor (CAR) T Cells in Relapsed or Refractory CD19-Positive Haematological Malignancy	3	4
Steven Lane	Glen Kennedy	P1382 - Examination of genes that control the growth and survival of blood cancers	0	27
Steven Lane	Elango Subramonia Pillai, Cameron Curley, Nicholas Weber, Kirk Morris, Caroline McNamara.	IMAGO - IMG-7289-CTP-201 A Phase 2 Multi-Center, Open Label Study to Assess the Safety, Efficacy and Pharmacodynamics of IMG-7289 in Patients with Essential Thrombocythemia	1	1

Collaborative Research Activity Involving RBWH Department / Research Group

Lead Investigator Name (RBWH staff in bold)	Other Study Investigators (RBWH staff in bold)	Research Project Title	Number of RBWH Patients Recruited in 2021	Total number of RBWH Patients Recruited
Kirk Morris, St Vincent's Health Network		Lymphoma in pregnant patients: the Australian experience	3	3
Elango Subramonia Pillai Monash University Peter MacCallum Cancer Centre	Michelle Spanevello, Jason Butler, Cameron Curley, Kirk Morris, Nicholas Weber, Ashleigh Scott	TREATT: A double blind, randomised controlled trial evaluating the safety and efficacy of tranexamic acid in patients with haematological malignancies with severe thrombocytopenia	0	7
Glen Kennedy ALLG (The Australasian Leukaemia & Lymphoma Group)	Nicholas Weber, Cameron Curley, Jason Butler, Kirk Morris, Elango Subramonia Pillai, Simon Durant, Steven Lane	AML M16 – Sorafenib in Combination with Intensive Chemotherapy for Previously Untreated Adult FLT3-ITD Positive AML: A Phase 2 Randomised Double-Blind Placebo Controlled Multi-Centre Study	0	8

Lead Investigator Name (RBWH staff in bold)	Other Study Investigators (RBWH staff in bold)	Research Project Title	Number of RBWH Patients Recruited in 2021	Total number of RBWH Patients Recruited
Glen Kennedy ALLG	Cameron Curley, Jason Butler, Elango Subramonia Pillai, Steven Lane, Kirk Morris, Nicholas Weber, Simon Durant	ALLG NBCR – Australasian Leukaemia and Lymphoma Group Acute Myeloid Leukaemia National Blood Cancer Registry	0	44
Jason Butler ALLG	Cameron Curley, Simon Durant, Glen Kennedy, Steven Lane, Kirk Morris, James Morton, Elango Subramonia Pillai, Nicholas Weber	NHL 29 – A Phase II study of Ibrutinib, Rituximab and mini-CHOP therapy in very elderly patients with newly diagnosed DLBCL	0	2
Steven Lane ALLG	Cameron Curley, Jason Butler, Nicholas Weber, Elango Subramonia Pillai	APML5: A phase 1 pharmacokinetic evaluation of oral arsenic trioxide in previously untreated patients with acute promyelocytic leukaemia	0	3
Steven Lane ALLG	Cameron Curley, Jason Butler, Kirk Morris, Nicholas Weber, Elango Subramonia Pillai, Simon Durrant, Glen Kennedy	AML M21: A phase Ib/II clinical evaluation of Ponatinib in combination with 5-azacitidine in FLT3-ITD positive acute myeloid leukaemia	0	7
Steven Lane ALLG	Cameron Curley, Jason Butler, Kirk Morris, Nicholas Weber, Elango Subramonia Pillai	LS17 REGALLIA: Studies to delineate the molecular and genomic basis of high risk ALL (Registry of Acute Lymphoblastic Leukaemia in Australasia and Associated Correlative Studies)	0	3
Siok Tey ALLG	Jason Butler, Cameron Curley, Simon Durrant, Glen Kennedy, Ashleigh Scott, James Morton, Elango Subramonia Pillai, Andrea Henden	BM12 CAST: Study of using Cyclophosphamide After Sibling-donor allogeneic stem-cell Transplantation (CAST) in patients with acute leukaemia and myelodysplasia: a randomised study comparing cyclosporin and methotrexate to cyclosporin and post-transplantation cyclophosphamide for graft-versus-host disease prophylaxis.	1	4
Nicholas Weber The Myeloma and Related Diseases Registry	Jason Butler	MRDR - Myeloma and Related Diseases Registry	25	109
Nicholas Weber AMaRC (Australasian Myeloma Research Consortium)	Cameron Curley, Jason Butler, Ashleigh Scott	AMaRC – A randomized phase 2 study of bortezomib, cyclophosphamide and dexamethasone induction (VCD) compared with VCD and daratumumab induction followed by daratumumab maintenance (VCDD) for the initial treatment of transplant ineligible patients with multiple myeloma	0	5

Lead Investigator Name (RBWH staff in bold)	Other Study Investigators (RBWH staff in bold)	Research Project Title	Number of RBWH Patients Recruited in 2021	Total number of RBWH Patients Recruited
Andrea Henden QMGP - Queensland Myeloid Genomics Program	Cameron Curley, Nicholas Weber , Louisa Gordon	To demonstrate the value of routine genomic testing in patients presenting with acute myeloid leukaemia (AML), myelodysplastic syndrome (MDS) & myeloproliferative neoplasms (MPN) in informing the need for stem cell transplantation.	57	64
Nicholas Weber	Leonie Naumann	The MyeEx Study: The Effect of an Individualised Exercise Intervention on Functional, Biological and Quality of Life Outcomes in Patients with Multiple Myeloma	3	6
Kirk Morris	Janine Deevey	National Projects with CanTeen - The Youth Cancer Service Experience of Care Survey	8	11
Jason Butler Maher Ghandi NHMRC	Dr's Tara Cochrane, Anna Johnston, Giri Pratyush, Michael McManus, Claire Vajdic, Chan Yoon Cheah	Integrating immunity and genetics in Follicular Lymphoma to establish a prognostic score fit for the modern era	0	0
Glen Kennedy, Siok Tey , Rajiv Khanna	Dr's Geoff Hill, James Morton, Jason Butler, Simon Durrant	P992: Immune monitoring of stem cell transplant patients	0	47
Steven Lane The University of Sydney	Nicholas Weber, Cameron Curley, Kirk Morris	MoST Framework - The Cancer Molecular Screening and Therapeutics (MoST) Program - A framework protocol for multiple, parallel, signal-seeking clinical studies of novel molecularly targeted therapies for patients with advanced cancer and unmet clinical need.	10	10
Steven Lane Australian Genomic Cancer Medicine Group, OMICO, NHMRC	Andrea Henden, Cameron Curley, Caroline McNamara, Kirk Morris, Nicholas Weber	MoST LLY 15 AZ - A single arm, open label, signal seeking, phase II trial of the activity of Durvalumab in combination with Acalabrutinib in patients with high-grade B cell lymphoma	3	3

Research Publications

Publications in 2021

Journal Articles (RBWH staff in bold)

1. Safety and feasibility of apheresis to harvest and concentrate parasites from subjects with induced blood stage Plasmodium vivax infection.
Odedra A, Mudie K, **Kennedy G**, Watts RE, Rossignol E, Mitchell H, Gower J, Rebelo M, Pava Z, Pawliw R, Woolley S, Laloo DG, Robinson G, Lynch S, Collins KA, Amante F & McCarthy J.
Malaria Journal. 2021; 20 (1): 43. doi: 10.1186/s12936-021-03581-w.
2. A Phase 3 Double-Blind Study of the Addition of Tocilizumab versus Placebo to Cyclosporin/Methotrexate GvHD Prophylaxis
Kennedy G, Tey SK, Buizen L, Varelias A, Gartlan KH, **Curley C**, Olver S, Chang K, **Butler J, Misra A, Subramoniapillai E, Morton A, Durrant S, Henden AS**, Moore J, Ritchie DS, Gottlieb D, Cooney JP, Paul SK & Hill GR
Blood. 2021 Jan 21: blood.2020009050. doi: 10.1182/blood.2020009050. Online ahead of print

Journal Articles (RBWH staff in bold)

3. Resilience and ongoing quality care for cancer clinical trials during Covid-19: experience from a tertiary hospital in Australia'.
A Ives, **T Pusztai**, J Keller, E Ahern,
Chan B, Gasper H, Wyld D, **Kennedy G**, Dickie G, Lwin Z & Roberts.NA
Asia Pacific Journal of Clinical Oncology. 2021 Apr 5. doi: 10.1111/ajco.13570. Online ahead of print
4. A semi-qualitative research protocol to explore cancer care workforce perceptions of the health system response to COVID 19 preparations in South-East Queensland, Australia.
Gasper H, Ahern E, Roberts NA, Chan B, Hughes B, **Kennedy G**, Wyld D, Eastgate M & Lwin Z.
British Medical Journal Open (Accepted for publication, March 2021)
5. Rallying Macrophages in the fight against MDS and AML.
Guirguis AA, **Lane SW**.
The Hematologist, 2021 Mar 18(2)
6. Not all TP53 mutations are equal.
Jivan Y, Lane SW.
The Hematologist, 2021 Jan 18 (1)
7. Myeloid somatic mutation panel testing in myeloproliferative neoplasms.
Ross DM, Thomson C, Hamad N, **Lane SW**, Manos K, Grigg AP, Guo B, Erber WN, **Scott A**, Viiala N, Chee L, Latimer M, Tate C, Grove C, Perkins AC, Blombery P.
Pathology 2021. Doi: 10.1016/j.pathol.2021.01.003
8. A fixed 'single vial' dose of subcutaneous desmopressin (DDAVP) produces adequate biologic responses for persons with mild haemophilia A.
Noye J, **Rowell JA, Zeissink B, Connolly A, Mason JA**.
Haemophilia. 2021 Mar 8. doi: 10.1111/hae.14287. [Epub ahead of print].
9. IFN λ Therapy Prevents Severe Gastrointestinal Graft-versus-Host disease.
Andrea S Henden, Motoko Koyama, Renee J Robb, Adriana Forero, Rachel D Kuns, Karshing Chang, Kathleen S Ensbey, Antiopi Varelias, Stephen H Kazakoff, Nicola Waddell, Andrew D Clouston, Rabina Giri, Jakob Begun, Bruce R Blazar, Mariapia A Degli-Esposti, Sergei V Kotenko, **Steven W Lane**, Kate Bowerman, Ram Savan, Philip Hugenholtz, Kate H Gartlan, Geoffrey R Hill.
Blood. 2021 May 5;blood.2020006375. doi: 10.1182/blood.2020006375. Online ahead of print.
10. CMV exposure drives long-term CD57+ CD4 memory T cell inflation following allogeneic stem cell transplant.
Albert C Yeh, Antiopi Varelias, Anupama Reddy, Sierra M Barone, Stuart Olver, Kate Chilson, Lynn Onstad, Kathleen S Ensbey, **Andrea Henden**, Luke Samson, Carla A Jaeger, Timothy Bi, Kimberly Dahlman, Tae Kon Kim, Ping Zhang, Mariapia A Degli-Esposti, Evan W Newell, Madan Jagasia, Jonathan Michael Irish, Stephanie J Lee, Geoffrey R Hill.
Blood. 2021 Jun 3. doi: <https://doi.org/10.1182/blood.2020009492>
11. Interferon-lambda therapy prevents severe gastrointestinal graft-vs-host disease.
Henden AS, Koyama M, Robb RJ, Forero A, Kuns RD, Chang K, Ensbey KS, Varelias A, Kazakoff SH, Waddell N, Clouston AD, Giri R, Begun J, Blazar BR, Degli-Esposti MA, Kotenko SV, **Lane SW**, Bowerman K, Savan R, Hugenholtz P, Gartlan KH, Hill GR.
Blood. 2021 May 5. doi: 10.1182/blood.2020006375
12. Intact TP53 function is essential for sustaining durable responses to BH3-mimetic drugs in leukemias.
Thijssen R, Diepstraten ST, Moujalled DM, Chew E, Flensburg C, Shi MX, Dengler MA, Litalien V, MacRaid S, Chen M, Anstee NS, Reljic B, Gabriel SS, Djajawi TM, Riffkin CD, Aubrey BJ, Chang C, Tai L, Xu Z, Morley TD, Pomilio G, Bruedigam C, Kallies A, Stroud DA, Bajel A, Kluck RM, **Lane SW**, Schoumacher R, Banquet S, Majewski IJ, Stresser A, Roberts SW, Huang DCS, Brown FC, Kelly G, Wei AH.
Blood. 2021 Apr 6. doi: 10.1182/blood.2020010167. Online ahead of print
13. Myeloid somatic mutation panel testing in myeloproliferative neoplasms.
Ross DM, Thomson C, Hamad N, **Lane SW**, Manos K, Grigg AP, Guo B, Erber WN, **Scott A**, Viiala N, Chee L, Latimer M, Tate C, Grove C, Perkins AC, Blombery P.
Pathology. 2021. doi: 10.1016/j.pathol.2021.01.003
14. Targeting TP53 mutants in myeloid neoplasms, are we there yet?
Royle J, **Lane SW**.
The Hematologist. 2021 June 14. <https://doi.org/10.1182/hem.V18.4.202141>
15. Listeria monocytogenes brain abscess as a late complication of allogeneic haemopoietic stem cell transplantation
Joseph Chung, Kate L. McCarthy, Andrew Redmond, **Jason Butler, Ashleigh P. Scott**, Adam G. Stewart
Internal Medicine Journal, 21 June 2021. <https://doi.org/10.1111/imj.15356>

