

2023 RBWH Research Report

Cancer Care Services



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Cancer Care Services



Dr Glen Kennedy

Executive Director of Cancer Care Services

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, Bone Marrow Transplant Unit and CAR-T programme. Research continues to be considered core business within Cancer Care, and a vehicle to the facilitation of progressive treatment for our patients.

Several Cancer Care investigators and teams were recognized in the 2023 Metro North Research Awards, including Dr Mark Nalder's team from Medical Oncology (finalist), Dr Andrea Henden (highly commended in Research Rising Star Award) and the CAR-T programme, led by Dr Siok Tey, which won the Innovation Clinical Research Award. These successes highlight the broad recognition of our cancer researchers and team's achievements.

With planning around the Queensland Cancer Centre (QCC) well underway, supporting, developing, and implementing our research programmes and partnerships is critical to our future success. The achievements of all our research teams, as detailed in their respective reports, highlights the strong foundations our staff have created towards achieving the goals of the QCC.

I thank all our staff and teams for their commitment to supporting and developing research in Cancer Care. I would also like to specifically acknowledge our clinical trials teams and our Director of Cancer Research, Prof Steven Lane, for their ongoing commitment to supporting research within our service and beyond.

Clinical Research



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

Metro North Cancer Care Services seeks to provide optimal patient care through integrating research into patient management. As a division, we have contributed to major international clinical trials and continue to help train the next generation of leaders. We have been recognised for these outcomes and activity with national and international level funding come on top publications in internationally reviewed peer review journals and numerous research awards.

I'm particularly proud of the CAR-T cellular therapies programme which won the 2023 Metro North Innovation in Clinical Research award and Dr Andrea Henden who was highly commended as the Research Rising Star for Metro North. Additionally, we had several other finalists in the Metro North Research Awards, including Dr Mark Nadler's team from Medical Oncology (Implementation of pre-treatment genotype guided personalised dosing to reduce severe toxicity from chemotherapy). Congratulations to all those who were nominated and received awards.

The achievements of each individual departments are highlighted in the Directors reports. These illustrate the breadth of influence research has within our clinical service lines. Each year our research activity and capacity grow and will place us in an enviable position as we transition to involvement in a Queensland Cancer Centre from 2028 and beyond. All this depends on the outstanding work of our research coordinators, our clinical trials nurses and administrative support. I would like to particularly thank Tracey Gilbert, our research support officer, for her tireless work, and the research advisory group for their ongoing commitment to supporting research within Metro North Cancer Care Services.

Allied Health Professions

Research highlights



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

Allied Health Professions has continued to strengthen and expand its research program in cancer care services during 2023. Our research is embedded within the multidisciplinary teams of radiation oncology, medical oncology, haematology/BMT, and we highly value our ongoing collaboration with services such as QIMR, QLD PET Service, Gastroenterology, ENT, Maxillofacial surgery and others who form part of our cancer focused research teams. During 2023, we have also continued to strengthen our research collaborations with major academic and clinical centres of excellence across Australia as well as the partnerships with teams in Europe, and the USA.

Across 2023 Allied Health Professions has led a diverse range of studies engaging our consumers, clinicians, and other stakeholders to examine key aspects of cancer care delivery. These studies have incorporated systematic reviews to examine current practices and identify areas for future research, screening and surveillance programs, the evaluation of current clinical practices and education programs, as well as exploration of new models of care and emerging cancer treatments to determine the supportive care needs of our patients and their caregivers to optimise outcomes.

Allied Health Professions' high quality and translational cancer care research has been recognised through several awards and achievements. Key highlights include:

- ❖ Dr Joanne Hiatt and Dr Emilie Croisier (Dietetics and Food Services) had their degrees conferred by The University of Queensland. Dr Hiatt's PhD program adopted a longitudinal qualitative study which explored the nutrition care experience of adult patients and carers throughout the trajectory of head and neck cancer treatment and survivorship and identified key areas for service delivery improvement. Dr Croisier's PhD program investigated the nutritional implications of pelvic radiotherapy in patients with gynaecological cancers, to better understand the role of soluble fibre and the dietary management of diarrhoea in practice. Her research confirmed the need for specialist dietetic intervention for this population and highlighted the benefits of individualised nutrition counselling to optimise patient care.
 - ❖ Dr Sarah Anderson (Dietetics and Food Services) and research team was awarded over \$260,000 in a series of grants exploring prebiotic fibre supplementation during allogeneic stem cell transplantation. She also received the 2023 British Dietetic Association's PENG ESPEN Award. Emma Osland (Dietetics and Food Services) received the David Russell Award for Clinical Nutrition at the Australasian Society for Enteral and Parenteral Nutrition Conference.
- At the Metro North Research Excellence Awards, Associate Professor Teresa Brown (Dietetics and Food Services) was awarded the Rising Star Award, and a research group led by Allied Health Professions was awarded the Consumer in Research award for their study titled "Optimising consumer choice in telehealth: Metro North Telehealth Co-Design Project".
- ❖ 33 research studies were led by Allied Health clinician researchers and 12 in collaboration with other teams.
 - ❖ 17 peer reviewed publications and 2 international keynote presentations were delivered.
 - ❖

Five research higher degree students with a focus on cancer care were supervised by Allied Health staff. These research programs are embedded within RBWH cancer care services to support research translation and provide optimal patient and service benefits.

Research Awards and Achievements

| Recipient (RBWH staff in bold) | Award | Event |
|---|---|--|
| Kelsey Pateman (CAHR) , Anja Christoffersen (Consumer Representative), Michelle Cottrell (Physiotherapy) , Clare Burns (Speech Pathology) , Amber Jones (OT) , Peter Button (Consumer Representative), Emily Arthur (MN Allied Health), Gary Power (Consumer Representative), Linda Cuskelly (Metro North), Kate Dickson (RBWH SOPD), Mark Cruickshank (Physiotherapy) | Consumer in Research Award | Metro North Research Excellence Awards, 2023 |
| Sarah Andersen | British Dietetic Association PENG ESPEN award | European Society for Clinical Nutrition and Metabolism (ESPEN) Congress, September 2023 (Lyon, France) |
| Emma Osland | David Russell Award for Clinical Nutrition | Australasian Society for Enteral and Parenteral Nutrition Conference (AusPEN) Annual Conference, November 2023 (Auckland, New Zealand) |
| Teresa Brown | Rising Star Award | Metro North Research Excellence Awards, November 2023 (Brisbane, Australia) |

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 |
|---|------------------------------------|--|-------------------------------------|---------------------------------|--|
| Sarah Andersen | Dietetics and Food Services | Using prebiotic fibre supplementation to improve patient outcomes during treatment for haematological malignancies | MNHHS Clinician Research Fellowship | \$240,531 | 4 years, 2023 - 2027 |
| Teresa Brown | Nutrition and Dietetics | Investigating the Impact of Skull Base Surgery on Nutrition Outcomes to Optimise Nutrition Care Pathways for Patients Undergoing Surgical Resection for Head and Neck Cancer | RBWH Foundation | \$ 25,618 | 1 year, 2023 |
| Teresa Brown | Nutrition and Dietetics | Optimising nutrition outcomes and care pathways for patients undergoing surgical resection for head and neck cancer | MNHHS Clinician Research Fellowship | \$175,000 | 4 years, 2022 - 2025 |
| Teresa Brown | Nutrition and Dietetics | Immunotherapy and nutrition outcomes in head and neck cancer | Metro North Health | \$10,000 | 1 year, 2023 - 2024 |

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 2023 |
|---|---|--|---|
| Ada Lo, Kate Thompson | Ashleigh Scott (RBWH), Glen Kennedy (RBWH), Katie McMahon (RBWH), Olivier Salvado (CSIRO) | 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) | 0 |

| Lead Investigator Name (RBWH staff in bold) | Other Study Investigators (RBWH staff in bold) | Research Project Title | Number of RBWH Patients Recruited in 2023 |
|---|--|--|---|
| Alice Rogers | Claire Blake, Teresa Brown | Complications following gastrostomy placement in patients with head and neck cancer: A Systematic Literature Review | NA |
| Claire Blake | Teresa Brown , Anita Pelecanos (QIMR), Laura Moroney, Jennifer Helios , Brett Hughes, Liz Kenny | Enteral nutrition support and treatment toxicities in patients with head and neck cancer receiving helical intensity-modulated radiotherapy with concurrent chemotherapy or surgery | 0 |
| Claire Blake | Elise Treleaven, Ally di Bella, Teresa Brown, Adrienne Young , Jenni Leutenegger, David Wyld | Implementation of patient-led malnutrition screening in the cancer care ambulatory setting | 0 |
| Clare Burns | Liz Ward (CFAHR; UQ), Jasmine Foley (UQ), Rebecca Nund (UQ), Laurelie Wall (Metro South HHS), Dr Maurice Stevens, Dr Lizbeth Kenny | Understanding the Regional and Remote Head and Neck Cancer (HNC) Patient Services Journey | N/A |
| Clare Burns | Annie Hill (UQ), Liz Ward (CFAHR; UQ), Lynell Bassett ; 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 |
| 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. | N/A |
| Clare Burns | Annie Hill (UQ), Liz Ward (CFAHR; UQ), Sanjeewa Kularatna (AusHSI QUT); Joshua Byrnes (Griffith University) | Evaluation of two speech pathology service models for swallowing rehabilitation post head and neck cancer treatment | 0 |
| Emilie Croisier | Teresa Brown , Alice Grigg, Phillip Chan, Jeffrey Goh, Judy Bauer (Monash) | Dietary counselling to increase soluble fibre in patients with gynaecological cancers undergoing pelvic radiotherapy: a feasibility study | 0 |
| Frances Thomsen | Omar Breik (RBWH), Susan Laracy, Karina Lewis, Michelle Donovan , Alanna Chatfield (Consumer) | A Retrospective Audit of Occupational Therapy Splinting of Radial Forearm Flap Donor Sites in Head and Neck Cancer | N/A |
| Heidi White | Rebecca Fichera, Elise Treleaven, Claire Blake , Leonie Naumann | Implementing sarcopenia screening in the oncology day therapy unit | 0 |
| Kyla Stableford | Leonie Naumann, Kirsty Quince, Julie Adsett | Increasing exercise participation in the cancer care wards at Royal Brisbane and Women's Hospital | 25 |
| Lauren Rae | Emma Foley | Redesigning Occupational Therapy Cancer-related Fatigue Education at RBWH | N/A |
| Leonie Naumann | Hayley Futcher, Michelle Cottrell | Increasing exercise participation in the cancer care wards at Royal Brisbane and Women's Hospital | 0 |
| Leonie Naumann | Hildegard Ruel-Hirche , Amanda Pigott (UQ), Jodie Nixon (PAH) | Advanced lymphedema course quality evaluation | 0 |
| Michelle Cottrell | Perry Judd, Sue Laracy , Cate Carter (RDH), Jacqueline Nix (RDH), Leonie Naumann, Robyn Scheer, Jennifer Strong, Sonia Sam | 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 | 0 |
| Rebecca Fichera | Teresa Brown, Sarah Andersen , Glen Kennedy, David Williams | New Model of Care for autologous stem cell transplant patients (AutoCare): adherence and clinical outcomes | 0 |
| Sarah Andersen | Rebecca Fichera, Teresa Brown , Glen Kennedy, David Williams | Audit of new nutrition support protocol for allogeneic transplantation | NA |

| Lead Investigator Name (RBWH staff in bold) | Other Study Investigators (RBWH staff in bold) | Research Project Title | Number of RBWH Patients Recruited in 2023 |
|---|---|---|---|
| Sarah Andersen | Teresa Brown , Glen Kennedy, Frederik Steyn (Neurology & UQ), Rebecca Fichera | Energy expenditure in patients undergoing allogeneic stem cell transplantation | 11 |
| Sarah Andersen | Teresa Brown , Bronwyn Segon , Judy Bauer (Monash) | Systematic review of vitamin requirements during stem cell transplantation | NA |
| Sarah Andersen | Jiani Xu (UQ), Glen Kennedy, Judy Bauer (Monash) | Nutrition support and clinical outcomes after allogeneic stem cell transplantation | NA |
| Sarah Andersen | Andrea Henden (QIMR), Heidi Staudacher (Deakin), Glen Kennedy, Nicole Gavin | Fibre intake during treatment for haematological malignancies: a scoping review | NA |
| Sarah Andersen | Andrea Henden (QIMR), Glen Kennedy, Merrilyn Banks | Prebiotics, the gastrointestinal microbiome and clinical outcomes post allogeneic stem cell transplantation | 30 |
| Sarah Andersen | Andrea Henden, Heidi Staudacher (Deakin), Jacinta Smith (Consumer), Midori Nakagaki, Nicole Gavin (Cancer Care) | Prebiotic fibre supplementation during allogeneic stem cell transplantation, a pilot randomised control trial | |
| Sarah Andersen | Teresa Brown , Claire Blake , Rachel Willims , Helen MacLauglin , Dannielle McCormack, (QUT), Christine Johnson (QUT) | Micronutrient requirements during graft versus host disease post allogeneic stem cell transplantation: a systematic review | NA |
| Scott Russell | Peter Window , Simon Whitehart , Jane Mason | Does the use of video-conferencing in physiotherapy consultations of adult patients with haemophilia change clinical recommendations when compared to audio-conferencing? | 0 |
| Sarah Wilson | Clare Burns , Bena Brown (Metro South HHS; UQ) | Development of clinical and videofluoroscopic assessment tools for the evaluation of dysphagia following laryngectomy: An e-Delphi process | N/A |
| Teresa Brown | Merrilyn Banks , Brett Hughes, Charles Lin, Liz Kenny, Louise Campbell (Qld PET Service), Judy Bauer (Monash) | Assessment of sarcopenia and malnutrition in patients with head and neck cancer undergoing treatment of curative intent – implications for practice | 0 |
| Teresa Brown | Daniel Hwang (UQ), Elise Treleven , Brett Hughes, Liz Kenny, Charles Lin, Penny Webb (QIMR), Anita Pelecanos (QIMR), Judy Bauer (Monash) | A feasibility study to investigate taste changes post treatment in patients with head and neck cancer and their association with genes and dietary behaviour | 0 |
| Teresa Brown | Ryan Sommerville (ENT), Tom Slaughter (ENT), Clare Burns (SP), Brett Hughes (Cancer Care), Judy Bauer (Monash) | Nutrition and swallowing outcomes following TORS for head and neck cancer | N/A |
| Teresa Brown | Ryan Sommerville (ENT), Abigail Walker (ENT), Stephanie Yau (ENT), Joanne Hiatt, Rebecca Fichera, Clare Burns (SP), Brett Hughes (Cancer Care), Judy Bauer (Monash) | Nutrition and swallowing outcomes following skull base surgery | N/A |
| Teresa Brown | Belinda Camilleri , Brett Hughes (Cancer Care), Judy Bauer (Monash) | Nutrition outcomes following immunotherapy for head and neck cancer | 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 2023 |
|---|--|---|---|
| Teresa Brown | Elise Treleven, Claire Blake, Rebecca Fichera, Jo Hiatt, Omar Briek (MAXF), Ryan Sommerville (ENT), Milap Rughani (Plastics), Brett Hughes (Cancer Care), Judy Bauer (Monash) | Developing nutrition care pathways and prophylactic gastrostomy insertion for head and neck surgery | N/A |

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 2023 |
|--|---|---|---|
| Anna Edwards (Toowoomba/UQ) | Teresa Brown, Brett Hughes (Cancer Care), Judy Bauer (Monash) | Regional H&N cancer centre nutrition care and experience | 0 |
| Elise Gane (PAH) | Shaun O'Leary, Caroline Speksnijder (Uni Medical Centre Utrecht) | Neck rehabilitation after neck dissection for head and neck cancer: a pilot intervention study | N/A |
| Heshani Mediwake, Glen Kennedy, Siok Tey | Ada Lo, Harriet Bodimeade | NCA in CARTs: Neurocognitive assessment in patients undergoing chimeric antigen receptor therapy | 1 |
| Joshua Russell (UQ/RBWH Maxillofacial Surgery) | Kelsey Pateman (CAHR), Martin Batstone (RBWH Maxillofacial Surgery) | Donor Site Morbidity of Composite Free Flaps in Head & Neck Surgery: A Prospective Analysis | 59 |
| Judy Bauer (Monash) | Lauren Hanna (Monash), Teresa Brown, Merran Findlay (Uni of Sydney), Belinda Vangelov (Prince of Wales, Sydney) | Body composition and sarcopenia in head and neck cancer in a national dataset | N/A |
| Laurie Wennerholm (White Plains Hospital New York, UQ) | Clare Burns, Liz Ward (CFAHR/UQ), | Laryngectomy care pathways: Examining patient and clinician perspectives | N/A |
| Liz Ward (CFAHR/UQ) | Clare Burns, 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 |
| Liz Ward (CFAHR/UQ), | Jasmine Jones (UQ), Clare Burns, 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 |
| Liz Ward (CFAHR/UQ) | Clare Burns, 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 | N/A |
| Marissa Ryan (PAH), | Christine Carrington (PAH), Liz Ward (CFAHR/UQ), Centaine Snoswell (UQ), Clare Burns, Mhairi Mackinnon (PAH) | Development, implementation and evaluation of a Cancer Pharmacy Service for adult patients at the Princess Alexandra Hospital | 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 2023 |
|---|--|--|---|
| Mikaela Lynch (UQ) | Trevor Russell (UQ), Rachele Pitt (AHPOQ), Leonie Naumann | Essential components of Self-Management for Cancer Related Lymphoedema: a Delphi Study | N/A |
| Nicole Gavin (Cancer Care) | Glen Kennedy, David Patterson (Infectious Diseases), Claire Rickard (Griffith Uni), Sarah Andersen , Elise Button, Rebecca Lippiatt | 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 | 0 |

Research Publications

Authors

| Investigator | ORCID ID | Investigator | ORCID ID |
|--------------------|---|-------------------|---|
| Ann-Louise Spurgin | https://orcid.org/0000-0001-7799-9703 | Kelsey Pateman | https://orcid.org/0000-0002-5230-1492 |
| Belinda Lehn | https://orcid.org/0000-0001-8635-941 | Laura Moroney | https://orcid.org/0000-0002-4320-907X |
| Clare Burns | https://orcid.org/0000-0002-9752-1739 | Michelle Cottrell | https://orcid.org/0000-0001-7300-1467 |
| Elise Treleaven | https://orcid.org/0000-0002-6982-2593 | Sarah Andersen | https://orcid.org/0000-0002-9200-8186 |
| Emilie Croisier | https://orcid.org/0000-0002-2304-6840 | Shana Taubert | https://orcid.org/0000-0002-1514-6833 |
| Joanne Hiatt | https://orcid.org/0000-0001-7019-6545 | Shaun O'Leary | https://orcid.org/0000-0002-2574-129X |
| Kate Thompson | https://orcid.org/0000-0002-2269-1215 | Teresa Brown | https://orcid.org/0000-0002-5127-1631 |

Publications in 2023

Journal Articles (RBWH staff in bold)

Ahern E, Brown T, Campbell L, Hughes B, Banks M, Lin C, Kenny L, Bauer J. Impact of sarcopenia and myosteatosis on survival outcomes for patients with head and neck cancer undergoing curative-intent treatment. *Br J Nutr*; 129(3): 406-415. <https://doi.org/10.1017/S0007114522000435>

Andersen S, Fichera R, Banks M. et al. Proactive enteral nutrition for patients undergoing allogeneic stem cell transplantation - implementation and clinical outcomes. *Eur J Clin Nutr*. 2023; Online ahead of print. <https://doi.org/10.1038/s41430-023-01367-8>

Andersen S, Xu J, Llewellyn S, Kennedy G, Bauer J. Nutrition support and clinical outcomes following allogeneic stem cell transplantation. *Bone Marrow Transplant*. 2023; 58: 1137–1142. <https://doi.org/10.1038/s41409-023-02080-7>

Andersen S, Henden A, Staudacher H, **Kennedy G, Gavin N**. Fibre intake and supplementation during treatment for haematological malignancies: a scoping review. *J Hum Nutr Diet*. 2023; 36: 1982-1991. <https://doi.org/10.1111/jhn.13209>

Blake CL, Brown TE, Pelecanos A, Moroney LB, Helios J, Hughes BGM, Chua B, Kenny LM. Enteral nutrition support and treatment toxicities in patients with head and neck cancer receiving definitive or adjuvant helical intensity-modulated radiotherapy with concurrent chemotherapy. *Head Neck*. 2023; 45 (2), 417-430. <https://doi.org/10.1002/hed.27249>

Blake CL, Lai R, Brown TE, Pelecanos A, Moroney LB, Helios J, Hughes BGM, Chua B, Kenny LM. Nutrition outcomes and treatment toxicities in patients with Head and Neck Cancer receiving Helical Intensity-Modulated Radiotherapy. *J Hum Nutr Diet*. 2023; 1–11. <https://doi.org/10.1111/jhn.13243>

Brown T, Edwards A, Pashley A, Lehn B, Vasani S, Hodge R, et al. Nutritional status and post-operative complications in patients undergoing surgery for advanced pharyngeal or laryngeal cancer. *Eur Arch Otorhinolaryngol*. 2023; 280: 5531–5538. <https://doi.org/10.1007/s00405-023-08139-x>

Byrnes A, Glen K, Matthews-Rensch K, et al. Use and safety of enteral nutrition protocols in acute care: A scoping review of literature and retrospective audit of practice. *Nutrition & Dietetics*. 2023; Online ahead of print: 1-12. <https://doi.org/10.1111/1747-0080.12819>

Daly LK, de Looze JWM, Forrestal DP, Wagels M, Spurgin AL, Hoey JD, et al. 3D printing for respiratory physiotherapy: a tale of three disciplines. *Annals of 3D Printed Medicine*. 2023 Feb;9:100096. <https://doi.org/10.1016/j.stim.2022.100096>

Journal Articles (RBWH staff in bold)

Foley J, Wishart LR, Ward EC, **Burns CL**, Packer R, Philpot S, et al. Exploring the impact of remoteness on people with head and neck cancer: Utilisation of a state-wide dataset. Australian Journal of Rural Health. 2023 Jun 6;31(4):726–43. <https://doi.org/10.1111/ajr.13005>

Hiatt J, Young A, Brown T, Banks M, Bauer J. Improving patient and carer access to information and support through head and neck cancer treatment and survivorship using experience-based co-design. J Hum Nutr Diet. 2023; 36: 443–452. <https://doi.org/10.1111/jhn.13099>

Jefferis M, **Andersen S, Brown T, Curley C**, Bauer J. Malnutrition and clinical outcomes post allogeneic stem cell transplantation. J Hum Nutr Diet. 2023; 36(4): 1253-1260. <https://doi.org/10.1111/jhn.13124>

Joseph R, Hart NH, Bradford N, Wallen MP, Han CY, Pinkham EP, Hanley B, Lock G, Wyld D, Wishart L, Koczwara B. et al. Essential elements of optimal dietary and exercise referral practices for cancer survivors: expert consensus for medical and nursing health professionals. Supportive Care in Cancer. 2023 Jan;31(1):46. <https://doi.org/10.1007/s00520-022-07509-1>

Naumann L, Reul-Hirche H, Comans T, **Burns CL**, Paratz J, **Cottrell M**. Evaluating telehealth for the education and monitoring of lymphoedema and shoulder dysfunction after breast cancer surgery. Supportive Care in Cancer. 2023;31(4):239. <https://doi.org/10.1007/s00520-023-07693-8>

Towards an estimate of the prevalence of lymphoedema in Australia: a data source scoping report 2023 (aihw.gov.au) (**Leonie Naumann as contributor**). <https://www.aihw.gov.au/reports/chronic-disease/prevalence-of-lymphoedema-in-australia/summary>

Russell J, Volker G, McGarvey D, **Pateman, K.** et al. An objective analysis of composite free flap donor site morbidity in head and neck surgery: Prospective series. Head & Neck. 2023; 45(2): 398-408. [doi:10.1002/hed.27254](https://doi.org/10.1002/hed.27254)

Ward EC, Hancock KL, Boxall J, **Burns CL, Spurgin A, Lehn B, Hoey, J.** et al. Post-laryngectomy pulmonary and related symptom changes following adoption of an optimal day-and-night heat and moisture exchanger (HME) regimen. PubMed. 2023 Feb 20;45(4):939–51. <https://doi.org/10.1002/hed.27323>

Keynote or Plenary Lectures given in 2023

| Date | Title |
|---------------|--|
| 23/07/2023 | Claire Blake, Teresa Brown. Workshop: Extended Scope Models of Care. Dietitians Australia Annual Conference |
| 10-12/08/2023 | Sandro Porceddu, Elizabeth Ward, Clare Burns, Teresa Brown. Breakfast Session: Meet the Researchers. Australia and New Zealand Head and Neck Cancer Society (ANZHNCS) Annual Scientific Meeting |

Cancer Care Nursing Research

Research highlights



Michael Smith

Director Cancer Nursing

During the year 2023 Cancer Care Nursing Research team continued to pursue research activities through conference presentations, publications and progressing grant funded projects. Dr Nicole Gavin has continued her work in the area of vascular access, having developed *Vessel Health and Preservation Guidelines* with Cancer Nursing Society of Australia. These Guidelines are due to launch in the first quarter of 2024.

Brigid Scanlon submitted her PhD and presented her findings at several national conferences, winning *Best of the Best oral presentation* for health services research at the Clinical Oncology Society of Australia Annual Scientific Meeting and winning a professional development grant at the Cancer Nurses Society of Australia's national conference.

Robyn Matthews has continued her work on her grant funded randomised control trial (The ACTIVE Study). This study aims to increase patient mobility in patients connected to intravenous antibiotics and fluids. This study will continue until the second quarter of 2024.

The research team have continued supporting our wonderful research interns. Veronica Percival received a SWIFT grant to continue her work regarding the development and implementation of a nursing assessment tool for lumbar punctures. Fran Boyte's work looking at priming practices of monoclonal antibody drugs has been accepted for publication in a peer reviewed journal.

The nursing research team were also able to accept four nurses for our Evidence Based Practice Program, which continues into 2024. We look forward to continuing to support our nursing staff to develop their research skills.

We congratulate the Cancer Care Nursing Research team on their outstanding achievements in 2023 and look forward to seeing it progress within 2024.

Research Awards and Achievements

| Recipient (RBWH staff in bold) | Award | Event |
|--------------------------------|---|---|
| Brigid Scanlon | Best of the Best Oral Presentation (Health Services Research) Award | Clinical Oncology Society of Australia Annual Scientific Meeting, Melbourne, 2023 |
| Brigid Scanlon | CNSA Professional Development Grant Award | CNSA, Adelaide 2023 |
| Emma Munro | ACN (Australian College of Nursing) Emerging Leaders Research Program | \$10,000 to support research project |
| Courtney Black | QUT MPhil Stipend | \$30,000 per annum over 2 years |

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 |
|--|--|--|--|--|--|
| Scanlon B, Wyld D, Durham J, Toloo, S, Roberts N | CCS Nursing Research | Equity across the cancer care continuum for culturally and linguistically diverse migrants living in Australia | Queensland University of Technology (Faculty Scholarship) | \$15,000 | 1 year, 2023 |
| Viridun C, Button E, Matthews R, Mudge A, Yates P, Singh G, Phillips J, Carter H, Moran P, Douglas C, Wyld D, Alexander A, Richter K, Fielding D, Ratanjee S, Palamuthusingam D | CCS Nursing Research | Improving the quality of hospital care for people with serious illness through patient experience measurement and feedback informing facilitated ward-based improvement: an implementation pilot study (The PREM-QUAL study) | Metro North Collaborative Research Grant (QUT and MN) QH Nursing and Midwifery Research fellowship | \$49,392.67 \$46,176.16 | 1 year, 2022-2023 1 year, 2022-2023 |
| Robyn Matthews, Toby Pavey, Nicole Gavin, Melissa Eastgate, Bronwyn Clark, Greg Merlo, Brigid Scanlon | CCS Nursing Research | 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) | Metro North Collaborative Research Grant (QUT and MN) | \$49,964.25 | 2 years, 2022-2024 |
| Abigail Saunders | Nutrition and Dietetics | Changes in disease activity, patients-reported outcomes | RBWH Scholarship | \$500,000 | 5 years, 2021-2025 |
| Sarah Andersen, Andrea Hendon, Midori Nakagaki, Nicole Gavin, Glen Kennedy & Heidi Staudacher | Allied Health, CCS Nursing Research, Haematology, Pharmacy | Prebiotic fibre supplementation in haematology | Gateway for Cancer Research | \$112,000 USD | 1 year, 2023-2024 |
| Sarah Andersen, Andrea Hendon, Midori Nakagaki, Nicole Gavin, Glen Kennedy & Heidi Staudacher | Allied Health, CCS Nursing Research, Haematology, Pharmacy | Prebiotic fibre supplementation to improve patient outcomes during allogeneic stem cell transplantation, a pilot randomised control trial | SERTA Project Grant | \$71,165 | 1 year, 2023-2024 |
| Sarah Andersen, Andrea Hendon, Midori Nakagaki, Nicole Gavin, Glen Kennedy & Heidi Staudacher | Allied Health, CCS Nursing Research, Haematology, Pharmacy | Prebiotic fibre supplementation during allogeneic stem cell transplantation, a pilot randomised control trial | American Society of Parenteral and Enteral Nutrition Rhoads Research Foundation | \$20,000 USD | 1 year, 2023-2024 |
| Veronica Percival, Nicole Gavin, Kirsty McLeod, Therese Hayes | CCS Nursing Research | Implementing a lumbar puncture nursing assessment tool to support clinical practice and improve patient care | MN Research SWIFT Grant | \$14,902 | 1 year, 2023-2024 |