Journal Articles (RBWH staff in bold)

16. Case report: *Ganoderma weberianum* invasive fungal disease (IFD) during allogeneic hematopoietic stem cell transplantation (HSCT)
Ashleigh P. Scott, Markian Choptiany, Jennifer Dwyer, Kate L. McCarthy
Transplant Infectious Diseases, 24 May 2021 <https://doi.org/10.1111/tid.13647>
17. Stewart AG, **Henden AS**. Infectious complications of CAR T-cell therapy: a clinical update. *Ther Adv Infect Dis*. 2021 Aug 24;8:20499361211036773. doi: 10.1177/20499361211036773. PMID: 34457269; PMCID: PMC8388233
18. Australia and New Zealand transplant and cellular therapies COVID-19 vaccination consensus position statement.
Hamad N, Ananda-Rajah M, Gilroy N, MacIntyre R, Gottlieb D, Ritchie D, Harrison S, **Kennedy G**, Watson AM, Greenwood M, Doocey R, Perera T, Spencer A, Wong E, O'Brien T, Shaw P, Conyers R, Milliken S, Bardy P, Larsen S, Ho PJ, Lai H, Bajel A, **Butler J**, Tiley C, D'Rozario J, Johnston A, Cochrane T, Mills T, Irving I, Pullon H & Purtill D
Internal Medicine Journal. 2021; 51 (8): 1321-1323
19. Pralatrexate in relapsed/refractory T-cell lymphoma: a retrospective multicenter study.
Bhurani M, Admojo L, Van Der Weyden C, Twigger R, Bazargan A, Quach H, Zimet A, Coyle L, Lindsay J, Radeski D, Hawkes E, **Kennedy G**, Irving I, Gutta N, Trotman J, Yeung J, Dunlop L, Hua M, Giri P, Yuen S, Panicker S, Moreton S, Khoo L, Scott A, Kipp D, McQuillan A, McCormack C, Dickinson M, Prince HM.
Leukemia & Lymphoma. 2021; 62 (2): 330-336.
20. A prospective cohort study of an Australian Cancer Care Services-led model of emergent care
Button E, Gavin NC, Bates T, Ahmed D, Nasato G, Wyld D, **Kennedy G**, Fennelly E, Smith M, Northfield S & Yates P.
Australian Health Review 2021 Jul 13. doi: 10.1071/AH20346. Online ahead of print
21. Our experience of nursing/allied health practitioner led geriatric screening and assessment of older patients with cancer – a highly accessible model of care
Thaker DA, McGuire P, Bryant G, Wyld D, Leach J, Wheatley H, Snape-Jenkinson S, Kelly B, Bourke A & **Kennedy G**
Journal of Geriatric Oncology; 2021 May 10: S1879-4068(21)00111-9. doi: 10.1016/j.jgo.2021.05.003. Online ahead of print
22. **Mason JA**, Young G. Emicizumab prophylaxis in infants with severe haemophilia A without inhibitors: Illustrative real-world cases to support shared decision-making. *Haemophilia*. 2021;27(5):724-9.
23. Ali T, Keenan J, **Mason J**, Hsieh JT, Batstone M. Prospective study examining the use of thrombin-gelatin matrix (FloSeal) to prevent post dental extraction haemorrhage in patients with inherited bleeding disorders. *Int J Oral Maxillofac Surg*. 2021. Aug 13:S0901-5027(21)00271-X. doi: 10.1016/j.ijom.2021.07.018. Online ahead of print.
24. **Stewart Hunt**, Jeremy Robertson, Jason Conn, John Casey, **Jane Royle**, Joel Collins, Matthew Hourigan, Joshua Richmond, Tzu Yang Wang, Anthony Mills, **Jane Mason**. *European Journal of Haematology*. 2022 Jan;108(1):28-33.
A low-dose rituximab regimen for first-line treatment of acquired haemophilia A.

Keynote or Plenary Lectures given in 2021

Date	Title
06/2021	Invitation to the International Meeting on Fundamental Research in Paediatric Cancer. June 2021, Paris: French National Cancer Institute. (Presented virtually) Steven Lane
2021	Invited seminar: Precision Medicine in Blood Cancer. 2021, Austin Hospital/Olivia Newton-John Cancer Centre. (Presented virtually) Steven Lane
2021	EINSTEIN Seminar Series. 2021, Box Hill Hospital and Monash University, Melbourne. (Presented Virtually) Steven Lane

QLD Haemophilia Centre



Dr Jane Mason
Director of Haemophilia
Queensland Haemophilia Centre

2021 was another exciting year for the Queensland Haemophilia Centre (QHC) working in collaboration with the Clinical Research Unit Cancer Care Services and the Cellular Therapy/ BMT Laboratory. We built further on our experience with AAV5-FVIII gene therapy through recruitment and dosing of 3 patients in the BMN 270-303 dosing study. There remains much to be understood about vector transduction, intracellular trafficking and transgene expression in the Haemophilia A gene therapy space. We are therefore grateful for the altruistic participation of 2 of our gene therapy patients in the (optional) liver biopsy sub-study, this represents a valuable contribution of histopathological and genetic data which will further the haemophilia gene therapy field as a whole. The QHC also continued as an active site in a multi-centre phase 3 study evaluating the efficacy of a factor VIII mimetic (Eticizumab) given via monthly subcutaneous injection. Publication highlights included outcomes of a QLD collaborative study which demonstrated efficacy of an upfront low dose rituximab and steroid approach in treatment of Acquired Haemophilia.

Research Publications

Journal Articles (RBWH staff in bold)

1. **Stewart Hunt**, Jeremy Robertson, Jason Conn, John Casey, **Jane Royle**, Joel Collins, Matthew Hourigan, Joshua Richmond, Tzu Yang Wang, Anthony Mills, **Jane Mason**. European Journal of Haematology. 2022 Jan;108(1):28-33. A low-dose rituximab regimen for first-line treatment of acquired haemophilia A.

Keynote or Plenary Lectures given in 2021

Date	Title
12/2021	Relationship between Endogenous, Transgene FVIII Expression and Bleeding Events Following Valoctocogene Roxaparvovec Gene Transfer for Severe Hemophilia A: A Post-Hoc Analysis of the GENE8-1 Phase 3 Trial.
12/2021	A Randomized Study of Bortezomib, Cyclophosphamide and Dexamethasone Induction (VCD) Versus VCD and Daratumumab Induction Followed By Daratumumab Maintenance (VCDD) for the Initial Treatment of Transplant-Ineligible Patients with Multiple Myeloma (AMaRC 03-16)

Medical Oncology



Dr David Wyld
Deputy Director of Clinical Research CCS
Director Medical Oncology

Despite the ongoing challenges to undertaking research in the current environment, the Department of Medical Oncology's research program remained very active, and indeed continues to develop throughout 2021. That this was the case reflects the dedication and hard work of staff in maintaining ongoing research across CCS in general. All involved should be congratulated on their efforts which allowed continuation of the department's research programs.

I would like to highlight several of the departments 2021 achievements:

- ❖ The RBWH Medical Oncology Department recently received global recognition as a "high-performing" clinical trial site, by being one of only 2 sites in Australia to be offered a Clinical Site Partnership with Merck Sharp & Dohme.
- ❖ The Department was successful in obtaining a 2021 MNHHS SEED Innovation Grant for the project "Reducing severe toxicity and hospitalisations related to 5-Fluorouracil (5-FU) chemotherapy". The project, led by Mark Nalder, is the first of its kind undertaken in Qld, and allows patients within MNHHS to undergo specific testing prior to commencement of 5-FU chemotherapy, to identify individuals who are at risk of significant toxicity from standard doses of this drug, allowing dose modification and thereby reducing the risk of significant side effects for those individuals. The project is progressing very well, and if successful has the potential to change standard practice for such patients in Qld.
- ❖ The departments 2 new clinical fellows developed research projects that were been accepted as suitable for research higher degrees with University of Qld. Mark Nalder is undertaking a PhD "Examining real-world evidence for immune checkpoint inhibitor (PD-L1) treatment in advanced solid organ malignancies: A population based data analysis in Queensland, Australia". Kathy You is undertaking a Masters of Philosophy with UQ, researching "Multifactorial determinants that influence clinical trial participation by cancer patients in Australia", with Zarnie Lwin as her principal supervisor.
- ❖ The Medical Oncology unit held its first departmental research retreat
- ❖ The Department of Medical Oncology was honoured to be selected to host William Wang, Year 1 MD candidate from UQ, for a Summer Research Program. Over a period of 8 weeks in December 2021/January 2022, William successfully completed his research project "Retrospective Review of Screen Failures at the Medical Oncology Clinical Trials Unit".
- ❖ Departmental staff undertook a number of COVID-19 related research projects. 2 publications have already resulted from this work, and results from one, "COVID-19 and the Cancer Care Workforce", was presented at the Qld Clinical Excellence Showcase by Zarnie Lwin
- ❖ Maintaining access for patients to clinical trials treatment. The ability of the team to rapidly adjust to changing circumstances and allow the majority of the departments clinical trials to remain open to our patients was exceptional. While recruitment of new patients was affected for periods throughout the year, all patients receiving therapy on a clinical trial were able to continue therapy, and new patients continued to be recruited to studies throughout most of the year. The development of several new innovative practices by the research team was a key factor in allowing this to occur.
- ❖ Research publications. Departmental output included over 50 publications in 2021

Finally, I would like to acknowledge Jenny Campbell, who retired in 2021, after 25 years working as part of the Medical Oncology Clinical Research team. Jenny played a major role in the development of the Medical Oncology Department's clinical trials program from its humble beginnings in 9E to what it is today, and we thank her for the enormous contribution she has made to Cancer Services at RBWH and wish her well in her retirement.

Research Awards and Achievements

Recipient (RBWH staff in bold)	Award	Event
Chun Loo Gan	Conquer Cancer Merit Award	American Society of Clinical Oncology Genitourinary Cancers (ASCO GU) Symposium
Chun Loo Gan	Conquer Cancer Merit Award	American Society of Clinical Oncology (ASCO) Annual Meeting
Chun Loo Gan	Oncology Young Canadian Investigator Awards	NOYCIA, NOVARTIS, Canada

Research Grants

Investigator Names (RBWH staff in bold)	RBWH Departments / Research Groups	Research Project Title	Granting Body	Total Awarded (whole all years)	Length of Awards in years and years active
Medical Oncology Clinical Trials Unit	Medical Oncology	Clinical Trials Data Management Grant	Queensland Cancer Fund	\$124,000	1 year, 2021
Mark Nalder, Matthew Burge, Melissa Eastgate, David Wyld	Medical Oncology	Reducing severe toxicity and hospitalisations related to 5-Fluorouracil (5-FU) chemotherapy	2021 MNHHS SEED Innovation Funding (awarded Dec 2020)	\$88,488	1 year, 2021
Penelope Webb, Raymond Chan, Bena Brown, David Wyld , Sabe Sabesan, Louisa Gordon, Gunter Hartel, Melissa Eastgate , Laurelie Wishart, Rebecca Nund	Medical Oncology	PROMISE: patient-Reported Outcome Measures in cancer care: a hybrid effectiveness-Implementation trial to optimise symptom control and health service experience.	Cancer Council Queensland Accelerating Collaborative Cancer Research (ACCR) Grant, QIMR Grant	\$2,000,000	4 years, 2020-2023
Mark Smyth, Nicola Waddell, Andreas Moller, Michele Teng, Harsha. Gowda, John Pearson, Tobias Bald, Peter Simpson, Elizabeth Ahern, David Fielding, Brett Hughes .	Medical Oncology	LUCKISTARS. Lung cancer knowledge in immunogenomics to stratify therapeutic resistance and sensitivity.	Cancer Council of Queensland, AACR-0000000027, QIMR Grant	\$2,000,000	4 years, 2020-2023
Niall Tebbutt, Jeanne Tie, Chris Karapetis, Steve Ackland, Connie Diakos, Matthew Burge , Naureen Starling, Tony Dhillon, Christine Bishop, David Church, David Lau, Kate Mahon, Sonia Yip, Sophia Frentzas, Yoko Tomita, Kate Wilson	Medical Oncology	POLEM Trial, a phase III randomised study of Avelumab plus fluoropyrimidine-based chemotherapy as adjuvant treatment for stage III dMMR or POLE exonuclease domain mutant colon cancer.	MRFF International Clinical Trials Collaborations Grant	\$981,313	5 years, 2020-2024