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 2023 |
|--|---|--|---|
| Justine Leach | Raymond Chan, Elise Button , Patsy Yates | A Data-Informed Approach for Planning Structured Nurse-Led Services for Patients with Cancer | 200 |
| 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 |
| Brigid Scanlon , David Wyld and Natasha Roberts | Jo Durham (QUT), Sam Toloo (QUT) | Equity across the cancer care continuum for culturally and linguistically diverse migrants living in Australia | 523 |
| Mary-Ellen Yarker | Carol Windsor (QUT) Jennifer Fox (QUT) Pauline Gillan (QUT) | The role of oncology nurse in shared decision making for patients undergoing radiation and/or chemotherapy treatment | 0 |
| Judy Avery | Sonya Osborne (USQ), Aletha Ward (USQ), Catriona Brooker (USQ) | Nurse-led debriefing with hospital nurses in the workplace | 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 |
| Virdun C, Button E (mat leave), Matthews R , Mudge A , Yates P, Singh G, Phillips J, Carter H, Moran P, Douglas C, Wyld D, Alexander A, Richter K, Fielding D, Ratanjee S, Palamuthusingam D | | Improving the quality of hospital care for people with serious illness through patient experience measurement and feedback informing facilitated ward-based improvement: an implementation pilot study (The PREM-QUAL study) | 7 |
| Brigid Scanlon , David Wyld and Natasha Roberts | Jo Durham (QUT), Sam Toloo (QUT) | Exploring facilitators and barriers to the provision of cancer care services for Culturally and Linguistically Diverse populations | 21 |
| Emily N Larsen, Claire M Rickard, Nicole Marsh, Mary Fenn, Rebecca S Paterson, Amanda J Ullman, Raymond Chan, Vineet Chopra, Doreen Tapsall, Amanda Corley, Nicole Gavin , Brigid Scanlon , Joshua Byrnes | | Patient reported outcome and experience measures among patients with Central Venous Access Devices | 0 |
| Nicole Gavin and 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 |

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 2023 |
|--|--|--|---|
| Claudia Viridun | Matthews R, Mudge A , Yates P, Singh G, Phillips J, Carter H, Moran P, Douglas C, Wyld D, Alexander A, Richter K, Fielding D, Ratanjee S, Palamuthusingam D | Improving the quality of hospital care for people with serious illness through patient experience measurement and feedback informing facilitated ward-based improvement: an implementation pilot study (The PREM-QUAL study) | 0 |
| Brigid Scanlon, Natasha Roberts, David Wyld | Jo Durham (QUT), Sam Toloo (QUT) | Equity across the cancer care continuum for culturally and linguistically diverse migrants living in Australia: Retrospective cohort study | 0 |

Research Publications

Authors

| Investigator | ORCID ID | Investigator | ORCID ID |
|-------------------|---|-----------------|---|
| Nicole Gavin | https://orcid.org/0000-0002-0828-9852 | Patsy Yates | https://orcid.org/0000-0001-8946-8504 |
| Elise Button | https://orcid.org/0000-0001-8240-8699 | Glen Kennedy | https://orcid.org/0000-0002-7171-0435 |
| Brigid Scanlon | https://orcid.org/0000-0002-9190-8721 | David Wyld | https://orcid.org/0000-0001-9523-4333 |
| Veronica Percival | https://orcid.org/0000-0001-7821-8710 | Natasha Roberts | https://orcid.org/0000-0003-0534-8084 |
| Francesca Boyte | NA | Robyn Matthews | https://orcid.org/0000-0003-3828-5278 |

Publications in 2023

Journal Articles (RBWH staff in bold)

Scanlon, B. Wyld, D. Roberts, N. Durham, J. Toloo, G (Sam). Rethinking cancer prevention for migrant populations in Queensland, Australia: A retrospective cohort study comparing Culturally and Linguistically Diverse and Australian born cancer patients. *Global Public Health*. (2023). DOI: [10.1080/17441692.2023.2202213](https://doi.org/10.1080/17441692.2023.2202213)

Zomerdijk, Nienke, Turner, Jane, Gottlieb, David, **Barnes, Annette, Butler, Jason P**, Markey, Kate A, Hill, Geoffrey R. Supporting family members requested to donate hematopoietic stem cells to a relative: development and pilot testing of a psycho-educational resource. *Journal of Psychosocial Oncology Research and Practice*. (2023). 5 (1)

Matthews, R. Gavin, N C. Marsh, N. Marquart-Wilson, L. Keogh, S. Peripheral intravenous catheter material and design to reduce device failure: A systematic review and meta-analysis. *Infection, Disease and Health* (2023)

Nicole C Gavin; Elizabeth Wignall; Nicole Marsh; Louise Marquart; **Karen L Dobeli; Catherine O'Brien;** Anthony D Verderosa; Makrina Totsika; Samantha Keogh (2023) Perforated intravenous catheter design is acceptable for the administration of contrast-enhanced computed tomography administration in cancer patients: Results of a pilot randomised controlled trial. *The Journal of Vascular Access*. DOI: [10.1177/11297298231171422](https://doi.org/10.1177/11297298231171422)

Nicole C Gavin; Emily Larsen; Naomi Runnegar; Gabor Mihala; Samantha Keogh; David McMillan; Gillian Ray-Barruel; Claire M Rickard (2023) Association between parenteral nutrition containing intravenous lipid emulsions and bloodstream infections in patients with single-lumen central venous access: A secondary analysis of a randomized trial. *Journal of Parenteral and Enteral Nutrition*. DOI: [10.1002/jpen.2530](https://doi.org/10.1002/jpen.2530)

Sarah Andersen; Andrea Henden, Heidi Staudacher, **Glen Kennedy, Nicole Gavin.** (2023) Fibre intake and supplementation during treatment for haematological malignancies: a scoping review. *Journal of Human Nutrition and Dietetics*. July (2023) doi: 10.1111/jhn.13209

Scanlon, B. Durham, J. **Wyld, D. Roberts, N.** Toloo, G. Exploring equity in cancer treatment, survivorship, and service utilisation for Culturally and Linguistically Diverse migrant populations living in Queensland, Australia: A retrospective cohort study. *International Journal for Equity in Health*. Sep (2023). DOI: [10.1186/s12939-023-01957-9](https://doi.org/10.1186/s12939-023-01957-9)

Midori Nakagaki, Glen A Kennedy, Nicole C Gavin, Jason Butler, Alexandra Clavarino & Karen Whitfield (2024) A randomised trial of topical polaprezinc to prevent oral mucositis in patients undergoing haematopoietic stem cell transplantation (ToPaZ study). *Supportive Care in Cancer* 32 DOI: [10.1007/s00520-023-08235-y](https://doi.org/10.1007/s00520-023-08235-y)

Journal Articles (RBWH staff in bold)

Roberts N, Jacmon H, **Scanlon B**, Battersby C, Buttrum P, James C. How can we meet the needs of patients, their families and their communities? A qualitative study including clinicians, consumer representatives, patients, and community members. *BMC Health Serv Res.* 2023 Jul 28;23(1):809. doi: 10.1186/s12913-023-09814-9. PMID: 37507758; PMCID: PMC10385916.

Keynote or Plenary Lectures given in 2023

| Date | Title |
|-----------|--|
| 14.6.2023 | Penelope Comans Inglis & Nicole Gavin . The patient: the integral player. Vascular access device selection, get it right the first time. Pre-Congress workshop CNSA Adelaide 2023. Invited speaker |
| 15.6.2023 | Scanlon, B . Quantifying equity across the cancer care continuum for Culturally and Linguistically Diverse migrant populations: A retrospective cohort study. CNSA, Adelaide. 2023. Podium presentation |
| 15.6.2023 | Scanlon, B . Exploring institutional factors associated with the provision of equitable cancer care for Culturally and Linguistically Diverse populations: early insights from a qualitative study. CNSA, Adelaide. 2023. Podium presentation |
| 7.9.2023 | Nicole Gavin . Developing and implementing evidence-based vascular access device guidelines. Herston Symposium. 2023. Keynote presentation |
| 2.11.2023 | Scanlon, B . Equity across the cancer care continuum for culturally and linguistically diverse migrant populations living in Queensland, Australia: An exploratory sequential mixed methods study. Clinical Oncology Society of Australia. Melbourne, 2023. Podium presentation |

Haematology BMT

Research highlights



Dr Cameron Curley
Deputy Director Clinical
Haematology & BMT

The Department of Haematology and BMT provides exceptional care for patients with blood disorders and cancers through a comprehensive research framework driving clinical research through translational, correlative, collaborative and investigator initiated clinical trials in common and rare blood cancers. Areas of specific research success and interest through 2023 included important contributions in the areas of novel cellular and non- cellular therapies for a diverse group of blood cancers, improved approaches to diagnosing/treating GVHD, infectious and non-infectious complications of therapy and the influence of microbiome on patient outcomes.

A number of notable grants were attained in 2023 including:

- Australian Cancer Research Foundation ACRF grant – 2023-2028 (\$2 million)
- 2023 Gilead Australia Research Fellow – \$60k
- 2023 Serta Project Grant - \$75k
- QCOG Cancer Clinical Trial Data Manager Grant - \$32k

We are grateful for the continued efforts of the whole Haematology and BMT research team for their contributions in 2023 to expand and drive innovative research for our patients. In particular, we would like to recognise the CAR-T team under the leadership of Dr Siok Tey as the Metro North Clinical Research Award winner and Dr Andrea Henden as the highly commended Rising Star for 2023.



Dr Jane Mason
Director of Haemophilia Queensland Centre

2023 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 AAV vector gene therapy, with successful recruitment and dosing in a phase III clinical trial in AAV-FIX gene therapy for severe haemophilia B. We were co-authors on a landmark haemophilia A gene therapy outcome paper which was published in the New England Journal of Medicine. There remains much to be understood about vector transduction, intracellular trafficking and transgene expression in the Haemophilia gene therapy space and we look forward to having ongoing research contributions in this area. We have also commenced recruitment to an investigator-initiated laboratory study examining the effect of antithrombin knockdown on thrombin generation in rare factor deficiencies.

Successful PhD candidates in 2023

| Name | PhD Title | Month Completed | Affiliated University | Summary |
|----------------|--|-----------------|------------------------------|---|
| Ashleigh Scott | Targeting translocator protein (TSPO) to improve diagnostic accuracy in gastrointestinal graft versus host disease (GI-GVHD) | January 2023 | The University of Queensland | Acute gastrointestinal graft versus host disease (GI-GVHD) frequently complicates allogeneic haematopoietic stem cell transplantation (HSCT); however, diagnostic endoscopic biopsy has limited sensitivity and specificity. GI-GVHD diagnosis could be augmented by positron emission tomography (PET) using GI-GVHD-specific radiotracers; the mitochondrial translocator protein (TSPO), targetable using [18F]GE-180, is one potential biomarker. In this thesis, I demonstrate that 26% of GI-GVHD patients lack histological confirmation and have distinct phenotypic and prognostic features. [18F]GE-180 PET/CT and anti-TSPO immunohistochemistry demonstrate significantly increased enterocytic TSPO protein expression during colonic GI-GVHD. These exploratory data support further GI-GVHD research evaluating TSPO and other novel PET biomarkers. |



Research Awards and Achievements

| Recipient (RBWH staff in bold) | Award | Event |
|--------------------------------|----------------------------------|---|
| Siok-Keen Tey | Winner – Clinical Research Award | 2023 Metro North Research Excellence Awards |
| Andrea Henden | Highly Commended – Rising Star | 2023 Metro North Research Excellence Awards |

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 |
|--|---|--|--|---------------------------------|--|
| A/Prof Andrea Henden | Haematology/BM T Cancer Care Services | Micro Fibre CAR | 2023 Gilead Australia Research Fellowship | \$60,000 | 1 year, 2023 |
| A/Prof Andrea Henden | Haematology/BM T Cancer Care Services | Solving problems in Chimeric Antigen Receptor T cell Immunotherapy | 2023 SERTA Project Grant | \$75,000 | 1 year, 2023 deferred to 2024 |
| Professor Steven Lane | Haematology/BM T Cancer Care Services | Translation of genetic findings to improve outcomes for patients with blood cancers | NHMRC Investigator Grant, L1. | \$1,913,403 | 5 years, 2021-2025 |
| Professor Steven Lane | Haematology/BM T Cancer Care Services | Rare Cancers and Unmet Need: MoST-LLy, Molecular Screening and Therapeutics Leukaemia and Lymphoma | MRFF Clinical Trials Activity | \$2,688,736.40 | 5 years 2021-2025 |
| Professor Steven Lane, A/Prof Siok Tey, Glen Kennedy, Andrea Henden | Haematology/BM T Cancer Care Services / QIMRB | ACRF Centre for Optimised Cancer Therapy | Australian Cancer Research Foundation - ACRF | \$2,000,000.00 | 6 years, 2023-2028 |
| Dr Ashleigh Scott | Haematology/BM T Cancer Care Services | Immune cell profiling using spatial transcriptomics in gastrointestinal graft versus host disease | MNHHS Collaborative Research Grant (CRG) | \$50,000.00 | 3 years, 2022-2024 |
| Dr Glen Kennedy | Haematology/BM T Cancer Care Services | QCOG Cancer Clinical Trial Data Manager Grant 2022 | Queensland Clinical Oncology Group | \$32,000.00 | 1 year, 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 2023 |
|---|--|---|---|
| Andrea Henden | Ashleigh Scott, Caroline McNamara, Glen Kennedy, Kirk Morris, Siok Tey, Stewart Hunt | T2MR - Performance of emerging microbiological techniques for the diagnosis of severe infections in neutropenic patients with haematological malignancies | 20 |
| Andrea Henden | Cameron Curley, Siok Tey, Elango Subramonia Pillai, Ashleigh Scott, Steven Lane, Glen Kennedy, Jason Butler, James Morton, Heshani Mediwake | "Micro GVHD" - Faecal Microbial Transplantation for Graft-Versus-Host Diseases ^{1e} | 4 |
| Andrea Henden | Glen Kennedy, Siok Tey, Ashleigh Scott, Cameron Curley, Caroline McNamara, Elango Subramonia Pillai, Jason Butler, Kirk Morris, Nicholas Weber | P3805-QRCOV1 - Phase I open-label clinical trial of allogeneic SARS-CoV-2-specific T cells for patients at risk of severe COVID-19 | 3 |
| Andrea Henden | Cameron Curley, Siok Tey, Elango Subramonia Pillai, Ashleigh Scott, Steven Lane, Cheryl Hutchins, Glen Kennedy, Jason Butler, Heshani Mediwake, Kirk Morris | CARTOS - Chimeric Antigen Receptor-T cell Observational Study | 6 |

| Lead Investigator Name (RBWH staff in bold) | Other Study Investigators (RBWH staff in bold) | Research Project Title | Number of RBWH Patients Recruited in 2023 |
|---|---|---|---|
| Andrea Henden | Cameron Curley, Siok Tey , Patrick Harris, Robert Bird, Adam Stewart, David Paterson | COVEM - COVID-19 Vaccine Efficacy in patients with Haematological Malignancy | 0 |
| Ashleigh Scott | Antiopi Varelias, Andrea Henden , Quan Nguyen, Glen Kennedy , Sunil Lakhani, Joshua Satchwell | Immune cell profiling using spatial transcriptomics in gastrointestinal graft <i>versus</i> host disease | 0 |
| Ashleigh Scott | Cameron Curley, Glen Kennedy, Siok Tey, Andrea Henden, Elango Subramonia Pillai, Jason Butler, Stewart Hunt | CYP-GVHD-P2-01 - Multicenter, Randomized, Double-blind, Placebo-Controlled Phase II Study to Investigate the Efficacy and Safety of CYP-001 in Combination with Corticosteroids vs Corticosteroids Alone for the Treatment of High-Risk Acute Graft Versus Host Disease | 0 |
| 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 |
| 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 |
| Caroline McNamara | Steven Lane, Kirk Morris, Nicholas Weber, Ashleigh Scott, Cameron Curley | Geron IMPACT MYF3001 - A Randomized Open-Label, Phase 3 Study to Evaluate Imetelstat (GRN163L) Versus Best Available Therapy (BAT) in Patients with Intermediate-2 or High-risk Myelofibrosis (MF) Refractory to Janus Kinase (JAK) Inhibitor | 3 |
| Caroline McNamara | Steven Lane, Kirk Morris, Ashleigh Scott, Cameron Curley, Nilu Perera, Stewart Hunt, Elango Subramonia Pillai, Siok Tey, Andrea Henden | INCYTE INCA - A Phase 1, Open-Label, Multicenter Study of INCA033989 Administered as a Monotherapy or in Combination With Ruxolitinib in Participants With Myeloproliferative Neoplasms | 0 |
| Jane Mason | Michelle Spanevello, Sally Campbell | Pfizer C0371004 - An open-label, non-investigational product, multi-center, lead-in study to evaluate prospective efficacy and selected safety data of current Factor IX (FIX) or factor VIII (FVIII) prophylaxis replacement therapy in the usual care setting of moderately severe to severe adult hemophilia B participants (FIX:C=2%) who are negative for neutralizing antibodies to adeno-associated virus vector Spark100 (benegene-1) and moderately severe to severe hemophilia A adult participants (FVIII:C=1%) who are negative for neutralizing antibodies to adeno-associated virus vector 6 (AAV6), prior to the respective therapeutic phase 3 gene therapy studies | 0 |
| Jane Mason | Michelle Spanevello, Sally Campbell | Pfizer C0371002 - Phase 3, open label, multi-cohort, multi-center study of FIX gene transfer with PF-06838435 (rAAV-Spark100-hFIX-Padua) in adult male participants with moderately severe to severe hemophilia B (FIX:C=2%) (BeneGene-2) | 3 |
| 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 |
| 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 |

| Lead Investigator Name (RBWH staff in bold) | Other Study Investigators (RBWH staff in bold) | Research Project Title | Number of RBWH Patients Recruited in 2023 |
|---|--|---|---|
| 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 |
| Jason Butler | Ashleigh Scott, Cameron Curley, Elango Subramonia Pillai, Nicholas Weber, Kirk Morris | Genmab GCT3013-01 - A Phase 1/2, Open-Label, Dose-Escalation Trial of GEN3013 in Patients with Relapsed, Progressive or Refractory B-Cell Lymphoma | 4 |
| 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 | 0 |
| Jason Butler | Andrea Henden, Ashleigh Scott, Cameron Curley, Elango Subramonia Pillai, Glen Kennedy, Siok Tey | Janssen CARTITUDE 5 - A Phase 3 Randomized Study Comparing Bortezomib, Lenalidomide and Dexamethasone (VRd) followed by Ciltacabtagene Autoleucel, a Chimeric Antigen Receptor T cell (CAR-T) Therapy Directed Against BCMA versus Bortezomib, Lenalidomide and Dexamethasone (VRd) followed by Lenalidomide and Dexamethasone (Rd) Therapy in Participants with Newly Diagnosed Multiple Myeloma for Whom Hematopoietic Stem Cell Transplant is Not Planned as Initial Therapy | 1 |
| Jason Butler | Andrea Henden, Ashleigh Scott, Kirk Morris, Cameron Curley, Nicholas Weber, Nilu Perera, Elango Subramonia Pillai, Glen Kennedy, Siok Tey, Stewart Hunt | KITE ZUMA 23 - A Phase 1 Open-label, Single Arm, Multicenter Study Evaluating the Safety and Efficacy of KITE-197 in Subjects with Relapsed or Refractory Large B-cell Lymphoma | 0 |
| 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 |
| 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 | 0 |
| Siok Tey | Ashleigh Scott, Andrea Henden, Cameron Curley, Elango Subramonia Pillai, Jason Butler | AlloVir PREVENT P-105-202 - Phase 2/3 study (P-105-202, NCT04693637), for the prevention of clinically significant adenovirus (AdV), BK virus (BKV), cytomegalovirus (CMV), Epstein-Barr virus (EBV), human herpesvirus 6 (HHV-6), and JC virus (JCV) infection and/or disease in high-risk patients following allogeneic hematopoietic cell transplant (HCT) | 0 |
| 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-versushost disease in patients receiving hematopoietic cell transplant | 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 |

| Lead Investigator Name (RBWH staff in bold) | Other Study Investigators (RBWH staff in bold) | Research Project Title | Number of RBWH Patients Recruited in 2023 |
|---|--|---|---|
| Siok Tey | Glen Kennedy, Cheryl Hutchins | TREG Apheresis - Developing a method to generate regulatory T cells from healthy donors | 0 |
| 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 |
| 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 |
| Siok Tey | Glen Kennedy, Cheryl Hutchins | Generating Chimeric Antigen Receptor (CAR T) cells from healthy volunteers | 0 |
| 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 | 8 |
| Steven Lane | Glen Kennedy | P1382 - Examination of genes that control the growth and survival of blood cancers | 0 |
| 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 | 0 |
| Steven Lane | Elango Subramonia Pillai, Cameron Curley, Nicholas Weber, Kirk Morris, Caroline McNamara | FORTREA APTIVATE APTOSE - A Phase 1/2, Open-label, Multicenter, Dose Escalation and Expansion Study of the Safety, Tolerability, Pharmacokinetics, and Pharmacodynamics of HM43239 in Patients with Relapsed or Refractory Acute Myeloid Leukemia (AML) | 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 2023 |
|--|---|--|---|
| Andrea Henden National Centre in Infections in Cancer (NCIC) | N/A | Infection outcomes in patients with haematological malignancies treated with cellular therapies: A national multi-site Australian study | 0 |
| Kirk Morris, St Vincent's Health Network | N/A | Lymphoma in pregnant patients: the Australian experience | 0 |
| 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 |
| 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 |

| Lead Investigator Name (RBWH staff in bold) | Other Study Investigators (RBWH staff in bold) | Research Project Title | Number of RBWH Patients Recruited in 2023 |
|---|---|--|---|
| Caroline McNamara ALLG | Cameron Curley, Jason Butler, Elango Subramonia Pillai, Steven Lane, Kirk Morris, Nicholas Weber | ALLG AML M24 - A phase 3, multicenter, open-label, randomized, study of gilteritinib versus midostaurin in combination with induction and consolidation therapy followed by one year maintenance in patients with newly diagnosed Acute Myeloid Leukemia (AML) or Myelodysplastic syndromes with excess blasts-2 (MDS-EB2) with FLT3 mutations eligible for intensive chemotherapy | 1 |
| 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 |
| Steven Lane ALLG | Cameron Curley, Jason Butler, Nicholas Weber, Elango Subramonia Pillai | ALLG APML5: A phase 1 pharmacokinetic evaluation of oral arsenic trioxide in previously untreated patients with acute promyelocytic leukaemia | 0 |
| 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 |
| Steven Lane ALLG | Caroline McNamara, Elango Subramonia Pillai, Kirk Morris, Nicholas Weber | ALLG AML M27 IMPRESS - A phase II study evaluating the efficacy and safety of imetelstat in patients with HR myelodysplastic syndromes or AML failing HMA-based therapy | 2 |
| Steven Lane ALLG | Caroline McNamara, Elango Subramonia Pillai, Kirk Morris, Nicholas Weber | ALLG CML 13 ASCEND - A single arm phase II study to evaluate the efficacy of asciminib in newly diagnosed patients with chronic phase chronic myeloid leukaemia | 0 |
| 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 |
| Steven Lane SAHMRI | Andrea Henden, Cameron Curley, Caroline McNamara, Kirk Morris, Nicholas Weber | PREACH-M - Precision Medicine for Chronic Myelomonocytic Leukaemia: A phase II Trial Studying the Efficacy of Lenzilumab and High Dose Ascorbate with Azacitidine Based on Molecular Profiling | 3 |
| Siok Tey Westmead Institute of Medical research | Ashleigh Scott, Andrea Henden, Cameron Curley, Elango Subramonia Pillai, Jason Butler | R3ACT Randomised (R3R) - A randomised trial of most closely HLA-matched third-party donor-derived virus-specific cytotoxic T-lymphocytes in patients with untreated viral infection post-allogeneic stem cell transplantation | 0 |
| Siok Tey ALLG | Jason Butler, Cameron Curley, Simon Durrant, Glen Kennedy, Ashleigh Scott, James Morton, Elango Subramonia Pillai, Andrea Henden | ALLG 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 | 5 |
| Nicholas Weber ALLG | Kirk Morris, Caroline McNamara, Elango Subramonia Pillai, Cameron Curley | ALLG HD13 RADAR - A randomised phase III trial with a PET response adapted design ABVD +/- ISRT and A2VD +/- ISRT in patients with previously untreated stage IA/IIA Hodgkin lymphoma | 2 |

| Lead Investigator Name (RBWH staff in bold) | Other Study Investigators (RBWH staff in bold) | Research Project Title | Number of RBWH Patients Recruited in 2023 |
|--|---|---|---|
| Nicholas Weber The Myeloma and Related Diseases Registry | Jason Butler | MRDR - Myeloma and Related Diseases Registry | 24 |
| Nicholas Weber AMaRC (Australasian Myeloma Research Consortium) | Kirk Morris, Caroline McNamara, Jason Butler | AMARC 19-02 BelaCarD - A phase I/II single arm study of combination Belantamab Mafodotin, Carfilzomib, Dexamethasone in patients with early relapsed multiple myeloma | 0 |
| Nicholas Weber AMaRC (Australasian Myeloma Research Consortium) | Ashleigh Scott, Cameron Curley, Jason Butler | 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 |
| Nicholas Weber AMaRC (Australasian Myeloma Research Consortium) | Ashleigh Scott, Cameron Curley, Jason Butler | AMARC - The RIDDLE-M-X trial - Risk Directed Front-Line Therapy for Multiple Myeloma incorporating Selinexor | 2 |
| 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 | 16 |
| 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 | 6 |
| Steven Lane Australian Genomic Cancer Medicine Group, OMICO, NHMRC | Andrea Henden, Cameron Curley, Caroline McNamara, Kirk Morris, Nicholas Weber | MoST LLY 16 BGB - AZ - A Single arm, open label, signal seeking, phase II trial of pamiparib in patients with relapsed/ refractory myeloid haematological malignancy with aberrant germline or somatic DNA repair pathway function | 2 |
| Jason Butler PMCC (Peter MacCallum Cancer Centre) | Cameron Curley;Elango Subramonia Pillai;Kirk Morris;Ashleigh Scott;Siok Tey;Andrea Henden; | PMCC COALITION - A multicentre, parallel arm, open-label trial of frontline R-CHOP/Pola-RCHP and glofitamab in younger, higher risk patients with diffuse large B cell lymphoma (DLBCL) | 3 |

Research Publications

Authors

| Investigator | ORCID ID | Investigator | ORCID ID |
|---------------------|---------------------|---------------------|---------------------|
| Andrea Henden | 0000-0003-2261-169X | Nilu Perera | 0000-0002-4752-0551 |
| Siok Tey | 0000-0001-9567-382X | A/Prof Glen Kennedy | 0000-0002-7171-0435 |
| Ashleigh Scott | 0000-0001-5574-6713 | Sally Campbell | 0000-0002-1421-745X |
| Nick Weber | 0000-0001-6341-2537 | Stewart Hunt | 0000-0002-4555-6964 |
| Michelle Spanevello | 0000-0003-1498-7822 | Caroline McNamara | 0000-0002-1116-9747 |
| Steven Lane | 0000-0002-8050-6209 | Joseph Noye | 0000-0002-4422-3375 |
| Jane Mason | 0000-0002-8320-2884 | Jason Butler | 0000-0002-6422-4404 |
| Heshani Mediwake | 0000-0002-4521-7970 | | |

Publications in 2023

Journal Articles (RBWH staff in bold)

Mahlangu J, Kaczmarek R, von Drygalski A, Shapiro S, Chou SC, Ozelo MC, Kenet G, Peyvandi F, Wang M, Madan B, Key NS, Laffan M, Dunn AL, **Mason J**, Quon DV, Symington E, Leavitt AD, Oldenburg J, Chambost H, Reding MT, Jayaram K, Yu H, Mahajan R, Chavele KM, Reddy DB, Henshaw J, Robinson TM, Wong WY, Pipe SW; GENER-1 Trial Group. Two-Year Outcomes of Valoctocogene Roxaparvovec Therapy for Hemophilia A. *N Engl J Med.* 2023 Feb 23;388(8):694-705

Gareth Gregory, Jenna Langfield, Matthew Greenwood, **Sean McKeague**, Mohammad Shanavas, Renee Eslick, Giselle Kidson-Gerber, Portia Smallbone, Catherine Tang, **Kirk Morris**, Ian Bilton, Costas K. Yannakou, Xavier Badoux, Leanne Berkahn, Sergio Farina, Kylie D. Mason, Penelope Motum, Kathryn Goss, Nada Hamad. The clinical features, management and outcomes of lymphoma in pregnancy: A multicentre study by the Australasian Lymphoma Alliance. *BJHaem*, 2023 March ;201:887–896. DOI: 10.1111/bjh.18727

Austin RJ*, Straube J*, Halder R, Janardhanan Y, Bruedigam C, Witkowski M, Cooper L, Porter A, Braun M, Souza-Fonseca-Guimaraes F, Minnie SA, Cooper E, Jacquelin S, Song A, Bald T, Nakamura K, Hill GR, Aifantis I, **Lane SW**#, Bywater MJ#. Oncogenic drivers dictate immune control of acute myeloid leukemia. *Nature Communications* 2023, In Press. *co-first author, #co-senior and co-corresponding author