Investigator Names (RBWH staff in bold)	RBWH Departments / Research Groups	Research Project Title	Granting Body	Total Awarded (whole all years)	Length of Awards in years and years active
Po-Ling Inglis , Olga Kondrashova, Nicola Waddell, Sunil Lakhani, Amy McCart Reed,	Medical Oncology, Pathology	Integration of machine learning in breast cancer prognosis by profiling the tumour Microenvironment (Q-IMPROvE)	Collaborative Research Grant MNHHS and QIMR	\$50,000	2 years, 2020-2021
John Atherton, Kristyan Guppy-Coles, Sandhir Prasad, Po-Ling Inglis	Cardiology, Medical Oncology	Feasibility and Diagnostic Accuracy of Novel Echocardiographic Approaches to allow Screening and Monitoring for Left Ventricular Systolic Dysfunction by Novice Healthcare Staff	Heart Foundation 2019 Vanguard	\$150,000	2 years, 2020-2021
Hayes S, Obermair A, Janda M, Eakin E, Shannon C, Goh J , Beesley V, Vagenas D, Spence R	Surgery, Medical Oncology	A Phase II trial evaluating feasibility, safety and efficacy of an individually-tailored exercise intervention during chemotherapy for recurrent ovarian cancer	NHMRC MRFF EPCDR Ovarian Cancer Grant	\$884,172	4 years, 2020-2023
Sunil Lakhani (UQ) Amy Reed (UQCCR), Christopher Pyke (Mater), Cameron Snell (Mater), Nicole McCarthy (Wesley), Ken O'Byrne (PAH), Valentine Hyland (Pathology), Owen Ung (Surgery), Natasha Woodward (Mater), Euan Walpole (PAH), Peter Simpson (UQ), Stephen Rose (CSIRO), Fares Al-Ejeh (QIMR), Po-Ling Inglis , Ben Green	Pathology, Surgery, Cancer Care Services	High risk breast cancer genomic sequencing project platform Queensland wide	MRFF Genomics grant	2,800,000	3 years, 2020-2022
Chee Khoon Lee, Michael Friedlander, Clare Scott, Sherene Loi, Tarek Meniawy, Jeffrey Goh , Anna deFazio Alicia Jenkins, Alison Davis, Rachel O'Connell	Medical Oncology	PARAGON-II: Phase 2 basket study of an Aromatase inhibitor plus PI3KCA inhibitor or CDK4/6 inhibitor in women with hormone receptor positive recurrent/metastatic Gynaecological Neoplasms.	MRFF Clinical Trials Activity (Rare Cancers, Rare Diseases and Unmet Need) –2019 Reproductive Cancers Grant Opportunity	\$1,995,422	4 years, 2020-2023

Investigator Names (RBWH staff in bold)	RBWH Departments / Research Groups	Research Project Title	Granting Body	Total Awarded (whole all years)	Length of Awards in years and years active
Paul Thomas, John Hooper, Trent Munro, David Wyld , Luke Perrin, Rohan Lourie, Stephen Rose, Simon Puttick	Medical Oncology, Nuclear Medicine	A new radio-imaging agent to guide targeted therapy for epithelial ovarian cancer	NHMRC MRFF – Emerging Priorities and Consumer Driven Research - 2019 Ovarian Cancer Research Grant. (APP1199422)	\$1,893,306	5 years, 2020-2024
Vanessa Beesley, Rachel Neale, Jane Turner, Patsy Yates, David Wyld , Raymond Chan, Louisa Gordon	Medical Oncology	PRoCESS: Pancreatic cancer Relatives Counselling and Education Support Service trial. Assessing the effect of nurse-led counselling, compared with information alone, on participant-reported outcomes and use of medical services.	NHMRC MRFF – Research Grant (APP1200326)	\$801,229	5 years, 2020-2024
Linda Mileschkin, Yeh Chen Lee, Martin Stockler, Yoland Antill, Pearly Khaw, Pamela Pollock, Elizabeth Barnes, Paul Cohen, Michelle Wilson, Elizabeth Christie, Jeffrey Goh .	Medical Oncology	Adjuvant Tislelizumab plus chemotherapy after post-operative pelvic chemoradiation in high risk endometrial cancer: the ADELE study	NHMRC MRFF – Research Grant	\$1,633,241	3 years, 2020-2022
Teresa Brown, Judy Bauer, Brett Hughes .	Nutrition and Dietetics	A Feasibility study to investigate taste changes post-treatment in patients with head & neck cancer and their association with genes and dietary behaviour.	RBWH Fellowship	\$45,788	2 years, 2020-2021
Arutha Kulasinghe. Brett Hughes, Lizbeth Kenny, Ken O'Byrne, Chamindie Punyadeera	Institute for Molecular Bioscience QUT, Medical Oncology	Identification of predictive biomarkers for immune checkpoint blockade in head and neck cancer	The Garnett Passe and Rodney Williams Memorial Foundation	\$367,500	4 years, 2020-2023

Investigator Names (RBWH staff in bold)	RBWH Departments / Research Groups	Research Project Title	Granting Body	Total Awarded (whole all years)	Length of Awards in years and years active
Paul Clarke, Gabrielle Blez, Guimaraes Fonseca, Arutha Kulasinghe, Peter Soyer, Kiarash Khsorrotehrani, Quan Nguyen, Kirsty Short, Maher Gandhi, John Frazer, Sarah Roberts-Thomson, Vicki Clifton, Sandro Porceddu, Rahul Ladwa, Brett Hughes, Antje Blumenthal, Jacky Suen, Raymond Steptoe, Snehlata Kumari, Mitchell Stark, Howard Liu, Wen Xu, Andreas Moller, David Simmons, Stephan Thor, Gregory Monteith, Danielle Kamato, Peter Moyle, Carlos Salomon Gallo, Amy McCart, Priyakshi Kalita De Croft, Alain Wuethrich, Abu Sina, Peter Simpson, Marc Ruitenber, Emanuele Pelosi, Stacey Cole	UQ Diamantina Institute, Institute for Molecular Bioscience UQ, Mater Research Institute-UQ, TPCH, Pharmacy UQ, PAH, RBWH CCS, Biomedical Sciences UQ, Health and Behavioural Sciences UQ, Centre for Clinical Research UQ, Aus Institute for Bioengineering & Nanotechnology	Nanostring GeoMX DSP: A world-class facility for advanced tissue profiling in health and disease	One-UQ Research Infrastructure Investment Scheme 2021 UQRIIS2167612	\$687,100	2 years, 2021-2022
J Zalcborg, K Sjoquist, N Tebbutt, D Yip, J Desai, T Price, L Lipton, C Diakos, S Ananda, C Kin Law, C Bishop, S Ackland, S Yip, R Morton, D Wyld , D Goldstein, J Mumford	Medical Oncology	SSG XXII: International randomised phase III multicenter study of 3 v 5 years of adjuvant imatinib as treatment of patients with operable GIST with high risk for recurrence.	NHMRC MRFF 2020 International Clinical Trial Collaborations	\$1,036,125.09	6 years, 2021-2026

Current RBWH Department / Research Group Led Research Activity

Lead Investigator Name (RBWH staff in bold)	Other Study Investigators (RBWH staff in bold)	Research Project Title	Number of RBWH Patients Recruited in 2021	Total number of RBWH Patients Recruited
Natasha Roberts, David Wyld	Monika Janda , Kim Alexander	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		
Matthew Burge	Melissa Eastgate, David Wyld, Shu Lee Euan Walpole (PAH)	Prospective evaluation of FOLFIRINOX for metastatic or locally advanced Pancreatic Cancer		
David Wyld	Julie Moore, Mark Wan	Neuroendocrine Tumours: Epidemiologic trends in Queensland	Not applicable	4580 QLD cases
Brett Hughes	Elizabeth Ahern , Bill Dougall, Mark Smyth (PAH)	Pharmacodynamics of Pre-Operative PD1 Checkpoint Blockade and Receptor Activator of NF-κB Ligand (RANKL) Inhibition in Non-Small Cell Lung Cancer (NSCLC) – a phase 1B/2 trial. POPCORN	0	1
Natasha Roberts (Cancer Care Services/Queensland University of Technology)	Monika Janda , Kim Alexander, David Wyld	Patient Reported Outcomes in the Medical Oncology Setting (iPROMOS)	0	538
Melissa Eastgate	Anna Kuchel , Kathryn Hine	Financial planning concerns in patients with advanced melanoma – a research study into patient and clinician perspectives		
David Wyld	Julie Moore, Nancy Tran, Michael Wyld	Neuroendocrine Neoplasms in the Paediatric, Adolescent and Young Adult Population in Queensland, Australia.	Not applicable	Audit 653 Qld Cases
Natasha Roberts	Haryana Dhillon, Phillip Parente, Craig Gedy, Australia New Zealand Urogenital and Prostate Cancer Trials Group	Patient Experience of Participating in a Clinical Trial	0	
Melissa Eastgate	Geoffrey Bryant, Mathew Burge, Darshit Thaker, David Wyld , Cameron Curley, Michele Grogan, Jemma Byth	Cancer patient reported outcomes: putting theory into practice.		
Brett Hughes (Cancer Care Services) Elizabeth Ahern (Cancer Care Services/Queensland Institute of Medical Research Berghofer),	Martin Batstone, Mark Smyth and Bill Dougall (QIMR)	Expression of novel immune markers in mucosal head and neck squamous cell carcinoma (HNSCC) specimens	Not applicable	Not applicable

Lead Investigator Name (RBWH staff in bold)	Other Study Investigators (RBWH staff in bold)	Research Project Title	Number of RBWH Patients Recruited in 2021	Total number of RBWH Patients Recruited
Melissa Eastgate Elizabeth Ahern (Cancer Care Services/Queensland Institute of Medical Research Berghofer Anna Kuchel)	Ailin Lepetier, Jason Madore, Mark Smyth (QIMR)	Multiplex immunofluorescence assessment of melanoma biopsies and response to immunotherapy	Not applicable	Not applicable
Brett Hughes, Elizabeth Ahern (Cancer Care Services/Queensland Institute of Medical Research Berghofer)	Martin Batstone, Mark Smyth and Bill Dougall (QIMR)	Immune Biomarker Evaluation in Oral Mucosal Squamous Cell Carcinoma: a prospective tissue collection	Not applicable	Not applicable
Zarnie Lwin	Alexander Broom (UNSW), Claire Wakefield, Emma Kirby (UNSW), Barbara Prainsack, Mustafa Khasraw, Katherine Kenny, Stephanie Raymond	Precision and the Person: A sociological study of therapeutic innovation in cancer care	0	0
Melissa Eastgate	Rosalind Jeffrey (Neurosurgery), Margaret Cummings (Pathology), Elizabeth Ahern, Anna Kuchel , Shu Lee (Medical Oncology Ipswich), Michael Colditz (Neurosurgery)	Clinicopathologic feature predicting survival after brain metastasectomy in melanoma	Not applicable	Not applicable
Wessling C, Gavin N,	Russell E, Glynn T, Eastgate M, Hajkowicz K, Klages P, Leutenegger J, Sandler C, Clark B, Hutchinson E, Sutherland A,	A Randomised Controlled Trial exploring the administration of intravenous antibiotics and fluids via intravenous pole and pump versus portable CADD pump to improve mobility in patients diagnosed with cancer (The Active Trial)		
Melissa Eastgate, Elizabeth Ahern, Harry Gasper, Sudha Rao (QIMRb)	Sumudu Britton (RBWH IDBrett Hughes, Glen Kennedy, Zarnie Lwin, Jasmine Brady, Robert McCuaig (QIMRb), Wenjuan Tu (QIMRb), Michelle Melino (QIMRb), Amanda Bain (QIMRb),	Immune correlates of CoVID-19 in cancer patients: Biobank	0	
Elizabeth Ahern, Harry Gasper, Natasha Roberts, Zarnie Lwin	David Wyld, Melissa Eastgate, Brett Hughes, Glen Kennedy,	CoVID-19 in cancer patients: Health Services Research and Qualitative Research Arm	Not applicable	Not applicable
Po-Ling Inglis	Quan Tran, Anna Kuchel, Sean Stephens (Neurosurgery)	Pineal germinoma: A 13 year Queensland experience		
Darshit Thacker, Elizabeth Ahern, Harry Gasper, Hermione Wheatly	David Wyld, Melissa Eastgate, Glen Kennedy, Andrea Henden, Peter McGuire	Socio-Psychological and Physical Impact of Covid-19 Pandemic on Elderly Oncology Patients: A Comprehensive Study at North Lakes Cancer Care Services	Not applicable	Not applicable
Lucy Corke	Matthew Burge	Pembrolizumab in previously treated microsatellite instability-high/deficient mismatch repair metastatic colorectal cancer	Not applicable	15