Straube J*, Eifert T*, Vu T*, Janardhana Y, Haldar R, von Eyss B, Cooper L, Bruedigam C, Ling V, Cooper E, Patch A, Bullinger L, Schnoder T, Bywater M, Heidel FH*, **Lane SW***. Cre Recombinase expression cooperates with homozygous FLT3 internal tandem duplication knockin mouse model to induce acute myeloid leukemia. *Leukemia* 2023, In Press. (*equal contribution)

Ling V, Straube J, Godfrey W, Haldar R, Janardhanan Y, Cooper L, Bruedigam C, Cooper E, Tavakoli Shirazi P, Jacquelin S, **Tey S-K**, Baell J, Huang F, Jin J, Zhao Y, Bullinger L, Bywater M, **Lane SW**. Targeting cell cycle and apoptosis to overcome chemotherapy resistance in acute myeloid leukemia. *Leukemia* 2023, 37(1): 143-53

Iland H, Russell N, Dillon R, Schuh R, Tedjaseputra A, Wei A, Khwaja A, Knapper S, **Lane SW**, Reynolds J, McMullin MF, artin A, Tan P, Taussig DC, Wong A, Taper J, Fraga C, Kelly R, Tawana K, Mehta P, Mina A, Altman J, Molle I, Tauro S, Tholouli E. Characteristics and outcomes of patients with acute promyelocytic leukemia and extreme hyperleukocytosis at presentation. *Blood Advances* 2023, 7(11): 2580-85 doi: 10.1182/bloodadvances.2022007126

Sarah Andersen, **Andrea Henden**, Heidi Staudacher, **Glen Kennedy**, Nicole Gavin. Fibre intake and supplementation during treatment for haematological malignancies: A scoping review. *Journal of Human Nutrition and Dietetics* Volume 36, Issue 5 p. 1982-1991

Anna Maria Peri, Felicity Edwards, **Andrea Henden**, Patrick N. A. Harris, Mark D. Chatfield, David L. Paterson & Kevin B. Laupland. Bloodstream infections in neutropenic and non-neutropenic patients with haematological malignancies: epidemiological trends and clinical outcomes in Queensland, Australia over the last 20 years . Springer - Clinical and Experimental Medicine. doi: 10.1007/s10238-023-01206-x

Scott, A.P., Henden, A., Kennedy, G.A, Tey, SK. PET assessment of acute gastrointestinal graft versus host disease. *Bone Marrow Transplant* (2023). 3 Aug 2023. <https://doi.org/10.1038/s41409-023-02038-9>

Eifert T, Hsu C, Becker AL, Graessle S, Horne A, Bemmann F, Zhang Q, Heuser M, Vasioukhin V, Schöll S, Hochhaus A, Siegerist F, Endlich N, Bullinger L, **Lane SW**, Haas S, Schnoeder TM, Heidel FH. Cell fate determinant *Lgl1* is required for propagation of acute myeloid leukemia. *Leukemia* 2023

Subramanian S, Thoms JAI, Huang Y, Paramo CPC, Koch FC, Jacquelin S, Shen S, Song E, Joshi S, Brownlee CP, Woll PS, Chacon-Fajardo D, Beck D, Curtis DJ, Yeyson K, Antonenas V, O'Brien T, Trickett A, Powell JA, Lewis ID, Pitson SM, Gandhi MK, **Lane SW**, Vafae F, Wong E, Gottgens B, Rokny H, Wong JWH, Pimanda JE. Genome-wide Transcription Factor binding maps reveal cell-specific changes in the regulatory architecture of human HSPC. *Blood* 2023

Bruedigam C, Porter AH, Song A, Vroeg in de Wei G, Stoll T, Straube J, Cooper L, Cheng G, Kahl VFS, Sobinoff AP, Ling VY, Jebaraj BMC, Janardhanan Y, Haldar R, Bray LJ, Bullinger L, Heidel FH, **Kennedy GA**, Hill MH, Pickett HA, Abdel-Wahab O, Hartel G, **Lane SW**. Imetelstat-mediated alterations in fatty acid metabolism to induce ferroptosis as therapeutic strategy for acute myeloid leukemia. *Nature Cancer* 2023

Philip Wong, David C. Whiteman, Catherine M. Olsen, Yin Yuan1, **Jason Butler, Cameron Curley, Simon Durrant, Andrea Henden, A. James Morton, Elango Subramoniapillai, Caroline Stewart, Siok Keen Tey, Glen A. Kennedy1 and Ashleigh P. Scott.** Quantifying skin cancer risk following allogeneic haematopoietic cell transplant in Queensland, Australia. *Bone Marrow Transplantation*. <https://doi.org/10.1038/s41409-023-02138-6>. 27 October 2023

Russell S, Whitehart S, **Mason J**, Window P. Does the method of telehealth delivery affect the physiotherapy management of adults with bleeding disorders? A comparison of audioconferencing and videoconferencing. *Haemophilia*. 2023 Nov;29(6):1589-1596. doi: 10.1111/hae.14869. Epub 2023 Sep 20. PMID: 37729471

Noye J, Beggs J, **Mason J**. Discrepant low von Willebrand factor activity results on the ACL TOP analyzer are frequent in unselected patients with myeloproliferative neoplasms and show no correlation with high-molecular-weight multimer loss or bleeding phenotype. *J Thromb Haemost.* 2023 Dec 30:S1538-7836(23)00926-1. doi: 10.1016/j.jtha.2023.12.024. Epub ahead of print. PMID: 38160725

Journal Articles (RBWH staff in bold)

Nada Hamad, Ian Bilmon, Lynette Chee, **Andrea Henden**, Anna Johnston, Duncan Purtil, Ashish Bajel, **Siok-Keen Tey**, David Yeung, Theresa Cole, Clinton Lewis, **Jason Butler**. ANZTCT consensus position statement on ruxolitinib in steroid-refractory acute and chronic graft-versus-host disease. *Internal Medicine Journal*, 2023. 28 November 2023
<https://doi.org/10.1111/imj.16255>

Sarah Andersen, Andrea Henden, Heidi Staudacher, **Glen Kennedy, Nicole Gavin**, Fibre intake and supplementation during treatment for haematological malignancies: A scoping review. *Journal of Human Nutrition and Dietetics*. 04 July 2023
<https://doi.org/10.1111/jhn.13209>

Medical Oncology

Research highlights



Dr David Wyld

Director of Medical Oncology

2023 was another very busy year for the Department of Medical Oncology's research unit. An important development in enhancing research across MNH was the research staff in the previously separate units at Royal Brisbane and Women's Hospital and Prince Charles Hospital, joining together as one research group. This change will improve the ability for new research studies to be offered to patients at TPCH, allow streamlining of processes across Cancer Care, improve the ability for staff to work across both sites as required, and hopefully allow patients to access clinical trials at TPCH that previously were only available at RBWH.

The Medical Oncology research program remained very active throughout 2023, with a large number of clinical trials and research studies open with significant numbers of patients managed on study. In addition, the department continues to undertake research with a wide variety of collaborators.

I would like to highlight several of the departments 2023 achievements.

- ❖ A team of researchers, led by Dr Mark Nalder, was a finalist in the 2023 Metro North Research Excellence Awards in the category of Clinical Research. The nominated project "Implementation of pre-treatment genotype guided personalised dosing to reduce severe toxicity from chemotherapy" was a local investigator-initiated study undertaken in MNH, which received a 2021 MNHHS SEED Innovation Grant, and successfully completed recruitment of 334 patients. Results have been presented the final manuscript is about to be submitted for publication. The results of the study have the potential to change standard practice for such patients in Qld.
- ❖ Completion of recruitment of the "Promise" study - a randomised controlled trial of electronic self-reporting of symptoms versus usual care during and following treatment in cancer patients to improve patient outcomes. A/Prof's Melissa Eastgate and David Wyld from RBWH were part of a research collaborative involving RBWH, PAH, GCUH and Townsville Hospitals and QIMR-B, who, after receiving a Cancer Council Queensland Accelerating Collaborative Research Grant in 2020, undertook this study at 4 major Qld public hospital. RBWH randomised 162 of a total 538 patients recruited to this study. This was an outstanding example of the potential of collaborative cancer research in Queensland.
- ❖ The unit continues to undertake research with a wide variety of collaborators both locally and from around the country. This can be demonstrated by
 - The number of collaborative research activities involving our group as listed in the report below – these include multiple Australasian Cancer Collaborative trials groups, several different academic institutions and research institutes, as well as colleagues in other clinical services.
 - The number of collaborative research grants held by members of our department in conjunction with research collaborators around the country, including 15 NHMRC/ MRFF grants and 2 Cancer Council Qld Accelerating Collaborative Cancer research Grants.

Research publications. A number of manuscripts were published by departmental staff in 2023, including a number in high impact journals such as The Journal of Clinical Oncology, JCO Oncology Practice, Journal of Neuro-Oncology, The Lancet Oncology, European Journal of Cancer and Nature Communication

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 | CCS Medical Oncology | CCQ- Clinical Trials Data Management Grant. Medical Oncology | Cancer Council Queensland | \$100,000 | 1 year, 2023 |
| Brett Hughes | CCS Medical Oncology | Understanding how immunotherapy for non-small cell lung cancer alters the immune environment to achieve better outcomes | IMPACT Philanthropy Application Program | \$56,040 | 1 year, 2023 |
| Mark Nalder, Matthew Burge, Melissa Eastgate, David Wyld | CCS Medical Oncology | Reducing severe toxicity and hospitalisations related to 5-Fluorouracil (5-FU) chemotherapy | 2021 MNHHS SEED Innovation Funding | \$88,488 | 3 years, 2021-2023 |
| John Atherton, Kristyan Guppy-Coles, Sandhir Prasad, Po-Ling Inglis | CCS Medical Oncology | Feasibility and Diagnostic Accuracy of Novel Echocardiographic Approaches to allow Screening and Monitoring for Left Ventricular Systolic | Heart Foundation 2019 Vanguard | \$150,000 | 3 years, 2020-2023 |
| Arutha Kulasinghe, Brett Hughes , Lizbeth Kenny, Ken O'Byrne, Chamindie Punyadeera | CCS Medical Oncology, CCS Radiation 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 |
| Hayes S, Obermair A, Janda M, Eakin E, Shannon C, Goh J , Beesley V, Vagenas D, Spence R | CCS Medical Oncology, Surgery | 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 |
| Hao-Wen Sim, Helen Wheeler, Zarnie Lwin , Kathryn Field, Benjamin Chua , David Espinoza, Michael Buckland, Kimberley Kaufman | CCS Medical Oncology, CCS Radiation Oncology | PICCOG: PARP and Immune Checkpoint inhibitor Combination for relapsed IDH-mutant high-grade Glioma | NHMRC (National Health and Medical Research Council) | \$1,391,472 | 4 years, 2019-2023 |
| Chee Khoon Lee, Michael Friedlander, Clare Scott, Sherene Loi, Tarek Meniawy, Jeffrey Goh , Anna DeFazio, Alicia Jenkins, Alison Davis, Rachel O'Connell | CCS 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 |
| Penelope Webb, Raymond Chan, Bena Brown, David Wyld , Sabe Sabesan, Louisa Gordon, Gunter Hartel, Melissa Eastgate , Laurelie Wishart, Rebecca Nund | CCS 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 |

| 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 |
|--|---|--|--|--|--|
| Nicola Waddell, Andreas Moller, Michele Teng, Harsha. Gowda, John Pearson, Tobias Bald, Peter Simpson, Elizabeth Ahern, David Fielding, Brett Hughes | CCS 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 |
| Arutha Kulasinghe, Rahul Ladwa, Ken O'Byrne, Scott Coman, Ben Wallwork, Gabrielle Belz, Kirsten Russell, Duncan Lambie, Brett Hughes | CCS Medical Oncology | Astronomy meets pathology: an interdisciplinary effort to develop a head and neck cancer cellular atlas for immunotherapy | MSH SERTA | \$100,000 | 3 years, 2022-2024 |
| 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 | CCS 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 |
| Paul Thomas, John Hooper, Trent Munro, David Wyld , Luke Perrin, Rohan Lourie, Stephen Rose, Simon Puttick | CCS 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 |
| Sunil Lakhani, Amy Reed, Christopher Pyke, Cameron Snell, Nicole McCarthy, Ken O'Byrne, Valentine Hyland, Owen Ung, Natasha Woodward, Euan Walpole, Peter Simpson, Stephen Rose, Fares Al-Ejeh, Po-Ling Inglis , Ben Green | CCS Medical Oncology | Whole Genome Sequencing in high-risk breast cancer patients | MRFF Genomics Health Futures Mission | \$2,800,000 | 5 years, 2020-2024 |
| Punyadeera C, Kenny L, Sriram S, Hughes B , Leo P, Papautsky I | CCS Medical Oncology | Multi-analyte liquid biopsy-based biomarkers for oropharyngeal cancer | NHMRC (National Health and Medical Research Council) | \$763,417 | 4 years, 2022-2025 |
| Vanessa Beesley, Rachel Neale, Jane Turner, Patsy Yates, David Wyld , Raymond Chan, Louisa Gordon | CCS 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, 2020-2025 |

| 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 | CCS Medical Oncology, CCS Radiation Oncology | Improving outcomes for people with and at risk of lung cancer | Australian Cancer Research Foundation | \$2,000,000 | 4 years, 2022-2025 |
| 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 | CCS 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 | 6 years, 2021-2026 |
| Raymond Chan, Jon Emery, Michael Jefford, Nicolas Hart, Gillian Harvey, David Wyld (CI F), David Chan, Michelle Miller, Sanjeewa Kularatna, Lee Jones | CCS Medical Oncology | Implementing a Nurse-Enabled, Shared-Care Model to Address Unmet Needs of People with Neuroendocrine Tumours: the AUS-NET Trial | NHMRC 2021 MRFF Rare Cancers, Rare Diseases and Unmet Need | \$2,374,220 | 5 years, 2022-2026 |
| Penelope Schofield, Linda Mileskin, Anna Ugalde, Richard Tothill, Stephen Quinn, Hui-li Wong, Owen Prall, Catherine Mitchell, Nilmini Wickramasinghe, Clare Fedele, Colin Wood, Louisa Gordon, Christopher Steer, Rachel Wong, Mark Shackleton, Louise Nott, Shamsudheen Padinharakan, Zee Wan Wong, Anna Kuchel | CCS Medical Oncology | Solving Unknown Primary cancER Earlier Diagnosis (SUPER-ED): A stepped wedge cluster randomised controlled trial implementing a new model of care to support earlier diagnosis | MRFF (Medical Research Future Fund) | \$2,400,000 | 5 years, 2022-2026 |
| Sudha Rao, Corey Smith, Gunter Hartel, Maciej Trzaskowski, Zarnie Lwin , Jane Dahlstrom, Melissa Eastgate , Vladimir Andelkovic, Sayed Ali | CCS Medical Oncology | Epigenetic checkpoint blockade: a new approach to enhance immune-mediated control | NHMRC Ideas Grant 2022 | \$1,280,076 | 5 years, 2023-2027 |
| Vicki Whitehall, Eric Shifrut, Ann-Marie Patch, Catherine Bond, Bianca Nowlan, Jennifer Borowsky, Juan Dubrot, Matthew Burge , David Clark | CCS Medical Oncology | New Approaches for Sensitising Metastatic Colorectal Cancer to Immunotherapy | NHMRC Ideas Grant 2022 | \$1,419,345 | 5 years, 2023-2027 |

| 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 |
|---|---|---|-------------------------------------|--|--|
| R Jeffree, B Day, C Gedye, ES Koh, R Leonard, HW Sim, W Varikatt, D Hansen, D Cossio, R Harrup, H Gan, J Zalcborg, T O'Brien, K Drummond, M Pinkham, R Ormsby, G Gomez, K Alexander, M Buckland, N Good, M Sachchithananthan, A Scott, J Whittle, D Ziegler, C Vajdic, W Lipworth, J Dickinson, L Quinn, J Aitken, Z Lwin , JHansford, A Yule, M Agar, G Kichenadasse, D Truran, G Francois, W Chin, B Kong, J Gabriel, A Lee, C Turner , S Evans, W Ng, R Sullivan, S Pitson, A Nguyen | CCS Medical Oncology | Australian Brain Cancer Research Infrastructure Grant: Supporting brain cancer care with an integrated network of platforms | MRFF (Medical Research Future Fund) | \$5,991,219 | 5 years, 2023-2027 |