Lead Investigator Name (RBWH staff in bold)	Other Study Investigators (RBWH staff in bold)	Research Project Title	Number of RBWH Patients Recruited in 2021	Total number of RBWH Patients Recruited
Lucy Corke	Brett Hughes , Chiyan Lau, David Fielding, David Fairbairn, Ben Lundie	Rebiopsy rates and outcomes at diagnosis and at progression on first line EGFR TKI therapy in advanced non-small cell lung cancer		
Laura Tam, Melissa Eastgate	Marcin Dzienis	A retrospective audit examining the feasibility and durability of response following re-challenge with immune checkpoint inhibitor post grade 3-4 immune-related adverse event	Not applicable	Not applicable
Mark Flower, Brett Hughes	Melissa Eastgate, Anna Kuchel, Elizabeth Ahern , Yong Yeung	Immune checkpoint inhibitor hepatotoxicity rates, associations and clinical management audit	Not applicable	Not applicable
Melissa Eastgate	Lindy Jeffree (Neuro Surg), Margaret Cummings (PathQLD) Elizabeth Ahern (CCS), Anna Kuchel (CCS) , Shu Fen Lee (IPWH), Michael Colditz (Neuro Surg)	Audit of outcomes of melanoma patients undergoing neurosurgery	Not applicable	Not applicable
Matthew Burge , Victoria Whitehall (QIMR)	David Wyld (CCS), Melissa Eastgate (CCS), Alison Hadley (CCS), Brett Hughes (CCS), Po-ling Inglis (CCS), Zarnie Lwin (CCS), Jeff Goh (CCS), Darshit Thaker (CCS) , Bahram Forouzesh (RKH), Dr Sudhakar Vemula (RKH), Elizabeth Ahern (CCS/QIMRB) Dr Jennifer Borowsky (RBWH/QIMRB)	The Royal Brisbane and Prince Charles Hospital metastatic Colorectal Cancer database: A prospective observational cohort study examining clinical and molecular biomarkers		
Matthew Burge, Fiona Paxton-Hall	David Wyld	Outcome and toxicity of salvage therapy with 177 Lu-dotatate in patients with metastatic neuroendocrine tumours		
Melissa Eastgate	Sudha Rao (QIMRB), David Wyld, Kathy You , Robert McCuaig (QIMRB), Haidar Al-Saig, Harry Gasper, Jeff Goh, Brett Hughes, Po Inglis, Anna Kuchel, Zarnie Lwin, Darshit Thaker	Immunotherapy STARS (Stratifying Therapeutic Resistance and Sensitivity) - immunotherapy treatment cohort	34	53
Harry Gasper	Melissa Eastgate, David Wyld, Matthew Burge	What are the patterns of referral, diagnosis, treatment and outcomes for patients with small bowel adenocarcinoma within our Hospital and Healthcare Service, and how do they compare to accepted international standards?	Not applicable	Not applicable
Harry Gasper, Melissa Eastgate	Michele Teng (QIMRB), Mark Smyth (QIMRB), Margaret Cummings (PathQLD), Rosalind Jeffree (Neurosurgery), Shu Lee, Anna Kuchel, Elizabeth Ahern	MISTY trial (Melanoma Immunotherapy Stratification and Treatment Sensitivity) Cutaneous Malignancies Group	0	0

Lead Investigator Name (RBWH staff in bold)	Other Study Investigators (RBWH staff in bold)	Research Project Title	Number of RBWH Patients Recruited in 2021	Total number of RBWH Patients Recruited
David Wyld	Laura Tam , David Pattison (Nuc Med) John Younger (Cardiology) Stuart Ramsay (Nuc Med), Matthew Burge , Louise McCormack (Cardiology)	A retrospective quality assurance audit examining the utility of three different modalities of imaging to define intracardiac metastases in neuroendocrine neoplasms		
Mark Nalder	David Wyld	Retrospective audit of outcomes of treatment of metastatic neuroendocrine tumours treated with PRRT Lutitium-177 at Royal Brisbane and Women's Hospital	Not applicable	Not applicable
David Wyld	Danica Cossio, Julie Moore, Phillipa Youl, Nancy Tran, Michael Wyld	Patterns of care for patients diagnosed with neuroendocrine cancer in Queensland	Not applicable	Not applicable
Zarnie Lwin , Harry Gasper	Zarnie Lwin , Elizabeth Ahern, Natasha Roberts , Bryan Chan	COVID-19 and the Multi-disciplinary team meeting: An audit of modifications in response to the pandemic.	Audit. Not applicable	Audit. Not applicable
Mark Nalder	Matthew Burge , David Wyld , Melissa Eastgate , Sarah Steinke	Pre-treatment dihydropyrimidine dehydrogenase (DPYD) genotyping to individualise fluoropyrimidine-based chemotherapy: An evaluation of clinical implementation in a tertiary cancer centre.	82	102
Tivya Kulasegaran	Mark Nalder , Melissa Eastgate , Matthew Burge	Retrospective review of fluoropyrimidine-based chemotherapy toxicity in patients with any solid organ malignancy. A multi-centre analysis in Queensland, Australia	Not applicable	Not applicable
Brett Hughes , Arutha Kulasinghe.		Identification of predictive biomarkers for immune checkpoint blockade in head and neck cancer		
Kyung You	Zarnie Lwin , Natasha Roberts	Multifactorial determinants that influence clinical trial participation by cancer patients in Australia.	Not applicable	Not applicable
Kyung You	Zarnie Lwin , Natasha Roberts , David Wyld , Mark Nalder	Retrospective audit: reviewing recruitment and screening at the RBWH Medical Oncology Clinical Trials Unit	Not applicable	Not applicable

Collaborative Research Activity Involving RBWH Department / Research Group

Lead Investigator Name (RBWH staff in bold)	Other Study Investigators (RBWH staff in bold)	Research Project Title	Number of RBWH Patients Recruited in 2021	Total number of RBWH Patients Recruited
Australasian Gastrointestinal Trials Group	Matthew Burge (Cancer Care Services)	INTEGRATE II Randomised Phase III Double Blind Placebo Controlled Study of regorafenib in Refractory Advanced GastroOesophageal Cancer	2	6
Australasian Gastrointestinal Trials Group	Matthew Burge (Cancer Care Services)	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)	2	9
Australasian Gastrointestinal Trials Group	David Wyld (Cancer Care Services)	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	0 (in follow-up)	14
Walter and Eliza Hall Institute	Matthew Burge (Cancer Care Services)	DYNAMIC: Circulating Tumour DNA Analysis Informing Adjuvant Chemotherapy in Stage II Colon Cancer	0 (in follow-up)	22
Walter and Eliza Hall Institute	Matthew Burge (Cancer Care Services)	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	0 (in follow-up)	5
Centre for Medical Psychology and Evidence Based Decision Making	Matthew Burge (Cancer Care Services)	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)	4	26
Australasian Gastrointestinal Trials Group/National Cancer Centre, Singapore	Melissa Eastgate (Cancer Care Services)	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)	2	9
Australasian Gastrointestinal Trials Group	Matthew Burge (Cancer Care Services)	MODULATE: Modulation of the tumour microenvironment using either vascular disrupting agents or STAT3 inhibition in order to synergise with PD1 inhibition in microsatellite stable, refractory colorectal cancer. (AGITG)	0 (in follow-up)	13

Lead Investigator Name (RBWH staff in bold)	Other Study Investigators (RBWH staff in bold)	Research Project Title	Number of RBWH Patients Recruited in 2021	Total number of RBWH Patients Recruited
Australasian Gastrointestinal Trials Group/ Walter and Eliza Hall Institute	Matthew Burge (Cancer Care Services)	DYNAMIC III: Circulating Tumour DNA Analysis Informing Adjuvant Chemotherapy in Stage III Colon Cancer: A Multicentre Phase II/III Randomised Controlled Study (AGITG, WEHI)	12	33
Australasian Gastrointestinal Trials Group/ Walter and Eliza Hall Institute	Matthew Burge (Cancer Care Services)	DYNAMIC-Pancreas: Circulating Tumour DNA Analysis Informing Adjuvant Chemotherapy in Early Stage Pancreatic Cancer: A Multicentre Randomised Study (WEHI, AGITG)	2	4
Australia New Zealand Gynaecological Oncology Group	Jeffrey Goh (Cancer Care Services)	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 Epithelial Ovarian, Fallopian Tube, or Primary Peritoneal Cancer	0 (in follow-up)	2
Australia New Zealand Gynaecological Oncology Group	Alison Hadley (Cancer Care Services)	OUTBACK - A PHASE III trial of adjuvant chemotherapy following chemoradiation as primary treatment for locally advanced cervical cancer compared to chemoradiation alone	0 (in follow-up)	14
Australia New Zealand Gynaecological Oncology Group	Jeff Goh (Cancer Care Services)	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	0 (in follow-up)	16
Australia New Zealand Gynaecological Oncology Group	Jeff Goh (Cancer Care Services)	ICON 8: an international trial comparing weekly chemotherapy with 3 weekly chemotherapy for women with ovarian cancer, fallopian tube cancer or primary peritoneal cancer	0 (in follow-up)	2
Australia New Zealand Urogenital and Prostate Cancer Trials Group	David Wyld (Cancer Care Services)	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	1	6
Australia New Zealand Urogenital and Prostate Cancer Trials Group	Aneta Suder (Cancer Care Services)	ENZAMET Trial: A randomised phase 3 trial of enzalutamide in first line androgen deprivation therapy for metastatic prostate cancer	0 (in follow-up)	2

Lead Investigator Name (RBWH staff in bold)	Other Study Investigators (RBWH staff in bold)	Research Project Title	Number of RBWH Patients Recruited in 2021	Total number of RBWH Patients Recruited
Cooperative Trials Group for Neuro-oncology	Zarnie Lwin (Cancer Care Services)	ACED: Randomised phase II study of acetazolamide plus dexamethasone versus dexamethasone alone for management of cerebral oedema in recurrent or progressive high grade gliomas.	0 (in follow-up)	4
Cooperative Trials Group for Neuro-oncology	Zarnie Lwin (Cancer Care Services)	VERTU - Veliparib, Radiotherapy and Temozolomide 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 methyltransferase	0 (in follow-up)	25
Cooperative Trials Group for Neuro-oncology	Po-Ling Inglis (Cancer Care Services)	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	0	2
Australia New Zealand Breast Cancer Trials Group	Michelle Nottage (Cancer Care Services)	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 . PALLAS	0 (in follow-up)	20
Australia New Zealand Breast Cancer Trials Group	Po-Ling Inglis (Cancer Care Services)	Penelope B: Phase III study evaluating palbociclib (PD-0332991), a Cyclin-Dependent Kinase (CDK) 4/6 Inhibitor in patients with hormone-receptor-positive, HER2-normal primary breast cancer with high relapse risk after neoadjuvant chemotherapy	0 (in follow-up)	1
Australia New Zealand Breast Cancer Trials Group/Breast International Group	Michelle Nottage (Cancer Care Services)	TEXT-Bone: A substudy of the TEXT trial to evaluate serial bone markers for bone remodeling, serial growth factors, and bone mineral density	0 (in follow-up)	5
Australia New Zealand Breast Cancer Trials Group/Breast International Group	Michelle Nottage (Cancer Care Services)	TEXT: A Phase III Trial Evaluating the Role of Exemestane plus GnRH analogue as Adjuvant Therapy for premenopausal women with endocrine responsive breast cancer	0 (in follow-up)	11

Lead Investigator Name (RBWH staff in bold)	Other Study Investigators (RBWH staff in bold)	Research Project Title	Number of RBWH Patients Recruited in 2021	Total number of RBWH Patients Recruited
Australia New Zealand Breast Cancer Trials Group/Breast International Group	Michelle Nottage (Cancer Care Services)	An International multi-centre study of tamoxifen vs. Anastrozole in postmenopausal women with hormone sensitive ductal carcinoma in situ (DCIS) IBIS II	0 (in follow-up)	11
Australia New Zealand Breast Cancer Trials Group/ECOG-ACRIN	Po-Ling Inglis (Cancer Care Services)	TAILORx Program for the Assessment of Clinical Cancer Tests (PACCT-1): Trial Assigning Individualized Options for Treatment: The TAILORx Trial	0 (in follow-up)	1
Australia New Zealand Breast Cancer Trials Group/Breast International Group	Michelle Nottage (Cancer Care Services)	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	0 (in follow-up)	6
Walter and Eliza Hall Institute	Matthew Burge (Cancer Care Services)	Pancreatic cancer: Understanding Routine Practice and Lifting End results (PURPLE) A Prospective Pancreatic Cancer clinical registry	20	135
Australia New Zealand Urogenital and Prostate Cancer Trials Group	Jeffrey Goh (Cancer Care Services)	KEYPAD: Proposed phase 2 trial of pembrolizumab and denosumab in advanced clear-cell renal cell carcinoma (ccRCC) progressing after a VEGF-TKI	0	4
Australia New Zealand Urogenital and Prostate Cancer Trials Group	Jeffrey Goh (Cancer Care Services)	UNISoN - anzUp Nivo->Ipi+Nivo Sequential Non-clear cell - Proposed Phase II Sequential Cohort Trial Of Single Agent Nivolumab, Then Combination Ipilimumab + Nivolumab In Metastatic Or Unresectable Non-Clear Cell Renal	0 (in follow-up)	12
Australia New Zealand Urogenital and Prostate Cancer Trials Group	Jeffrey Goh (Cancer Care Services)	TheraP: A randomised phase 2 trial of 177 Lu-PSMA617 theranostic versus cabazitaxel in men with progressive metastatic castration resistant prostate cancer	0 (in follow-up)	26
Cooperative Trials Group for Neuro-oncology	Zarnie Lwin (Cancer Care Services)	NUTMEG: A Randomized Phase II Study of Nivolumab and TeMozolomide vs Temozolomide in newly diagnosed Elderly Glioblastoma	1	8
Australasian Gastrointestinal Trials Group	Matthew Burge (Cancer Care Services)	A randomised phase 2 study of Panitumumab monotherapy versus fluoropyrimidine and bevacizumab as first line therapy for RAS wild type metastatic colorectal cancer. (MONARCC study)	1	8

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Australia New Zealand Gynaecological Oncology Group	Jeffrey Goh (Cancer Care Services)	Phase II clinical trial of the PARP inhibitor, olaparib, in HR-deficient metastatic breast and relapsed ovarian cancer in patients without germline mutations in BRCA1 and BRCA2: The EMBRACE study.	2	2
Australia New Zealand Gynaecological Oncology Group/United Kingdom Medical Research Council	Jeffrey Goh (Cancer Care Services)	ICON 9: to assess the efficacy, safety and tolerability of maintenance cediranib in combination with olaparib therapy compared to single agent cediranib maintenance in women with relapsed platinum sensitive ovarian, fallopian tube or primary peritoneal cancer. (ANZGOG/UK MRC)	0	3
Australia New Zealand Gynaecological Oncology Group	Jeffrey Goh (Cancer Care Services)	iPRIME - A phase II study of durvalumab and tremilumumab in combination with carboplatin and paclitaxel, as neoadjuvant treatment for newly diagnosed, advanced high grade serous ovarian cancer (ANZGOG)	0	3
Australia and New Zealand Melanoma Trials Group	Melissa Eastgate (Cancer Care Services)	A Phase Ib/II Trial of Ipilimumab-Nivolumab-Denosumab and Nivolumab-Denosumab in Patients with Unresectable Stage III and IV Melanoma. (ANZMTG 01.15.) CHARLI	0	5
Australia and New Zealand Melanoma Trials Group	Melissa Eastgate (Cancer Care Services)	A randomised phase III study of duration of Anti-PD-1 therapy in metastatic melanoma (STOP-GAP) (ANZMTG)	1	2
Australian Lung Cancer Trials Group	Brett Hughes (Cancer Care Services)	NIVORAD - A randomised phase 2 trial of nivolumab and stereotactic ablative body radiotherapy in advanced non-small cell lung cancer, progressing after first or second line chemotherapy.	0 (in follow-up)	3
Australian Lung Cancer Trials Group/ European Thoracic Oncology Platform	Brett Hughes (Cancer Care Services)	STIMULI: Small cell lung carcinoma Trial with nivolumab and Ipili-MUab in Limited disease. A randomised open-label phase II trial of consolidation with nivolumab and ipilimumab in limited-stage SCLC after chemo-radiotherapy. (ALTG, ETOP)	0 (in follow-up)	2
Melbourne Health	Michelle Nottage (Cancer Care Services)	NOMINATOR: GENOMIC MATCHING TREATMENT FOR RARE CANCERS Feasibility of performing genomic testing of rare cancers to match the cancer to treatment.	0 (in follow-up)	37

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Australia New Zealand Urogenital and Prostate Cancer Trials Group	Jeffrey Goh (Cancer Care Services)	UNICAB: A phase II trial of single agent cabozantinib in patients with locally advanced or metastatic non-clear cell renal cell carcinoma post immunotherapy or who are unsuitable for immunotherapy (ANZUP 1802).	2	5
Australia New Zealand Gynaecological Oncology Group	Jeffrey Goh (Cancer Care Services)	MOCCA – A Multicentre Phase II randomised trial of MEDI4736 versus physician's choice chemotherapy in recurrent ovarian clear cell adenocarcinomas.	0 (in follow-up)	3
Bryan Day QIMR Berghofer Medical Research Institute	Po Ling Inglis , (Cancer Care Services), Rosalind Jeffree (Neurosurgery)	Novel Therapies for Brain Cancer		
Kate Roberts (Princess Alexandra Hospital), Ken O'Byrne (Queensland University of Technology),	Brett Hughes, Zarnie Lwin (Cancer Care Services)	A multi-institutional retrospective audit of patients with metastatic malignancy treated with nivolumab through the Open Access Scheme at the Princess Alexandra Hospital, the Royal Brisbane and Womens' Hospital, and The Prince Charles Hospital	Not applicable	Not applicable
Manoj Bhatt (Nuc Med)	David Wyld, Matthew Burge , (Cancer Care Services), Rahul Ladwa (PAH) Peter Garcia, David Pattison, Kevin Lee, Samuel Kyle, Nicholas Dowson, Jye Smith (Nuclear Medicine), Steven Goodman, Stephen Rose (CSIRO).	Pilot project to assess liver metastases by comparing novel, dynamic and static functional imaging, and also morphological imaging with standard of care in WHO Grade I and Grade II Neuroendocrine Tumour (NET).	Not applicable	Not applicable
University of New South Wales	David Wyld (Cancer Care Services), Robert Henderson (Neurology)	Peripheral Neuropathy in Chemotherapy-treated Patients: Predictors, Assessment strategies and Functional Outcomes IN FOCUS Study (Identifying Neurological and Functional Outcomes in Cancer Survivors Study)	0 (in follow-up)	59
University of New South Wales	David Wyld (Cancer Care Services), Robert Henderson (Neurology)	IN FOCUS: The use of duloxetine for the treatment of chemotherapy-induced peripheral neuropathy	3	4
Olivia Newton-John Cancer Research Institute	Po-Ling Inglis (Cancer Care Services)	A phase I safety and bioimaging trial of KB004 in patients with glioblastoma	0 (in follow-up)	2
Walter and Eliza Hall Institute	Zarnie Lwin (Cancer Care Services)	EX-TEM: Phase III Trial of Extended Temozolomide in Newly Diagnosed Glioblastoma (WEHI)	2	5

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Australia New Zealand Urogenital and Prostate Cancer Trials Group	Jeffrey Goh (Cancer Care Services)	ENZA-p: A phase 2 open label randomised trial of enzalutamide versus enzalutamide+ Lu PSMA 617, in the early mCRPC setting prior to chemotherapy (stratified for hormone sensitive chemo) in men at high risk of early treatment failure on enzalutamide alone. (ANZUP)	11	12
Australia New Zealand Gynaecological Oncology Group	Jeffrey Goh (Cancer Care Services)	AtTend: Phase III Double-Blind Randomized Placebo Controlled Trial of Atezolizumab in Combination with Paclitaxel and Carboplatin in Women With Advanced/Recurrent Endometrial Cancer (Atezolizumab Trial in Endometrial cancer - AtTend) (MaNGO, ANZGOG)	2	3
Cooperative Trials Group for Neuro-oncology	Zarnie Lwin (Cancer Care Services)	LUMOS: Low & Intermediate Grade Glioma Umbrella Study of Molecular Guided TherapieS – Pilot Study. (COGNO)	0	2
Cooperative Trials Group for Neuro-oncology	Zarnie Lwin (Cancer Care Services)	MAGMA Trial: The Multi-Arm GlioblastoMa Australasia Trial (COGNO)	9	11
Peter MacCallum Cancer Centre	David Wyld (Cancer Care Services)	NET SANGUIS: The potential role of circulating DNA in the management of neuroendocrine tumours.		
Southern Adelaide Local Health Network Incorporated	Matthew Burge (Cancer Care Services)	NEO-CREATE: Neoadjuvant Immune-Chemo-Radiotherapy in operable oEsophageal and gastro-oesophageal junction cancers with Carboplatin Paclitaxel Radiotherapy and Avelumab - a Trial assessing feasibility and preliminary Efficacy	4	6
Amanda Love (Endocrinology) Marianne Elston (NZ), Richard Carrol (NZ), Eva Segelov (Monash)	David Wyld (Cancer Care Services)	Assessment of hypopituitarism rates following peptide receptor radionuclide therapy for neuroendocrine tumours.	0 (in follow-up)	66 (study total. RBWH Numbers unavailable)
John Clouston (DMI) Roger Bain (DMI)	Nigel Mott (DMI), Ken Mitchell (DMI), Karin Steinke (DMI), Sam Davis (DMI) Melissa Eastgate (CCS)	The Metro North Interventional Oncology database: a prospective observational cohort study examining outcomes for interventional oncology procedures.		

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Sunil Lakhani (University of Queensland) Amy Reed (UQCCR), Christopher Pyke (Mater), Cameron Snell (Mater), Nicole McCarthy (Wesley), Ken O'Byrne (PAH), Valentine Hyland (Pathology), Owen Ung (Surgery), Natasha Woodward (Mater), Euan Walpole (PAH), Peter Simpson (UQ), Stephen Rose (CSIRO), Fares Al-Ejeh (QIMR),	Po-Ling Inglis, Ben Green (Cancer Care Services)	High risk breast cancer genomic sequencing project platform Queensland wide		
Patsy Yates (Palliative Care)	David Wyld (Cancer Care Services), Kimberly Alexander, Christine Miaskowski, Raymond Chan, Alexandra McCarthy, Steven McPhail, Helen Skerman	A sequential multiple assignment randomised trial (SMART) of nursing interventions to reduce pain associated with chemotherapy induced peripheral neuropathy		
Teresa Brown (Nutrition and Dietetics)	Judy Bauer (University of Queensland), Brett Hughes (Cancer Care Services) Elizabeth Ahern (Cancer Care Services)	"Sarcopenia in HNSCC patients undergoing definitive concurrent CRT and associations with clinical outcomes"		
Breast Cancer Trials. Austrian Breast & Colorectal Cancer Study Group (ABCSG).	Michelle Nottage, Po-Ling Inglis (Cancer Care Services)	BRCA-P. A Randomized, Double-Blind, Placebo-Controlled, Multi-Center, International Phase 3 Study to determine the Preventive Effect of Denosumab on Breast Cancer in Women carrying a BRCA1 Germline Mutation	1	1
Australia New Zealand Urogenital and Prostate Cancer Trials Group	Aneta Suder (Cancer Care Services)	UPFRONT PSMA. A Randomised Phase 2 Study of Sequential 177Lu-PSMA617 and Docetaxel versus Docetaxel in Metastatic Hormone-Naïve Prostate Cancer.	4	4
Hao-Wen Sim, Helen Wheeler, Kathryn Field, David Espinoza, Michael Buckland, Kimberly Kaufman	Zarnie Lwin, Benjamin Chua (Cancer Care Services)	PICCOG: PARP and Immune Checkpoint inhibitor Combination for relapsed IDH-mutant high-grade Glioma	Not available	Not available
Colleen Nelson (PAH)	Brett Hughes, Zarnie Lwin, Elizabeth Ahern , Margot Lehman (PAH), Maggie Fung (PAH), Lidija Janovic (PAH), Irina Oleinikova (PAH), Simon Wood (PAH), Morgan Pokorny (PAH)	Liquid lung Biopsy: Laboratory Based Study of Circulating Tumour Cells in Human Blood	0 (in follow-up)	15

Lead Investigator Name (RBWH staff in bold)	Other Study Investigators (RBWH staff in bold)	Research Project Title	Number of RBWH Patients Recruited in 2021	Total number of RBWH Patients Recruited
Alex Broom (UNSW)	Zarnie Lwin (CCS) Emma Kirby (UNSW), David Wyld (CCS) Renata Kokanović (Monash University), Jonathan Adams (UTS), Eng-Siew Koh (Liverpool Hospital), Paul de Souza (Liverpool Hospital) Lisa Woodland (Multicultural Health Service)	Cultural biographies, medical knowledges: A sociological study at the intersection of cancer and culture	Not available	Not available
Peter MacCallum Institute	David Wyld (CCS), Melissa Eastgate (CCS)	GoTHAM: A Merkel Cell Carcinoma (MCC) study testing the immunotherapy drug Avelumab in combination with either radionuclide therapy or external beam radiotherapy	1	1
Peter MacCallum Institute	Melissa Eastgate (CCS)	03.18 I-MAT Trial - A randomised, placebo-controlled, phase II trial of adjuvant Avelumab in patients with stage I-III Merkel cell carcinoma	3	4
Walter and Eliza Hall Institute	Anna Kuchel (CCS), Jeffrey Goh (CCS)	iTestis: Bioinformatics for Testis Cancer	10	10
Prostate Cancer Clinical Trials Consortium, LLC (PCCTC)	Jeffrey Goh (CCS), Aneta Suder (CCS), Natasha Roberts (CCS)	IRONMAN: International registry for men with advanced prostate cancer	Not available	Not available
William McGahan (Surg)	Matthew Burge (CCS)	A retrospective review of outcomes of patients who participated in the PET/CT pancreas study	Not applicable	Not applicable
William McGahan (Surg)	Matthew Burge (CCS)	A retrospective review of the patterns of care in patients with pancreatic cancer in the Metro-North Health District	Not applicable	Not applicable
Unicorn Foundation	David Wyld (CCS)	An Observational, Multi-centre, Non-Interventional Programme to Register Patients Diagnosed With Neuroendocrine Neoplasms (NENs) and Monitor their Patterns of Care in Australian Hospitals. Planet Registry	11	11
BioGrid Australia	Michelle Nottage	Study of the clinical outcomes and analysis of anti-HER2 therapy in treatment of metastatic HER2 positive breast cancer. TABITHA	0	21
BioGrid Australia	Jeffrey Goh (CCS)	Analyzing Treatment Patterns and Outcomes from Real-World Patients with Castrate-Resistant Prostate Cancer (CRPC). ePAD	14	27
BioGrid Australia	Matthew Burge	Study of Clinical Outcomes and Analysis of Bevacizumab use in Metastatic Colorectal Cancer. TRACC	33	196