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 2023 |
|---|--|--|---|
| Matthew Burge , Victoria Whitehall | David Wyld, Melissa Eastgate , Alison Hadley, Brett Hughes, Po-ling Inglis, Zarnie Lwin, Jeff Goh, Darshit Thaker , Bahram Forouzes, Sudhakar Vemula, Elizabeth Ahern, Jennifer Borowsky | The Royal Brisbane and Prince Charles Hospital metastatic Colorectal Cancer database: A prospective observational cohort study examining clinical and molecular biomarkers | 7 (RBWH) 20 (TPCH) |
| 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 | 60 (RBWH) 16 (TPCH) (in follow-up) |
| Melissa Eastgate | Michelle Wykes, Rebecca Faleiro, Deshapriya Karunarathne | INVITE: In vitro testing of a novel immunotherapy for advanced cancer | 28 |
| Melissa Eastgate | Michele Teng, Bill Dougall, Margaret Cummings, Rosalind Jeffree, Shu Lee, Anna Kuchel , Elizabeth Ahern | MISTY trial (Melanoma Immunotherapy Stratification and Treatment Sensitivity) Cutaneous Malignancies Group | 2 |
| Melissa Eastgate | Sudha Rao, David Wyld, Kathy You , Robert McCuaig, 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 | 13 |
| Brett Hughes | Elizabeth Ahern, Bill Dougall | 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 (in follow-up) |
| Kyung You | Zarnie Lwin , Natasha Roberts | Multifactorial determinants that influence clinical trial participation by cancer patients in Australia | 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 2023 |
|---|---|---|---|
| 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 |
| Mark Nalder | Nikita Allen, Marianne Kirrane, David Wyld | Characteristics and outcomes of cancer patients requiring admission to intensive care – a single centre retrospective review | Not applicable |
| Brett Hughes | Cassie Turner | Outcomes for patients with radioactive iodine-refractory thyroid cancer treated within the Royal Brisbane and Women's Hospital | Not applicable |
| David Wyld | Julie Moore, Mark Wan | Neuroendocrine Tumours: Epidemiologic trends in Queensland | Not applicable |
| David Wyld | Julie Moore, Nancy Tran, Michael Wyld | Neuroendocrine Neoplasms in the Paediatric, Adolescent and Young Adult Population in Queensland, Australia | Not applicable |
| Melissa Eastgate | Anna Kuchel , Kathryn Hine | Financial planning concerns in patients with advanced melanoma – a research study into patient and clinician perspectives | Not applicable |
| Melissa Eastgate | Geoffrey Bryant, Mathew Burge , Darshit Thaker , David Wyld , Cameron Curley, Michele Grogan, Jemma Byth | Cancer patient reported outcomes: putting theory into practice | Not applicable |
| Brett Hughes Elizabeth Ahern | Martin Batstone and Bill Dougall (QIMR) | Expression of novel immune markers in mucosal head and neck squamous cell carcinoma (HNSCC) specimens | Not applicable |
| Melissa Eastgate , Elizabeth Ahern, Anna Kuchel | Ailin Lepetier, Jason Madore | Multiplex immunofluorescence assessment of melanoma biopsies and response to immunotherapy | Not applicable |
| Brett Hughes , Elizabeth Ahern | Martin Batstone, Bill Dougall | Immune Biomarker Evaluation in Oral Mucosal Squamous Cell Carcinoma: a prospective tissue collection | 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 | Not applicable |
| 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 |
| 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 applicable |
| Melissa Eastgate , Elizabeth Ahern, Harry Gasper, Sudha Rao | Sumudu Britton (RBWH ID) Brett 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 | 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 2023 |
|--|---|--|---|
| 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 |
| Po-Ling Inglis | Quan Tran, Anna Kuchel , Sean Stephens (Neurosurgery) | Pineal germinoma: A 13-year Queensland experience | Not applicable |
| 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 |
| Lucy Corke | Matthew Burge | Pembrolizumab in previously treated microsatellite instability-high/deficient mismatch repair metastatic colorectal cancer | Not applicable |
| Lucy Corke | Brett Hughes , Chiyau 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 | Not applicable |
| 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 |
| Mark Flower, Brett Hughes | Melissa Eastgate, Anna Kuchel , Elizabeth Ahern, Yong Yeung | Immune checkpoint inhibitor hepatotoxicity rates, associations and clinical management audit | Not applicable |
| Melissa Eastgate | Lindy Jeffree, Margaret Cummings (PathQLD) Elizabeth Ahern, Anna Kuchel , Shu Fen Lee, Michael Colditz | Audit of outcomes of melanoma patients undergoing neurosurgery | Not applicable |
| Matthew Burge, Fiona Paxton-Hall | David Wyld | Outcome and toxicity of salvage therapy with 177 Lu-dotatate in patients with metastatic neuroendocrine tumours | Not applicable |
| 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 |
| 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 | Not applicable |
| 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 |
| 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 |
| 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 | 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 2023 |
|---|---|--|---|
| 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 |
| Arutha Kulasinghe | Brett Hughes | Identification of predictive biomarkers for immune checkpoint blockade in head and neck cancer | 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 2023 |
|--|--|--|---|
| Australasian Gastrointestinal Trials Group | Matthew Burge (Cancer Care Services) | ASCEND: Randomized, phase 2 study of gemcitabine and nab-paclitaxel with CEND-1 or placebo in patients with untreated metastatic pancreatic ductal adenocarcinoma | 7 |
| 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 |
| Australasian Gastrointestinal Trials Group | David Wyld (Cancer Care Services) | SSG XXII GIST: Three versus five years of adjuvant imatinib as treatment of patients with operable GIST with a high risk for recurrence: A randomised phase III multicentre study by the Scandinavian Sarcoma Group | 0 (closed) |
| 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) | 0 (in follow-up) |
| Australasian Gastrointestinal Trials Group intestinal Trials Group | 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) | 0 (in follow-up) |
| Australasian Gastrointestinal Trials Group | Matthew Burge (Cancer Care Services) | MONARCC: A randomised phase 2 study of Panitumumab monotherapy versus fluoropyrimidine and bevacizumab as first line therapy for RAS wild type metastatic colorectal cancer | 0 (in follow-up) |
| Breast Cancer Trials | 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 | 0 |
| Breast Cancer Trials | Po-Ling Inglis (Cancer Care Services) | DECRESCENDO: De-escalation of adjuvant chemotherapy in HER2-positive, estrogen receptor-negative, node-negative early breast cancer subjects who achieved pathological complete response after neoadjuvant chemotherapy and dual HER2-blockade | 0 (closed) |
| Breast Cancer Trials | Po-Ling Inglis (Cancer Care Services) | FINER: 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 | 2 |

| Lead Investigator Name (RBWH staff in bold) | Other Study Investigators (RBWH staff in bold) | Research Project Title | Number of RBWH Patients Recruited in 2023 |
|---|--|--|---|
| Australia New Zealand Breast Cancer Trials Group | Michelle Nottage (Cancer Care Services) | PALLAS: 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 | 0 (in follow-up) |
| 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) |
| 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) |
| 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) |
| Australia New Zealand Gynaecological Oncology Group | Jeffrey Goh (Cancer Care Services) | ADELE: Adjuvant Tisnelizumab plus chemotherapy after post-operative pelvic chemoradiation in high risk endometrial cancer | 2 |
| Australia New Zealand Gynaecological Oncology Group | Jeffrey Goh (Cancer Care Services) | EPOCH: Eribulin and Pembrolizumab in Ovarian/uterine Carcinosarcoma and sarcoma: A Phase 2 study of the single agent microtubule inhibitor, Eribulin or of Eribulin in combination with the PD-1 inhibitor, Pembrolizumab, in relapsed ovarian/fallopian tube carcinosarcoma (OCS), uterine carcinosarcoma (UCS), angiosarcoma and liposarcoma | 0 |
| Australia New Zealand Gynaecological Oncology Group | Jeffrey Goh (Cancer Care Services) | PARAGON-II: Phase II basket study of an ARomatase inhibitor plus PI3KCA inhibitor or CDK4/6 inhibitor in women with hormone receptor positive recurrent/metastatic Gynaecological Neoplasms | 11 |
| 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 | 0 (in follow-up) |
| Australia New Zealand Gynaecological Oncology Group | Jeffrey Goh (Cancer Care Services) | EMBRACE: 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 | 0 (in follow-up) |
| Australia New Zealand Gynaecological Oncology Group | 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 | 0 (in follow-up) |
| 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 | 0 (in follow-up) |
| 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) |

| Lead Investigator Name (RBWH staff in bold) | Other Study Investigators (RBWH staff in bold) | Research Project Title | Number of RBWH Patients Recruited in 2023 |
|---|--|---|---|
| Australia New Zealand Gynaecological Oncology Group | Aneta Suder (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) |
| Australia New Zealand Gynaecological Oncology Group | Jeffrey Goh (Cancer Care Services) | VELIA: 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) |
| Australia and New Zealand Melanoma Trials Group | Melissa Eastgate (Cancer Care Services) | STOP-GAP: A randomised phase III study of duration of Anti-PD-1 therapy in metastatic melanoma | 1 |
| Australia New Zealand Urogenital and Prostate Cancer Trials Group | David Wyld (Cancer Care Services) | BEP: A randomised phase 3 trial of accelerated versus standard BEP chemotherapy for participants with intermediate and poor-risk advanced germ cell tumours | 0 |
| Australia New Zealand Urogenital and Prostate Cancer Trials Group | Jeffrey Goh (Cancer Care Services) | EVOLUTION: 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) | 7 (in follow-up) |
| Australia New Zealand Urogenital and Prostate Cancer Trials Group | Aneta Suder (Cancer Care Services) | UpFront PSMA: A Randomised Phase 2 Study of Sequential ¹⁷⁷ Lu-PSMA617 and Docetaxel versus Docetaxel in Metastatic Hormone-Naïve Prostate Cancer | 2 (in follow-up) |
| 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) |
| 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) | 0 (in follow-up) |
| 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 (in follow-up) |
| 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) |
| 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 | 0 (in follow-up) |
| BioGrid Australia | Jeffrey Goh (Cancer Care Services) | ePAD: Analyzing Treatment Patterns and Outcomes from Real-World Patients with Castrate-Resistant Prostate Cancer (CRPC) | 29 |

| Lead Investigator Name (RBWH staff in bold) | Other Study Investigators (RBWH staff in bold) | Research Project Title | Number of RBWH Patients Recruited in 2023 |
|---|--|--|---|
| BioGrid Australia | Matthew Burge (Cancer Care Services) | TRACC: Study of Clinical Outcomes and Analysis of Bevacizumab use in Metastatic Colorectal Cancer | 7 |
| Canadian Cancer Trials Group | 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 | 0 |
| Cooperative Trials Group for Neuro-oncology | Zarnie Lwin (Cancer Care Services) | MAGMA Trial: The Multi-Arm GlioblastoMa Australasia Trial (COGNO) | 2 (in follow-up) |
| 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 (in follow-up) |
| 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 | 0 (in follow-up) |
| 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) |
| Melanoma and Skin Cancer Trials Limited | David Wyld (Cancer Care Services), | GoTHAM: A Merkel Cell Carcinoma (MCC) study testing the immunotherapy drug Avelumab in combination with either radionuclide therapy or external beam radiotherapy | 1 |
| Melanoma and Skin Cancer Trials Limited | Melissa Eastgate (Cancer Care Services) | I-MAT: - A randomised, placebo-controlled, phase II trial of adjuvant Avelumab in patients with stage I-III Merkel cell carcinoma | 1 |
| Melanoma and Skin Cancer Trials Limited | Melissa Eastgate (Cancer Care Services) | CHARLI: A Phase Ib/II Trial of Ipilimumab-Nivolumab-Denosumab and Nivolumab-Denosumab in Patients with Unresectable Stage III and IV Melanoma | 0 (in follow-up) |
| Metro South HHS | Brett Hughes (Cancer Care Services) | DESQUAMATE: A phase 2 study of de-escalation in resectable, locally advanced cutaneous squamous cell carcinoma with the use of neoadjuvant Pembrolizumab. | 4 (in follow-up) |
| NeuroEndocrine Cancer Australia | David Wyld (Cancer Care Services) | 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 | 0 |
| Peter MacCallum Cancer Centre | David Wyld (Cancer Care Services) | NET SANGUIS: The potential role of circulating DNA in the management of neuroendocrine tumours. | 0 |
| Peter MacCallum Institute | Anna Kuchel (Cancer Care Services) | SUPER-NEXT: Complete Whole Genome Sequencing for Cancer of Unknown Primary | 5 (in follow-up) |
| Queensland University of Technology | Brett Hughes (Cancer Care Services) | Liquid lung Biopsy: Laboratory Based Study of Circulating Tumour Cells in Human Blood | 0 (in follow-up) |
| 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 | 0 (in follow-up) |
| University of New South Wales | David Wyld (Cancer Care Services), Robert Henderson (Neurology) | IN FOCUS: Peripheral Neuropathy in Chemotherapy-treated Patients: Predictors, Assessment strategies and Functional Outcomes | 0 (in follow-up) |

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|--|---|---|---|
| University of New South Wales | David Wyld (Cancer Care Services), Robert Henderson (Neurology) | IN FOCUS Duloxetine: The use of duloxetine for the treatment of chemotherapy-induced peripheral neuropathy | 0 (in follow-up) |
| Walter and Eliza Hall Institute | Michelle Nottage (Cancer Care Services) | ARORA: Advanced Hormone Receptor Positive Breast Cancer Registry in Australia | 4 |
| Walter and Eliza Hall Institute | Anna Kuchel (Cancer Care Services) | iTestis: Bioinformatics for Testis Cancer | 10 |
| Walter and Eliza Hall Institute | Matthew Burge (Cancer Care Services) | PURPLE: Pancreatic cancer: Understanding Routine Practice and Lifting End results; A Prospective Pancreatic Cancer clinical registry | 0 |
| Walter and Eliza Hall Institute | Michelle Nottage (Cancer Care Services) | TABITHA: Study of the clinical outcomes and analysis of anti-HER2 therapy in treatment of metastatic HER2 positive breast cancer | 2 |
| 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) |
| 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) |
| 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) | 2 (in follow-up) |
| 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) | 0 (in follow-up) |
| Walter and Eliza Hall Institute | Zarnie Lwin (Cancer Care Services) | EX-TEM: Phase III Trial of Extended Temozolomide in Newly Diagnosed Glioblastoma (WEHI) | 0 (in follow-up) |
| Bryan Day QIMR Berghofer Medical Research Institute | Po Ling Inglis , (Cancer Care Services), Rosalind Jeffree (Neurosurgery) | Novel Therapies for Brain Cancer | |
| Manoj Bhatt | 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 |
| Kate Roberts (Princess Alexandra Hospital), Ken O'Byrne (Queensland University of Technology), | Brett Hughes, Zarnie Lwin | 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 |
| 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) |

| Lead Investigator Name (RBWH staff in bold) | Other Study Investigators (RBWH staff in bold) | Research Project Title | Number of RBWH Patients Recruited in 2023 |
|---|--|--|---|
| John Clouston (DMI) Roger Bain (DMI) | Melissa Eastgate (CCS) , Nigel Mott (DMI), Ken Mitchell (DMI), Karin Steinke (DMI), Sam Davis (DMI) | The Metro North Interventional Oncology database: a prospective observational cohort study examining outcomes for interventional oncology procedures | Not available |
| 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 | Not available |
| 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 | Not available |
| Teresa Brown (Nutrition and Dietetics) | Judy Bauer (University of Queensland), Brett Hughes (Cancer Care Services) Elizabeth Ahern | "Sarcopenia in HNSCC patients undergoing definitive concurrent CRT and associations with clinical outcomes" | Not available |
| 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 |
| 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 |
| Queensland University of Technology | Jeffrey Goh (CCS), Aneta Suder (CCS) , Natasha Roberts (CCS) | IRONMAN: International registry for men with advanced prostate cancer | 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 |
| 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 |

| Lead Investigator Name (RBWH staff in bold) | Other Study Investigators (RBWH staff in bold) | Research Project Title | Number of RBWH Patients Recruited in 2023 |
|---|---|---|---|
| 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 |
| Cooperative Trials Group for Neuro-oncology | Po-Ling Inglis | Outcomes and patterns of care in adult medulloblastoma | 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 |

Research Publications

Authors

| Investigator | ORCID ID | Investigator | ORCID ID |
|-------------------|---|----------------|---|
| David Wyld | https://orcid.org/0000-0001-9523-4333 | Anna Kuchel | https://orcid.org/0000-0001-8580-2974 |
| Melissa Eastgate | https://orcid.org/0000-0002-7560-5026 | Zarnie Lwin | https://orcid.org/0000-0003-1064-8444 |
| Cassie Turner | https://orcid.org/0000-0003-2201-3921 | Mark Nalder | https://orcid.org/0000-0002-9310-1489 |
| Kathy (Kyung) You | https://orcid.org/0000-0001-7583-5502 | Haidar Al-Saig | |
| Chun Loo Gan | https://orcid.org/0000-0003-2576-9310 | Aneta Suder | |
| Jeffrey Goh | https://orcid.org/0000-0003-3103-146X | Darshit Thaker | |
| Brett Hughes | https://orcid.org/0000-0002-1811-0537 | Matthew Burge | |
| Michelle Nottage | https://orcid.org/0000-0002-1620-1961 | Po-Ling Inglis | |

Publications in 2023

Journal Articles (RBWH staff in bold)

Agar MR, Nowak AK, Hovey EJ, Barnes EH, Simes J, Vardy JL, Wheeler HR, Kong BY, Leonard R, Hall M, Tim E, Spyridopoulos D, Sim HW, **Lwin Z**, Dowling A, Harrup R, Jennens R, Kichenadasse G, Dunlop T, Gzell C, Koh ES. Acetazolamide versus placebo for cerebral oedema requiring dexamethasone in recurrent and/or progressive high-grade glioma: phase II randomised placebo-controlled double-blind study. *BMJ Supportive & Palliative Care*. 2023 13(3):354-362. doi:doi.org/10.1136/spcare-2022-004119. Epub 2023 Feb 17

Alexander M, Wei J, Parakash S, John T, Kao S, Nagrial A, Bowyer S, Warburton L, Moore M, **Hughes BGM**, Clay T, Pavlakis N, Solomon BJ, Itchins M. LOREALAUS: LOrlatinib REAL world AUStralian experience and overall survival in pre-treated patients with advanced anaplastic lymphoma kinase rearranged non-small cell lung cancer. *JTO Clinical and Research Reports*. 2023 4(4):100490. doi:doi.org/10.1016/j.jtocrr.2023.100490. Epub 2023 Apr 3

Antonarakis ES, Park SH, **Goh JC**, Shin SJ, Lee JL, Mehra N, McDermott R, Sala-Gonzalez N, Fong PC, Greil R, Retz M, Sade JP, Yanez P, Huang Y, Begbie SD, Gafanov RA, De Stantis M, Rosenbaum E, Kolinsky MP, Rey F, Chie K, Roubaud G, Kramer G, Sumitomo M, Massari F, Suzuki H, Qiu P, Zhang J, Kim J, Poehlein CH, Yu EY. Pembrolizumab Plus Olaparib for Patients With Previously Treated and Biomarker-Unselected Metastatic Castration-Resistant Prostate Cancer: The Randomized, Open-Label, Phase III KEYLYNK-010 Trial. *Journal of Clinical Oncology*. 2023 Aug;41(22):3839. doi.org/10.1200/JCO.23.00233. Epub 2023 Aug 1

Journal Articles (RBWH staff in bold)

Arnfield EG, Tam L, Pattison DA, Younger J, Chikatamarla VA, **Wyld D**, **Burge M**, McCormack L, Ladwa R, Ramsay S. Cardiac metastases from neuroendocrine neoplasms: Complementary role of SSTR PET/CT and Cardiac MRI. *J Nucl Cardiol*. 2023. doi:10.1007/s12350-023-03345-w. Epub 2023 Aug 16

Bratland A, Munoz-Couselo E, Mortier L, Roshdy O, González R, Schachter J, Arance AM, Grange F, Meyer N, Joshi AJ, Billan S, **Hughes BGM**, Grob JJ, Ramakrishnan K, Ge J, Gumuscu B, Swaby RF, Gutzmer R. Health-Related Quality of Life with Pembrolizumab in Patients With Locally Advanced or Recurrent or Metastatic Cutaneous Squamous Cell Carcinoma: Results from KEYNOTE-629. *Dermatology and Therapy*. 2023 Dec;13(12):3165-80. doi:doi.org/10.1007/s13555-023-01059-y. Epub 2023 Dec 1

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Keynote or Plenary Lectures given in 2023

| Date | Title |
|------------|---|
| 24/03/2023 | Eastgate M (session chair). Locally advanced disease - multidisciplinary care. Australasian Melanoma Conference |
| 27/10/2023 | Lwin Z. Oral Abstract Session Chair. Asian Society of Neurooncology ASM. Bali Indonesia |
| 18/11/2023 | Lwin Z (session chair). Twinning partnerships virtual MDTs. Society of Neurooncology ASM. Vancouver Canada. |

Pharmacy

Research highlight

In 2023, two PhD candidates completed and nearly completed their PhD (Midori Nakagaki and Paul Firman).

Successful PhD candidates in 2023

| Name | PhD Title | Month Completed | Affiliated University | Summary |
|-----------------|---|-----------------|-----------------------|--|
| Midori Nakagaki | Improving oral mucositis management in patients undergoing haematopoietic stem cell transplantation | September | UQ | This research aimed to test the effectiveness of topical polaprezinc mouthwash to prevent oral mucositis. To ensure study quality, oral mucositis grading and cofounders such as conditioning regimens were evaluated. Unlike previously published studies, polaprezinc did not show benefit in our study. |

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 Patients Recruited in 2023 | Number of RBWH Patients Recruited in 2023 |
|---|---|--|--------------------------------------|--|
| 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) | Ni | 108 (Recruitment closed) Published in Dec 2023 |
| 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 | Completed 2022 Manuscript to be submitted |
| Aisling McGowan | Glen Kennedy, Paul Firman | Evaluating the appropriateness of liposomal amphotericin B, caspofungin and voriconazole prescriptions in adult haematology and haematopoietic stem cell transplant patients | Retrospective audit | Completed 2023. Manuscript to be submitted |

Research Activity With a Specific Focus on First Nations People

| Lead Investigator Name (RBWH staff in bold) | Other Study Investigators (RBWH staff in bold) | Research Project Title | Number of RBWH Patients Recruited in 2023 |
|---|---|--|---|
| Jason Roberts | Julian Lindsay, Johannes Alffenaar, Tony Lai, Suzanne Parker, Monica Slavin, Catherine Liu, Mark Chatfield, Adam Irwin, Michelle Cunich, Natasha Roberts, Jacinta Smith, Phillip Selby, Midori Nakagaki, Amy Legg, Glen Kennedy, Jacobus Ungerer | PhaRmAcogenoMics for better treatment of fungal infections In Cancer (PRAGMATIC trial) | Not yet recruiting Plan:10-30 |

Research Publications

Authors

| Investigator | ORCID ID |
|-----------------|---------------------|
| Midori Nakagaki | 0000-0003-4086-6960 |

Publications in 2023

Journal Articles (RBWH staff in bold)

Nakagaki M, Kennedy GA, Gavin NC, Butler J, Clavarino A, Whitfield K. A randomised trial of topical polaprezinc to prevent oral mucositis in patients undergoing haematopoietic stem cell transplantation (ToPaZ study). *Supportive Care in Cancer* (Published online 2023)

Radiation Oncology

Research highlights



Dr Penny Mackenzie

Director Radiation Oncology

The culture of inter-disciplinary collaboration and advancing technology in research remained strong for radiation oncology in 2023. The aim and focus of the Radiation Oncology Research group is to promote, support and drive innovation, promote quality initiatives and ensure quality improvement projects deliver evidence-based practice, to ensure safe treatment delivery.

As new and emerging technologies are rapidly being assimilated into daily practice, the focus of research outcomes is to implement new technology in a scientific manner. Quality assurance and research into new technology is important to ensure, precision radiotherapy is delivered in a safe, efficient, and cost-effective manner.

Some of the departments 2023 achievements include:

1. Our amazing physics team remains active in the research domain. We are proud to see multiple journal publications across all cancer subsites and book publication of 3D Printing in Radiation Therapy by IOP Publishing, edited by Associate Professors Tanya Kairn and Scott Crowe, and contributions from other MNHHS staff members including Rachael Wilks and Sam Peet.
2. We would like to acknowledge Assoc. Professor Ben Chua's work in initiating the process for obtaining accreditation for RBWH Radiation Oncology as an affiliated site with NRG Oncology. NRG is an American cancer cooperative body formed by three legacy groups- NSABP, RTOG, and GOG. The affiliated membership will allow RBWH patients to access quality international clinical trials.
3. We delivered the first prostate stereotactic body radiotherapy (SBRT) under the auspice of TROG NINJA trial. SBRT to the prostate is a novel modality which requires stringent Quality Assurance throughout the treatment journey including image fusion, target volume delineation, dosimetry planning, and treatment delivery. It was an epitome of multidisciplinary collaborations involving oncologists, radiotherapists, and physicists.
4. Synchrony real time motion management programme (Tomotherapy) was implemented by our radiation therapy team and ongoing data collection and QA activities are in progress, led by Jemma Walsh.
5. Dr Penny Mackenzie was appointed as the Director of Radiation Oncology in May 2023. Dr Mackenzie is completing a PhD on Geriatric Oncology and Radiotherapy Utilisation. She is the immediate past Chair of the Radiation Oncology reference Committee at Eviq (Cancer Institute, NSW) and is a member of the Partnership and Radiation Oncology committee at the Cancer Alliance, Qld. Dr Mackenzie is committed to high quality evidence-based care, research and teaching.

We would like to acknowledge Lee Tripcony, who in 2023 stepped down from the role of Principal Clinical Scientist Statistics. Lee played a major role in the Cancer Care Services research program for over 39 years. We thank him for his enormous contribution and wish him well in his retirement. Finally, Dr. Graeme Dickie retired as the Director of Radiation Oncology. Dr. Dickie's remarkable legacy and decades of tireless efforts in serving cancer patients from Brisbane to Rockhampton were greatly appreciated. We would like to acknowledge Dr. Dickie's critical role in establishing radiotherapy in Queensland and wish him well in his retirement.