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Wessling C, Gavin N,	Russell E, Glynn T, Eastgate M , Hajkowicz K, Klages P, Leutenegger J, Sandler C, Clark B, Hutchinson E, Sutherland A,	A Randomised Controlled Trial exploring the administration of intravenous antibiotics and fluids via intravenous pole and pump versus portable CADD pump to improve mobility in patients diagnosed with cancer (The Active Trial)	Not available	Not available
Walter and Eliza Hall Institute	Michelle Nottage	Advanced Hormone Receptor Positive Breast Cancer Registry in Australia (ARORA)	11	11
Cooperative Trials Group for Neuro-oncology	Po-Ling Inglis	Outcomes and patterns of care in adult medulloblastoma	Not available	Not available
Connor O'Leary, (PAH),	Ken O'Byrne (PAH), Derek Richard (QUT), Elizabeth McCaffrey (PAH), Mark Adams (QUT), Arutha Kulasinghe (QUT), Brett Hughes (CCS) , Rahul Ladwah (PAH), Josh Burges (QUT)	Identification and clinical validation of potential cancer biomarkers	Not available	Not available
Australia New Zealand Breast Cancer Trials Group	Po-Ling Inglis (CCS)	A double-blind placebo controlled randomized phase iii trial of fulvestrant and ipatasertib as treatment for advanced her-2 negative and estrogen receptor positive (er+) breast cancer following progression on first line cdk 4/6 inhibitor and aromatase inhibitor (FINER)	0	0
Australia New Zealand Gynaecological Oncology Group	Jeffrey Goh (CCS)	Adjuvant Tislelizumab plus chemotherapy after post-operative pelvic chemoradiation in high risk endometrial cancer: the ADELE study	0	0
Australia New Zealand Gynaecological Oncology Group	Jeffrey Goh (CCS)	PARAGON-II: Phase 2 basket study of an ARomatase inhibitor plus PI3KCA inhibitor or CDK4/6 inhibitor in women with hormone receptor positive recurrent/metastatic Gynaecological Neoplasms.	0	0
Walter and Eliza Hall Institute Stafford Fox Rare Cancer Program	Po-Ling Inglis (CCS)	Discovery of novel therapeutic targets within the biology of rare cancers	0	0
Peter MacCallum Institute	Anna Kuchel (CCS)	SUPER-NEXT: Complete Whole Genome Sequencing for Cancer of Unknown Primary	0	0
Australia New Zealand Urogenital and Prostate Cancer Trials Group	Jeffrey Goh (CCS)	Phase II Study of Radionuclide ¹⁷⁷ Lu-PSMA Therapy versus ¹⁷⁷ Lu-PSMA in Combination with Ipilimumab and Nivolumab for Men with Metastatic Castration Resistant Prostate Cancer (mCRPC). EVOLUTION.	0	0

Research Publications

Publications in 2021

Journal Articles (RBWH staff in bold)

1. **Ahern E**, Allen MJ, Schmidt A, **Lwin Z**, **Hughes BGM**. Retrospective analysis of hospital admissions due to immune checkpoint inhibitor-induced immune-related adverse events (irAE). *Asia-Pacific J Clinical Oncology*. 2021 Jun 09. [Internet] doi.org/10.1111/ajco.13350
2. **Ahern E**, Solomon BJ, Hui R, Pavlakis N, O'Byrne K, **Hughes BGM**. Neoadjuvant immunotherapy for non-small cell lung cancer: right drugs, right patient, right time? *J Immunother Cancer*. 2021 Jun;9(6):e002248. doi: 10.1136/jitc-2020-002248.
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9. Clamp AR, Lorusso D, Oza AM, Aghajanian C, Oaknin A, Dean A, Colombo N, Weberpals JI, Scambia G, Leary A, Holloway RW, Gancedo MA, Fong PC, **Goh JC**, O'Malley DM, Armstrong DK, Banerjee S, García-Donas J, Swisher EM, Cameron T, Goble S, Coleman RL, Ledermann JA. Rucaparib maintenance treatment for recurrent ovarian carcinoma: the effects of progression-free interval and prior therapies on efficacy and safety in the randomized phase III trial ARIEL3. *Int J Gynecol Cancer* 2021 Jul 13;31:949–958. doi:10.1136/ijgc-2020-002240 Epub 2021 Jun 8
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18. Gan HK, **Burge M**, Solomon B, Lee ST, Holen KD, Zhang Y, Ciprotti M, Lee FT, Manusinghe W, Fischer J, Ansell P, Fox G, Xiong H, Reilly EB, Humerickhouse R, Scott AM. A Phase 1 and Biodistribution Study of ABT-806i, An Indium-111 Radiolabeled Conjugate of the Tumor-Specific Anti-EGFR Antibody ABT-806. *J Nucl Med.* [Internet] 2021 Jan 28;jnumed.120.253146. doi: 10.2967/jnumed.120.253146
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Cancer Care Pharmacy

Cancer Care Pharmacy started regular “research and education” meeting this year. In addition to the existing pharmacy residency, we now have advanced pharmacy residency program that include research projects. CCS pharmacy research was very active this year, with two publications and number of national/ international presentations listed below.

Research Grants

Investigator Names (RBWH staff in bold)	RBWH Departments / Research Groups	Research Project Title	Granting Body	Total Awarded (whole all years)	Length of Awards in years and years active
Midori Nakagaki	Pharmacy/ Cancer Care	Improving oral mucositis management in patients undergoing haematopoietic stem cell transplantation	RBWH Foundation (Scholarship)	\$116,585	3 yrs 2019-2021

Current RBWH Department / Research Group Led Research Activity

Lead Investigator Name (RBWH staff in bold)	Other Study Investigators (RBWH staff in bold)	Research Project Title	Number of RBWH Patients Recruited in 2021	Total number of RBWH Patients Recruited
Midori Nakagaki, Glen Kennedy	Nicole Gavin, Karen Whitfield, Alexandra Clavarino	A Randomised Trial of Topical Polaprezinc to Prevent Oral Mucositis in Patients Undergoing Haematopoietic Stem Cell Transplantation (ToPaZ Study)	71	71
Danielle Silvestro	Vivian Day, Grant Partridge	Implementation and assessment of competency standards for key skill requirements for RBWH Cancer Care staff	N/A	N/A
Midori Nakagaki	Nicole Gavin, Karen Whitfield, Alexandra Clavarino, Glen Kennedy	A real-world accuracy of oral mucositis grading in patients undergoing hematopoietic stem cell transplantation	Retrospective study	
Midori Nakagaki	Nicole Gavin, Karen Whitfield, Alexandra Clavarino, Glen Kennedy	The incidence of severe oral mucositis and taste disturbance in patients undergoing different hematopoietic stem cell transplantation regimens	Retrospective study	
Midori Nakagaki	Nicole Gavin, Therese Hayes, Rebecca Fichera, Caroline Stewart, Leonie Naumann, Justine Brennan, Natasha Perry, Emma Foley, Erin Crofton, Christie Brown, Jenni Leutenegger, Glen A Kennedy	Implementation and evaluation of a nurse- allied health clinic for patients after allogeneic haematopoietic stem cell transplantation	Completed	
Melissa Jensen	Shannon Pallett	Assessing Pentamidine usage as Pneumocystis jiroveci Prophylaxis (PJP) in Royal Brisbane and Women's Hospital Cancer Care Population: A Quality Assurance Project	Retrospective audit Completed	
Midori Nakagaki,	Jessica McIlwain, Fang Min Foo	Initial dose of Ciclosporin A in obese patients undergoing haematopoietic stem cell transplantation: Safety of actual weight based dosing	Retrospective Audit	

Lead Investigator Name (RBWH staff in bold)	Other Study Investigators (RBWH staff in bold)	Research Project Title	Number of RBWH Patients Recruited in 2021	Total number of RBWH Patients Recruited
Midori Nakagaki, Laura Kurucz	Paul Klages, Nicole Gavin, Kieren Barker, Vivian Day	Routine scheduling of post-bone marrow transplant vaccination at the Post-BMT outpatient clinic	Service improvement	

Research Publications

Publications in 2021

Journal Articles (RBWH staff in bold)

1. **Midori Nakagaki, Nicole C. Gavin, Therese Hayes, Rebecca Fichera, Caroline Stewart, Leonie Naumann, Justine Brennan, Natasha Perry, Emma Foley, Erin Crofton, Christie Brown, Jenni Leutenegger, Glen A. Kennedy.** Implementation and evaluation of a nurse-allied health clinic for patients after haematopoietic stem cell transplantation. Supportive Care in Cancer 2021
<https://doi.org/10.1007/s00520-021-06461-w>
2. **Midori Nakagaki, Nicole C Gavin,** Alexandra Clavarino, **Glen A Kennedy, Karen Whitfield:** A real-world accuracy of oral mucositis grading in patients undergoing hematopoietic stem cell transplantation. Support Care Cancer, 2021. DOI: 10.1007/s00520-021-06654-3

Radiation Oncology



Dr Graeme Dickie
Director Radiation Oncology

Staff from the Radiation Oncology team were well represented at the Engineering and Physical Sciences in Medicine Conference, 7th to 10th November 2021 at the Brisbane Convention & Exhibition Centre, Brisbane, Australia.

Alex Livingstone was awarded Best Oral Presentation Prize for “Clinical implementation of a quality assurance program for #D printed devices”.

Scott Crowe was awarded Best Poster Presentation Prize for “Listing of patient-matched 3D-printed radiotherapy bolus on the Australian Register of Therapeutic Goods”.

Prof Lizbeth Kenny was an invited speaker “Standards and Ethics in AI, where we have come from and why we are so passionate”.

Research Awards and Achievements

Recipient (RBWH staff in bold)	Award	Event
Amelia Brink	Inaugural 2021 Crestani Foundation Grant recipient	ASMIRT (Australian Institute of Medical Imaging and Radiation Therapy) award
Alex Livingstone	Best Oral Presentation Prize, for <i>Clinical implementation of a quality assurance program for 3D printed devices</i>	Engineering and Physical Sciences in Medicine, Brisbane, Australia, 2021.
Scott Crowe	Best Poster Presentation Prize for <i>Listing of patient-matched 3D-printed radiotherapy bolus on the Australian Register of Therapeutic Goods</i>	Engineering and Physical Sciences in Medicine, Brisbane, Australia, 2021.

Research Grants

Investigator Names (RBWH staff in bold)	RBWH Departments / Research Groups	Research Project Title	Granting Body	Total Awarded (whole all years)	Length of Awards in years and years active
Tanya Kairn, Susannah Cleland, Philip Chan, Benjamin Chua, Scott Crowe, Jodi Dawes, Lizbeth Kenny, Charles Lin, Rob McDowall, Tania Tutaki	Radiation Oncology Cancer Care	Anatomical displacements from oral positioning stents	HIRF	\$2000, in-kind	2021

Investigator Names (RBWH staff in bold)	RBWH Departments / Research Groups	Research Project Title	Granting Body	Total Awarded (whole all years)	Length of Awards in years and years active
Scott Crowe, Paul Charles, Elise Obereigner, Rachael Wilks, Lee Heseltine, Graeme Dickie, Catherine Bettington, Philip Chan, Steven Sylvander, Tanya Kairn, Glen Kennedy	CCS DRO	Improving radiation oncology with 3D printing and Biofabrication	Herston Biofabrication Institute program grant	\$515,000	2019-2022
Arutha Kulasinghe, Brett Hughes, Lizbeth Kenny, Ken O'Byrne, Chamindie Punyadeera	CCS DRO, DMO	Identification of predictive biomarkers for immune checkpoint blockade in head and neck cancer	Garnette Passe and Rodney Williams Memorial Foundation	\$367,500	30/6/2020-29/6/2023
Charles Lin	CCS DRO	A prospective study investigating the efficacy and toxicity of definitive chemoradiotherapy and immunotherapy (CRIO) in locally and / or regionally advanced cutaneous squamous cell carcinoma	Astra Zeneca	\$211 000.15	2017-2021
Arutha Kulasinghe, Lizbeth Kenny, Ken O'Byrne, Brett Hughes, Ashani Weeraratna, Chamindie Punyadeera, Gaddy Getz, Majid Warkiani, Paul Leo	CCS DRO, DMO	Multidimensional spatial profiling of the tumour microenvironment and liquid biopsy to determine response to immunotherapy.	Cancer Australia and Cure Cancer (Priority driven Early Career Researcher Category)	\$100 000	30/06/2020 – 29/06/2021
Brown T, Hwang L, Treleaven E, Hughes B, Kenny L, Lin C, Webb P, Pelecanos A, Bauer J	CCS DRO	A feasibility study to investigate taste changes and their association with genes and dietary behaviour in patients with head and neck cancer - fellowship application	Royal Brisbane and Women's Hospital	\$91 576	2020-2022
Graeme Dickie	CCS DRO	QCOG Cancer Clinical Trial Data Manager Grant	Queensland Clinical Oncology Group	\$72 000	2021
Benjamin Chua, Rosalind Jeffree, Chamindie Punyadeera, Bryan Day, Paul Leo, Gunter Hartel, Juliana Muller Bark	CCS DRO	The use of non-invasive biomarkers in glioblastoma	RBWH foundation	\$49 999.21	2021

Investigator Names (RBWH staff in bold)	RBWH Departments / Research Groups	Research Project Title	Granting Body	Total Awarded (whole all years)	Length of Awards in years and years active
Rachael Wilks	CCS DRO	Improving vaginal brachytherapy treatments by personalization using 3D printing (Application ID RBWH -PG-2021-096)	RBWH	\$39 633	2020 (2021)
Emilie Eadie, Brianna McCoola	CCS DRO (Radiation Therapy only)	Harnessing multi-media to provide patient education to tech savvy Adolescent and Young Adult cancer patients prior to Radiation Therapy	CAHRLI	\$5640.00	2020-2021
Jemma Blyth, Amelia Brink, Michelle Grogan, Emily Simpson-Page, Naasiha Cassim, Cathy Hargrave, Scott Crowe	CCS DRO	Evaluation of a commercially available treatment bra during radiation therapy for breast cancer patients with large or pendulous breasts	CCS Trust Management Committee	\$5000	2021-2022
Rachael Wilks, Scott Crowe, Tanya Karin, Philip Chan, Robyn Cheuk	CCS DRO	Design of a patient-matched vaginal applicator for brachytherapy treatments	HIRF Project Support Scheme	\$3 000	2021-2022
Tanya Kairn, Susannah Cleland, Philip Chan, Benjamin Chua, Scott Crowe, Jodi Dawes, Lizbeth Kenny, Charles Lin, Rob McDowall, Tania Tutaki	Radiation Oncology Cancer Care	Anatomical displacements from oral positioning stents	HIRF	\$2000, in-kind	2021
Andrew Fielding, Steven Sylvander	CCS, QUT	PET/MRI Flex coils / interface for radiotherapy treatment planning	RBWH PPTF Education, Training & Research Funding	\$21,000	2020- 2021
Jennifer Edmunds	CCS DRO	ANZUP	ANZUP ASM Study Coordinator's Scholarship	\$200	2021

Investigator Names (RBWH staff in bold)	RBWH Departments / Research Groups	Research Project Title	Granting Body	Total Awarded (whole all years)	Length of Awards in years and years active
K Fong, I Yang, H Marshall, R Bowman, R O'Rourke, P Valery, E Stone, R Manser, K Canfell, M Weber, G Garvey, S Lam, M Tammemagi, S Sabesan, Z Otty, F Brims, A McWilliams, B Page, J De Laat, S Hambleton, G Pratt, P Chan , M Windsor, R Naidoo, B Hughes, Z Lwin, K Hopcraft, M Toombs, P Fogart, P Tobias, B Bartholmai, F Maldonado, F Martignano, S Conticello, P Grogan, L Passmore, A Dent, G Olive, B Parris, H O'Farrell, K Chee	MNH, DRO, DMO	Improving outcomes for people with and at risk of lung cancer	Australian Cancer Research Foundation (ACRF)	\$2000000	2022-

Current RBWH Department / Research Group Led Research Activity

Lead Investigator Name (RBWH staff in bold)	Other Study Investigators (RBWH staff in bold)	Research Project Title	Number of RBWH Patients Recruited in 2021	Total number of RBWH Patients Recruited
Marcus Hu	Robyn Cheuk , John Yaxley, John Mackean	Review of outcomes from salvage HDR brachytherapy for localised prostate recurrence.	0	0
Philip Chan	Paul Thomas, Robyn Cheuk , Michelle Grogan , Graeme Dickie	Prognostic Value of Assessing Hypoxia in Tumours Using 18FMISO PET During a Course of Radiation Therapy – Proof of Concept Study	0	3
Benjamin Chua	Lindy Jeffree, Chamindie Punyadeera, Zarnie Lwin, Juliana Muller Bark, Yunxia Wan, Arutha Kulasinghe, Xi Zhang, Kai Tang, Bryan Day (QIMR)	The use of non-invasive biomarkers in glioblastoma: A pilot study	7	27
Scott Crowe	Paul Charles , Elise Obereigner , Tania Tutaki, Jenna Luscombe , Rachael Wilks , Lee Heseltine , Graeme Dickie , Catherine Bettington , Philip Chan , Steven Sylvander , Tanya Kairn	Improving radiation oncology with 3D printing and Biofabrication	N/A	N/A (~50 in HREC approved study so-far – retrospective).

Lead Investigator Name (RBWH staff in bold)	Other Study Investigators (RBWH staff in bold)	Research Project Title	Number of RBWH Patients Recruited in 2021	Total number of RBWH Patients Recruited
Scott Crowe	Tanya Kairn , Katie McMahon (HIRF), Louise Campbell (HIRF), Clare Berry (HIRF)	Characterisation of anatomical variations in the central nervous system	0	13
Graeme Dickie	Philip Chan, Rachael Wilks	Pulse Dose Rate Brachytherapy for cervix cancer, Royal Brisbane and Women's Hospital review	0	202
Alice Grigg	Catriona Hargrave	Retrospective evaluation of cardiac reduction between free-breathing (FB) and deep inspiration breath-hold (DIBH) radiation therapy for left-sided breast cancer patients	0	20
Charles Lin	Benjamin Chua, Lizbeth Kenny , Michelle Nottage, Brett Hughes, Michele Teng, Paul Thomas	A prospective study investigating the efficacy and toxicity of definitive chemo-radiation and immunotherapy (CRIO) in locally and / or regionally advanced cutaneous squamous cell carcinoma	5 consented 5 registered	15
Charles Lin	Charles Lin, Megan Carroll , Ryan Somerville, Sarah Grigg	Carcinoma of Head and Neck with Perineural spread: Outcomes After Skull Base Surgery and Adjuvant Radiotherapy		
Anthony Pagidas, Adrian Celati	Jemma Blyth, Michelle Grogan, Allison Dry , Catriona Hargrave	A Retrospective examination of changes in breast seroma volume and the feasibility of implementing simultaneous integrated boost in the treatment of breast cancer	0	40
Teague Moloney	Allison Dry, Kate Stewart , Cathy Hargrave	Clinical considerations for Computed Tomography (CT) acquisition and treatment verification for patients with Gastrointestinal/Endobiliary stents	20	20
Kate Stewart	Amelia Brinks, Catriona Hargrave	Comparison of Dose Estimation Methods utilising Cone Beam CT images of patients receiving Radiation Therapy to Prostate and Head& Neck regions	0	40
Jemma Walsh (nee Devereaux)	Jemma Blyth , Elena Blyth, Gregory Rattray , Catriona Hargrave, Lisa Nissin, Julie Burbery	DIBH (Deep Inspiration Breath Hold)-BREaST Trial. Breath Hold Respiratory Endurance & Spirometry Training	27	28
Jürgen Götz (UQ Queensland Brain Institute)	Benjamin Chua, Rob McDowall	Therapeutic Ultrasound for the Treatment of Brain Disorders		
Henry Marshall	Benjamin Chua, Luke Nicholls , Rishendren Naidoo, Katrina Hopcraft	CT screening for lung cancer in patients with chronic obstructive pulmonary disease		
Brianna McCoola, Julie-Anne Outhwaite	Cathy Hargrave	An Evaluation of a Paediatric Oncology model of Care to decrease anaesthesia rates	0	250
Emilie Eadie	Jenna Luscombe , Andy Huang, Brianna McCoola	AYA Patient Treatment Education Material development	N/A	N/A

Lead Investigator Name (RBWH staff in bold)	Other Study Investigators (RBWH staff in bold)	Research Project Title	Number of RBWH Patients Recruited in 2021	Total number of RBWH Patients Recruited
Scott Crowe	Susie Cleland, Sarah Maxwell , Tania Tutaki, Paul Charles , Tanya Kairn	Evaluation of 3D scanning systems for radiotherapy use	N/A (24 healthy volunteers)	N/A
Tanya Kairn	Philip Chan , Benjamin Chua , Scott Crowe , Jodi Dawes , Lizbeth Kenny , Charles Lin , Rob McDowall , Tania Tutaki	Anatomical displacements from oral positioning stents	N/A (1 healthy volunteer)	N/A
Liting Yu	Tanya Kairn , Alex Livingstone , Scott Crowe , Jamie Trapp	Structure based dose distribution comparison	N/A (retrospective)	N/A
Lili Nguyen , Michelle Parkinson	Michael Gray , Teague Moloney, Stacey Cooke , Brianna McCoola	Retrospective analysis of motion management strategies for patients receiving abdominal or thoracic radiation therapy treatment and addressing its feasibility to guide standard practice	N/A (retrospective)	N/A
Emma Liddy , Brodie Millsom	Christopher Walsh , Kate Stewart	Retrospective dosimetric comparison of Helical TomoTherapy and VMAT gated DIBH treatment techniques for patients receiving LT/RT sided breast radiotherapy with nodal involvement	N/A (retrospective)	N/A
Jemma Blyth , Amelia Brink	Michelle Grogan , Emily Simpson-Page , Naasiha Cassim , Cathy Hargrave, Scott Crowe	Evaluation of a commercially available treatment bra during radiation therapy for breast cancer patients with large or pendulous breasts	N/A (HREA submitted)	N/A
Rachael Wilks	Scott Crowe , Tanya Kairn , Philip Chan , Robyn Cheuk	Design of a patient-matched vaginal applicator for brachytherapy treatments	N/A (HREA submitted)	N/A
Emilie Crosier	Alice Grigg , Teresa Brown , Judy Bauer , Jeffrey Goh , Phillip Chan	"Dietary counselling to increase soluble fibre in patients with gynaecological cancer undergoing pelvic radiotherapy: a feasibility study."	5	5

Collaborative Research Activity Involving RBWH Department / Research Group

Lead Investigator Name (RBWH staff in bold)	Other Study Investigators (RBWH staff in bold)	Research Project Title	Number of RBWH Patients Recruited in 2021	Total number of RBWH Patients Recruited
Eric Hau	Catherine Bettington (CCS DRO)	TROG 20.01 A phase II study of platinum and etoposide chemotherapy, durvalumab with thoracic radiotherapy in the first line treatment of patients with extensive-stage small-cell lung cancer	n/a	n/a
Andrew Scott Eng-Siew Koh	Benjamin Chua (CCS DRO)	TROG 18.06 Prospective, multicentre trial evaluating FET-PET in Glioblastoma	0	0

Lead Investigator Name (RBWH staff in bold)	Other Study Investigators (RBWH staff in bold)	Research Project Title	Number of RBWH Patients Recruited in 2021	Total number of RBWH Patients Recruited
Steven David	Robyn Cheuk (CCS DRO)	Stereotactic Ablative Radiotherapy for Oligoprogressive ER-positive Breast Cancer (AVATAR)	0	0
Alison Brand	Philip Chan (CCS DRO)	VESPA A phase II pilot study of the use of vaginal oestriol to prevent vaginal stenosis in patients treated with radiotherapy for gynaecological, rectal and anal malignancies	3	3
Christopher Sweeney, Tamim Niazi	Philip Chan (CCS DRO)	DASL-HiCaP: Darolutamide Augments Standard Therapy for Localized High-Risk Cancer of the Prostate (ANZUP1801). A randomized phase 3 trial of adding darolutamide to androgen deprivation therapy and definitive or salvage radiation in high risk, clinically localized prostate cancer	7 consented 7 randomised	10
Danny Rischin	Charles Lin (CCS DRO)	A Randomized, Placebo-Controlled, Double-Blind Study of Adjuvant Cemiplimab Versus Placebo after Surgery and Radiation Therapy in Patients with High Risk Cutaneous Squamous Cell Carcinoma	2 consented 1 randomised	4
Stephen Ackland	Mathew Burge (CCS MO) Graeme Dickie (CCS DRO)	A randomised, placebo-controlled phase II trial of simvastatin in addition to standard chemotherapy and radiation in preoperative treatment for rectal cancer (SPAR)	1	7
Sherene Loi	Robyn Cheuk (CCS DRO) Michelle Grogan (CCS DRO)	TROG 17.05 A randomised phase II trial comparing the efficacy of single fraction or multi-fraction SABR (Stereotactic ablative body radiotherapy) with Atezolizumab in patients with advanced Triple negative breast Cancer (AZTEC)	1 consented 1 randomised	4
Michael Jenkinson	Catherine Bettington (CCS DRO)	TROG 15.02 Radiation versus Observation following surgical resection of Atypical Meningioma: a randomised controlled trial	1	2
Vincent Grégoire	Lizbeth Kenny (CCS DRO)	TROG 14.03 (EORTC-1219-ROG-HNCG) A blind randomized multicenter study of accelerated fractionated chemoradiotherapy 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	0	5

Lead Investigator Name (RBWH staff in bold)	Other Study Investigators (RBWH staff in bold)	Research Project Title	Number of RBWH Patients Recruited in 2021	Total number of RBWH Patients Recruited
Danny Rischin	Lizbeth Kenny (CCS DRO)	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	0	52
Chamindie Punyadeera	Lizbeth Kenny (CCS DRO)	A simple saliva test to diagnose head and neck cancer at an early stage - head and neck cancer detection is a spitting distance away	8	273
Rajiv Khanna	Lizbeth Kenny (CCS DRO)	Development of an Adoptive T Cell Therapy for HPV-Associated Malignancies (P2191)	9	53
David Pryor	Charles Lin (CCS DRO)	TROG 16.03: A multi stage multi centre international randomised trial of Conventional care Or Radioablation (stereotactic body radiotherapy) for Extra-cranial oligometastatic disease in lung, breast and prostate cancer (CORE)	0	2
Shankar Siva	Charles Lin (CCS DRO)	TROG 15.03 Focal Ablative STereotactic RADiosurgery for Cancers of the Kidney - A Phase II Clinical Trial (FASTRACK II)	0	1
Shankar Siva	Catherine Bettington (CCS DRO)	TROG 13.01 Stereotactic Ablative Fractionated Radiotherapy versus Radiosurgery for Oligometastatic Neoplasia to the Lung: A Randomised Phase II Trial (SAFRON II)	0	1
Scott Williams, Paul Nguyen	Philip Chan (CCS DRO)	Randomised phase 3 trial of enzalutamide in androgen deprivation therapy with radiation therapy for high risk, clinically localised, prostate cancer: ENZARAD	0	10
Kumar Gogna	Catherine Bettington (CCS DRO)	A single arm, prospective Phase II study of Split-Course Pelvic Radiotherapy for Locally Progressive, Castrate Resistant Prostate Cancer (SPLIT COURSE)	0	1
Margot Lehman	Philip Chan (CCS DRO)	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 (P-LUNG)	0	2

Lead Investigator Name (RBWH staff in bold)	Other Study Investigators (RBWH staff in bold)	Research Project Title	Number of RBWH Patients Recruited in 2021	Total number of RBWH Patients Recruited
Peter Graham	Robyn Cheuk (CCS DRO)	TROG 08.06 A randomised comparison of anastrozole commenced before and continued during adjuvant radiotherapy for breast cancer versus anastrozole and subsequent anti-oestrogen therapy delayed until after radiotherapy. (STARS - Study of Anastrozole and Radiotherapy Sequencing)	0	75
Maria Pearce	Charles Lin (CCS DRO)	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 (RAVES)	0	4
Boon Chua	Lizbeth Kenny (CCS DRO)	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	0	3

Research Publications

Publications in 2021

Journal Articles (RBWH staff in bold)

- Wong BZY, **Dickie G**, Garcia P, Scott D, Pattison DA. 124I-PET/CT-Guided Diagnosis and Personalized Treatment of Metastatic Papillary Thyroid Cancer to the Pancreas. Clin Nucl Med. 2021 Apr 1;46(4):337-339. doi: 10.1097/RLU.0000000000003499
- Kairn T**, Lathouras M, Grogan M, Green B, Sylvander SR, Crowe SB. Effects of gas-filled temporary breast tissue expanders on radiation dose from modulated rotational photon beams. Med Dosim. 2021 Spring;46(1):13-20. doi: 10.1016/j.meddos.2020.06.003. Epub 2020 Jul 10.
- Kulasinghe A, Taheri T, O'Byrne K, Hughes BGM, **Kenny L**, Punyadeera C. Highly Multiplexed Digital Spatial Profiling of the Tumor Microenvironment of Head and Neck Squamous Cell Carcinoma Patients. Front Oncol. 2021 Jan 19;10:607349. doi: 10.3389/fonc.2020.607349. eCollection 2020.
- Lim Y, Tang KD, Karpe AV, Beale DJ, Totsika M, **Kenny L**, Morrison M, Punyadeera C. Chemoradiation therapy changes oral microbiome and metabolomic profiles in patients with oral cavity cancer and oropharyngeal cancer. Head Neck. 2021 Feb 2. doi: 10.1002/hed.26619.
- Crowe SB**, **Charles PH**, **Cassim N**, **Maxwell SK**, **Sylvander SR**, **Smith JG**, **Kairn T**. Predicting the required thickness of custom shielding materials in kilovoltage radiotherapy beams. Physica Medica 2021 Jan;81:94-101. doi: 10.1016/j.ejmp.2020.12.008
- Yu L**, **Kairn T**, Trapp JV, **Crowe SB**. Comparison of global and local gamma evaluation results using isodose levels. Physical and Engineering Sciences in Medicine 2021 Mar;44(1):201-206. doi: 10.1007/s13246-020-00968-y
- Charles PH**, **Crowe SB**, **Kairn T**. Recommendations for simulating and measuring with biofabricated lung equivalent materials based on atomic composition analysis. Physical and Engineering Sciences in Medicine 2021 Mar;44(1):331-335. doi: 10.1007/s13246-021-00979-3
- Aland T, Jarema T, Trapp JV, **Kairn T**. Patient-specific quality assurance on a Varian Halcyon linear accelerator using a PTW Octavius 4D device. Phys Eng Sci Med. 2021; 44:565-572. doi: 10.1007/s13246-021-00986-4
- Arnfield EG, Thomas PA, Roberts MJ, Pelecanos AM, Ramsay SC, **Lin CY**, Latter MJ, Garcia PL, Pattison DA. Clinical insignificance of [18 F]PSMA-1007 avid non-specific bone lesions: a retrospective evaluation. Eur J Nucl Med Mol Imaging. 2021 Jun 16. doi: 10.1007/s00259-021-05456-3. Online ahead of print.

Journal Articles (RBWH staff in bold)

10. **Charles PH, Crowe SB, Kairn T.** Small field dose correction factors for radiochromic film in lung phantoms. *Med Phys.* 2021 May; 48(5): 2667-2672. doi: 10.1002/mp.14799
11. **Cleland S, Chan P, Chua B, Crowe SB, Dawes J, Kenny L, Lin C, Obereigner E, Peet SC, Trapp JV, Tutaki T, Kairn T.** Dosimetric evaluation of a patient-specific 3D-printed oral positioning stent for head-and-neck radiotherapy. *Phys Eng Sci Med.* 2021 Jun 10. doi: 10.1007/s13246-021-01025-y. Online ahead of print.
12. Ives A, Pusztai T, **Keller J**, Ahern E, Chan B, Gasper H, Wyld D, Kennedy G, **Dickie G**, Lwin Z, Roberts N. Resilience and ongoing quality care for cancer clinical trials during COVID-19: experience from a tertiary hospital in Australia. *Asia-Pac J Clin Oncol.* 2021 Apr 5. doi: 10.1111/ajco.13570. Online ahead of print.
13. **Kairn T, Maxwell SK,** Trapp JV, **Crowe SB.** Assessment of integrity and lead-equivalence of shielded garments using two-dimensional x-ray images from a computed tomography scanner. *Radiat Prot Dosim.* 2021 Apr; 193(3-4):155-164. doi: 10.1093/rpd/ncab037.
14. **Lin C, Ballah T,** Nottage M, Hay K, **Chua B, Kenny L,** Thomas P, Teng M, **Keller J, Le T, Edmunds J,** Hughes B. A prospective study investigating the efficacy and toxicity of definitive ChemoRadiation and Immunotherapy (CRIO) in locally and/or regionally advanced unresectable cutaneous squamous cell carcinoma. *Radiat Oncol.* 2021 Apr 9;16(1):69. doi: 10.1186/s13014-021-01795-5.
15. Müller Bark J, Kulasinghe A, Hartel G, Leo P, Warkiani ME, Jeffree RL, **Chua B,** Day BW and Punyadeera C. Isolation of Circulating Tumour Cells in Patients With Glioblastoma Using Spiral Microfluidic Technology – A Pilot Study. *Front Oncol.* 2021 Jun 3;11:681130. doi: 10.3389/fonc.2021.681130. eCollection 2021.
16. **Peet SC, Kairn T, Lancaster CM, Trapp JV, Sylvander SR, Crowe SB.** Measuring foetal dose from tomotherapy treatments. *Med Dosim.* 2021 Apr 29. doi: 10.1016/j.meddos.2021.03.008. Online ahead of print.
17. Rahman ST, Pandeya N, Neale RE, McLeod DSA, Baade PD, Youl PH, **Allison R,** Leonard S, Jordan SJ. Risk of thyroid cancer following hysterectomy. *Cancer Epidemiol.* 2021 Jun;72:101931. doi: 10.1016/j.canep.2021.101931. Epub 2021 Mar 31.
18. Rahman ST, Pandeya N, Neale RE, McLeod DSA, Baade PD, Youl PH, **Allison R,** Leonard S, Jordan SJ. Tobacco smoking and risk of thyroid cancer according to BRAF V600E mutational subtypes. *Clin Endocrinol (Oxf).* 2021 Jun 25. doi: 10.1111/cen.14545. Online ahead of print.
19. Rischin D, King M, **Kenny L,** Porceddu S, Wratten C, Macann A, Jackson JE, Bressel M, Herschtal A, Fisher R, Fua T, **Lin C,** Liu C, Hughes BGM, McGrath M, McDowell L, Corry J. Randomised trial of radiotherapy with weekly cisplatin or cetuximab in low risk HPV associated oropharyngeal cancer (TROG 12.01) - a Trans-Tasman Radiation Oncology Group study. *Int J Radiat Oncol Biol Phys.* 2021 Apr 24:S0360-3016(21)00376-X. doi: 10.1016/j.ijrobp.2021.04.015. Online ahead of print.
20. Rischin D, Mehanna HM, Young RJ, Bressel M, Dunn J, Corry J, Fulton-Lieuw T, Iqbal G, **Kenny LM,** Porceddu S, Wratten C, Robinson M, Solomon BJ. Identification of good and poor prognosis HPV associated oropharyngeal cancer based on CD103 immune cell expression in patients treated with cetuximab and radiotherapy on TROG 12.01 and De-ESCALaTE randomized trials. *Journal of Clinical Oncology* 39, no.15_suppl (May 20, 2021) 109-109. Published online May 28, 2021. DOI: 10.1200/JCO.2021.39.15_suppl.109
21. Stephens S, Kuchel A, **Cheuk R,** Alexander H, Robertson T, Rajah T, Tran Q, Inglis P. Management trends and outcomes of pineal germinoma in a multi-institutional Australian cohort. *Journal of Clinical Neuroscience*, Volume 90, Pages 1-7, Volume 90, 1 August 2021, Published online May 28, 2021 ISSN 0967-5868, doi.org/10.1016/j.jocn.2021.05.006.
22. Tang KD, Wan Y, Zhang X, Bozyk N, Vasani S, **Kenny L,** Punyadeera C. Proteomic Alterations in Salivary Exosomes Derived from Human Papillomavirus-Driven Oropharyngeal Cancer. *Mol Diagn Ther.* 2021 Jul;25(4):505-515. doi: 10.1007/s40291-021-00538-2. Epub 2021 Jun 2. PMID: 34080172.
23. Wan Y, Zhang X, Tang KD, Blick T, **Kenny L,** Thompson EW, Punyadeera C. Overexpression of miRNA-9 enhances galectin-3 levels in oral cavity cancers. *Mol Biol Rep.* 2021 May 21. doi: 10.1007/s11033-021-06398-7. Online ahead of print.
24. Wong BZY, **Dickie G,** Garcia P, Scott D, Pattison DA. 124I-PET/CT-Guided Diagnosis and Personalized Treatment of Metastatic Papillary Thyroid Cancer to the Pancreas. *Clin Nucl Med.* 2021 Apr 1;46(4):337-339. doi: 10.1097/RLU.0000000000003499.
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Keynote or Plenary Lectures given in 2021

Date	Title
03/2021	Kenny L . Quality Assurance in IR: Lessons Learned from Radiation Oncology. Society of Interventional Radiology Annual Scientific Meeting (online)
03/2021	Kenny L . Head, Neck and Skin Cancer Research Portfolio – Future Directions and Opportunities. TROG Annual Scientific Meeting (online)
06/2021	Kenny L . IO an RO a partnership made in heaven, Interventional Radiology Society of Australasia (ASM) Annual Scientific Meeting (online)
06/2021	Kenny L . Artificial Intelligence, University of Melbourne Medical Student Conference (online)
09/2021	Kenny L . Cancer care: how do we know whether we have done a good job. Cardiovascular and Interventional Radiology Society of Europe Summit (Online)
09/2021	Kenny L . What does end to end care look like? Cardiovascular and Interventional Radiology Society of Europe Summit (Online)
11/2021	Crowe SB . How 3D printing technology can facilitate research and improve healthcare outcomes (Better Healthcare Technology Boyce Worthley presentation). Engineering and Physical Sciences in Medicine, Brisbane, Australia
11/2021	Crowe SB , Aland T, Doromal D, Fog L, Greig L, Hamlett L, Lydon J, Round H, Sawers A, Waterhouse D. Launch of the ACPSEM ROMP workforce model. Engineering and Physical Sciences in Medicine, Brisbane, Australia
11/2021	Peet S . Out-of-field dosimetry. ACPSEM Summer School, Brisbane, Australia
11/2021	Wilks R . Source strength determination of HDR brachytherapy sources. ACPSEM Summer School, Brisbane, Australia
11/2021	Kenny L . Standards and Ethics in AI, Where we have come from and why we are so passionate. Engineering and Physical Sciences in Medicine Conference 2021