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 |
|--|---|---|--|--|--|
| 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, DM | Improving outcomes for people with and at risk of lung cancer | Australian Cancer Research Foundation (ACRF) | \$2,000,000 | 3 years, 2022-2025 |
| Hao-Wen Sim, Helen Wheeler, Zarnie Lwin, Kathryn Field, Benjamin Chua, David Espinoza, Michael Buckland, Kimberley Kaufman | CCS DRO, DMO | PICCOG: PARP and Immune Checkpoint inhibitor Combination for relapsed IDH-mutant high-grade Glioma | NHMRC | \$1,391,472.20 | 4 years, 2019-2023 |
| Punyadeera C, Kenny L, Sriram S, Hughes B, Leo P | CCS DRO, DMO | Multi-analyte liquid biopsy-based biomarkers for oropharyngeal cancer | NHMRC | \$763,417.40 | 3 years, 2022-2025 |
| 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 | 6 years, 2019-2025 |
| Chamindie Punyadeera, Lizbeth Kenny | CCS DRO | A novel assay for early detection of minimal residual disease in head and neck cancer patients | Garnett Passe & Williams | \$375,000 | 3 years, 2022-2025 |
| 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 | 3 years, 30/6/2020-29/6/2023 |
| Charles Lin | CCS DRO | A prospective study investigating the efficacy and toxicity of definitive chemoradiation and immunotherapy (CRIO) in locally and / or regionally advanced cutaneous squamous cell carcinoma | Astra Zeneca | \$211,000 | 7 years, 2017-2024 |
| Dickie G | CCS DRO | Queensland Cancer Council Clinical Trial Data Manager Grant 2023 | Queensland Cancer Council | \$48,000 | 1 year, 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 |
|--|---|--|------------------|--|--|
| Samuel Peet | CCS DRO | RISC: Reducing the risk of Radiation-Induced Secondary Cancers for a long and healthy life after cure. CAHRLI Early Career Fellowship 2023 | CAHRLI | \$25,000 | 1 year, 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 2023 |
|---|--|---|---|
| Benjamin Chua | Rosalind Jeffree, Jacqui Keller, Chamindie Punyadeera, Zarnie Lwin, Juliana Muller Bark, Lucas Trevisan Franca de Lima, Xi Zhang, Nuwan Tharanga Karunathilaka Wicramasingiha Arachchilage, Bryan Day (QIMR) | The use of non-invasive biomarkers in glioblastoma: A pilot study | 0 |
| Charles Lin | Benjamin Chua, Lizbeth Kenny, Michelle Nottage, Brett Hughes, Michele Teng, Paul Thomas | A prospective study investigating the efficacy and toxicity of definitive chemoradiation and immunotherapy (CRIO) in locally and / or regionally advanced cutaneous squamous cell carcinoma | 0 |
| 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 | 0 |
| 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 | 0 |
| Jemma Blyth, Kevina Choma | 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 | 7 |
| Scott Crowe | Tanya Kairn, Katie McMahon, Louise Campbell, Clare Berry | Characterisation of anatomical variations in the central nervous system | 0 |
| Scott Crowe | Paul Charles, Elise Obereigner, Tania Poroa, 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 |
| Scott Crowe | Susie Cleland, Sarah Maxwell, Tania Poroa, Paul Charles, Tanya Kairn | Evaluation of 3D scanning systems for radiotherapy use | N/A |
| Scott Crowe | Liting Yu, Alex Livingstone, Samuel Peet, Tanya Kairn | Characterising the relationship between radiotherapy treatment plan parameters and routine quality assurance test results | N/A (retrospective) |
| Tanya Kairn | Philip Chan, Benjamin Chua, Scott Crowe, Jodi Dawes, Lizbeth Kenny, Charles Lin, Rob McDowall, Tania Poroa | Anatomical displacements from oral positioning stents | N/A (1 healthy volunteer) |
| Liting Yu | Tanya Kairn, Alex Livingstone, Scott Crowe, Jamie Trapp | Structure based dose distribution comparison | N/A (retrospective) |

| Lead Investigator Name (RBWH staff in bold) | Other Study Investigators (RBWH staff in bold) | Research Project Title | Number of RBWH Patients Recruited in 2023 |
|---|---|---|--|
| 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 | N/A (retrospective) |
| Rachael Wilks | Scott Crowe, Tanya Kairn, Philip Chan, Robyn Cheuk | Design of a patient-matched vaginal applicator for brachytherapy treatments | 2 |
| Kate Stewart | Izaak Millen, Crispen Chamunyonga, Neil O'Brien | Evaluation of patient position on heart and lung doses in breast cancer radiation therapy | N/A (retrospective) |
| Kate Stewart | Samuel Peet, Jeremy Briggs, Benjamin Chua | Evaluation of the correlation between optical and thermal surface tracking and kV x-ray imaging during cranial radiotherapy | N/A (retrospective) Awaiting HREA approval |
| Scott Crowe | Keya Amarsee, Samuel Peet | Dose calculation and comparison for superficial treatment modalities | N/A (retrospective) Awaiting HREA approval |
| Scott Crowe | Tanya Kairn | Evaluation of dosimetric perturbation in and around synthetic scaffolds in breast radiotherapy | N/A |
| Veronica Tippet | | Retrospective Audit of Image Guided Radiation Therapy Practices at the RBWH | Awaiting HREA approval |

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 2023 |
|---|---|---|---|
| Shankar Siva | Charles Lin | DECREASE TROG 19.06 Darolutamide + Consolidation Radiotherapy in Advanced Prostate Cancer detected by PSMA | 0 |
| Jarad Martin | Charles Lin, Philip Chan, Robyn Cheuk, Rachel Effeney, Michelle Grogan, Gary Pratt | NINJA TROG 18.01 Novel Integration of New prostate radiation schedules with adJuvant Androgen deprivation | 2 |
| Fiona Day Jarad Martin | Melissa Eastgate Samantha Barbour | PALEO Phase II clinical trial of chemoradioimmunotherapy for the ALleviation of oEsOphageal cancer complications | 0 |
| Eric Hau | Catherine Bettington | 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 (CHEST RT) | 0 |
| Andrew Scott, Eng-Siew Koh | Benjamin Chua | TROG 18.06 Prospective, multicentre trial evaluating FET-PET in Glioblastoma (FIG) | 3 |
| Alison Brand | Philip Chan | 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 (VESPA) | 0 |
| Christopher Sweeney, Tamim Niazi | Philip Chan | 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 | 5 |

| Lead Investigator Name (RBWH staff in bold) | Other Study Investigators (RBWH staff in bold) | Research Project Title | Number of RBWH Patients Recruited in 2023 |
|---|---|--|---|
| Danny Rischin | Charles Lin | 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 (C-POST) | 2 |
| Stephen Ackland | Mathew Burge (CSS MO), Graeme Dickie | A randomised, placebo-controlled phase II trial of simvastatin in addition to standard chemotherapy and radiation in preoperative treatment for rectal cancer (SPAR) | 0 |
| Sherene Loi | Robyn Cheuk, Michelle Grogan | 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) | 0 |
| Michael Jenkinson | Catherine Bettington | TROG 15.02 Radiation versus Observation following surgical resection of Atypical Meningioma: a randomised controlled trial (ROAM) | 0 |
| Vincent Grégoire | Lizbeth Kenny | TROG 14.03 (EORTC-1219-ROG-HNCG) A blind randomized multicenter study of accelerated fractionated chemo-radiotherapy with or without the hypoxic cell radiosensitizer nimorazole (Nimoral), using a 15 gene signature for hypoxia in the treatment of squamous cell carcinoma of the head and neck | 0 |
| Danny Rischin | Lizbeth Kenny | 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 |
| Chamindie Punyadeera | Lizbeth Kenny | A simple saliva test to diagnose head and neck cancer at an early stage - head and neck cancer detection is a spitting distance away | 15 |
| Rajiv Khanna | Lizbeth Kenny | P2191 Development of an Adoptive T Cell Therapy for HPV-Associated Malignancies | 0 |
| Boon Chua | Lizbeth Kenny | 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 |
| David Pryor | Charles Lin | 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 |
| Shankar Siva | Charles Lin | TROG 15.03 Focal Ablative STereotactic RADiosurgery for Cancers of the Kidney - A Phase II Clinical Trial (FASTRACK II) | 0 |
| Maria Pearse | Charles Lin | 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 |
| Scott Williams Paul Nguyen | Philip Chan | Randomised phase 3 trial of enzalutamide in androgen deprivation therapy with radiation therapy for high risk, clinically localised, prostate cancer: ENZARAD | 0 |
| Peter Graham | Robyn Cheuk | 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 |
| Katie McMahon | Briley Devenport, Cathy Hargarve, Kate Stewart , Julie Burbery | The feasibility of utilising total body photography in superficial radiation therapy to assist in target volume definition planning and documentation | N/A retrospective |

| Lead Investigator Name (RBWH staff in bold) | Other Study Investigators (RBWH staff in bold) | Research Project Title | Number of RBWH Patients Recruited in 2023 |
|---|--|---|---|
| Crispen Chamunyonga | Cathy Hargrave, Kerrie Mengersen, Kate Stewart , Gregory Rattray | Development of a framework for systematic contour evaluation in radiation therapy | N/A retrospective |

Research Publications

Authors

| Investigator | ORCID ID | Investigator | ORCID ID |
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| Catherine Bettington | 0000-0002-8227-6320 | Charles Lin | 0000-0001-5589-4775 |
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Publications in 2023

Journal Articles (RBWH staff in bold)

Banavar G, Ogundijo O, Julian C, Toma R, Camacho F, Torres PJ, Hu L, Chandra T, Piscitello A, **Kenny L**, Vasani S, Batstone M, Dimitrova N, Vuyisich M, Amar S, Punyadeera C. Detecting salivary host and microbiome RNA signature for aiding diagnosis of oral and throat cancer. *Oral Oncol.* 2023 Oct;145:106480. doi: 10.1016/j.oraloncology.2023.106480. Epub 2023 Jul 14. PMID: 37454545

Basnayake BWMTJ, Leo P, Rao S, Vasani S, **Kenny L**, Haass NK, Punyadeera C. Head and neck cancer patient-derived tumouroid cultures: opportunities and challenges. *Br J Cancer.* 2023 Feb 10. doi: 10.1038/s41416-023-02167-4. Online ahead of print

Blake CL, Brown TE, Pelecanos A, Moroney LB, Helios J, Hughes BGM, Chua B, Kenny LM. Enteral nutrition support and treatment toxicities in patients with head and neck cancer receiving definitive or adjuvant helical intensity-modulated radiotherapy with concurrent chemotherapy. *Head Neck.* 2023 Feb;45(2):417-430. doi: 10.1002/hed.27249. Epub 2022 Nov 25. PMID: 36433667

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Bozyk N, Tang KD, Zhang X, Batstone M, **Kenny L**, Vasani S, Punyadeera C. Salivary exosomes as biomarkers for early diagnosis of oral squamous cell carcinoma. *Oral Oncology Reports.* 2023 Mar 9:100017

Chen HMN, Anzela A, Hetherington E, Buddle N, Vignarajah D, Hogan D, Fowler A, Forstner D, **Chua B**, Gowda R, Min M. A proposed framework for the implementation of head and neck cancer treatment at a new cancer center from a radiation oncology perspective. *Asia Pac J Clin Oncol.* 2023 Apr 26. doi: 10.1111/ajco.13963. Online ahead of print

Crowe S, **Maxwell S**, Brar H, **Yu L**, **Kairn T**. Use of light-weight foaming polylactic acid as a lung-equivalent material in 3D printed phantoms. *Phs Eng Sci Med.* 2023 Sep 6. doi: 10.1007/s13246-023-01318-4. Online ahead of print

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Defourny N, **Mackenzie P**, Spencer K. Clin Oncol (R Coll Radiol). Health Services Research in Brachytherapy: Current Understanding and Future Challenges. 2023 Aug;35(8):548-555. doi: 10.1016/j.clon.2023.03.001. Epub 2023 Mar 8. PMID: 36941146

Ekanayake Weeramange C, Tang KD, Barrero RA, Hartel G, Liu Z, Ladwa R, Langton-Lockton J, Frazer I, **Kenny L**, Vasani S, Punyadeera C. Salivary micro RNAs as biomarkers for oropharyngeal cancer. Cancer Med. 2023 Jun 6. doi: 10.1002/cam4.6185. Online ahead of print

Foley J, Wishart LR, Ward EC, Burns CL, Packer RL, Philpot S, **Kenny LM**, Stevens M. Exploring the impact of remoteness on people with head and neck cancer: Utilisation of a state-wide dataset. Aust J Rural Health. 2023 Jun 6. doi: 10.1111/ajr.13005. Online ahead of print

Hesselberg G, James M, Turner S, Gupta N, **Mackenzie P**. Gender diversity and leadership in Radiation Oncology in Australia and New Zealand. J Med Imaging Radiat Oncol. 2023 Mar;67(2):203-211. doi: 10.1111/1754-9485.13517. Epub 2023 Feb 22

How S, Banjade D, **Crowe S**, Dillon G, Skimmings A. "An anthropomorphic 3D printed inhomogeneity thorax phantom slab for SBRT commissioning and quality assurance", Phys Eng Sci Med (in press), 2023. <https://doi.org/10.1007/s13246-023-01233-8>

Hu M, Kim ANH, Emeto TI, Collins M, Chopping A, **Lin C**. Metastatic cutaneous squamous cell carcinoma to the parotid: Adjuvant radiotherapy and treatment outcomes. J Med Radiat Sci. 2023 Feb 15. doi: 10.1002/jmrs.650. Online ahead of print

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Kenny L, Karlsdottir M. Standards and quality assurance in interventional oncology: The establishment of the International Accreditation System for Interventional Oncology Services (IASIOS). J Med Imaging Radiat Oncol. 2023 Feb 23. doi: 10.1111/1754-9485.13520. Online ahead of print

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McCoola B, **Outhwaite JA**, **Lathouras M**, Pelecanos A, **Blyth J**, Carter A, Hastings Y, **Ratray G**, **Cheuk R**. An evaluation of the use and efficacy of behavioural therapy when treating paediatric patients with radiation therapy. J Med Radiat Sci. 2023 Jul 13. doi: 10.1002/jmrs.705. Online ahead of print

McDowell L, Bressel M, King MT, Corry J, **Kenny L**, Porceddu S, Wratten C, Macann A, Jackson JE, Rischin D. Patient-report symptom severity, health-related quality of life and emotional distress trajectories during and after radiotherapy for HPV-associated oropharyngeal cancer: a TROG 12.01 secondary analysis. Int J Radiat Oncol Biol Phys. 2023 Mar 1:S0360-3016(23)00199-2. doi: 10.1016/j.ijrobp.2023.02.041. Online ahead of print

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Muller Bark J, Karpe AV, Doecke JD, Leo P, Jeffree RL, **Chua B**, Day BW, Beale DJ, Punyadeera C. A pilot study: Metabolic profiling of plasma and saliva samples from newly diagnosed glioblastoma patients. Cancer Med. 2023 May;12(10):11427-11437. doi: 10.1002/cam4.5857. Epub 2023 Apr 9

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Sandler CX, Gildea GC, Spence RR, Jones TL, Eliadis P, Walker D, Donaghue A, **Bettington C, Keller J**, Pickersgill D, Shevill M, Biggs V, Morrison B, Jonker F, Foote M, Bashford J, Hayes SC. The safety, feasibility, and efficacy of an 18-week exercise intervention for adults with primary brain cancer – the BRACE study. Disabil Rehabil. 2023 Jun 13:1-10. doi: 10.1080/09638288.2023.2221041. Online ahead of print.PMID: 37310040

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Thong SY, **Chua B**, Winter C, Jiwrajka M.BMJ Case Rep. Intracranial ependymoma in an adult patient with multiple primary malignancies. 2023 Aug 29;16(8):e254584. doi: 10.1136/bcr-2023-254584

Wilks R, Crowe SB, Chan P, Cheuk R, Kairn T. A 3D printed patient-specific vaginal mould for brachytherapy. J Phys Conf Ser. 2023 Nov 15. doi: 10.1088/1742-6596/2630/1/012026

Yu L, Baker A, Kairn T, Livingstone A, Trapp J, Crowe SB. A structure-based gamma evaluation method for identifying clinically relevant dose differences in organs at risk. Phys Eng Sci Med. 2023 May 23. DOI: 10.1007/s13246-023-01270-3 Online ahead of print.

Books (RBWH staff in bold)

Kairn T, Crowe SB, Kron T. 3D Printing in Radiation Therapy. Bristol (UK): IOP Publishing Ltd. 2023 Dec. doi: 10.1088/978-0-7503-3907-0.

Book Chapters (RBWH staff in bold)

Asfia A, Katsifis GA, Novak JI, **Crowe SB**. Materials. 3D Printing in Radiation Therapy. 2023 Dec. doi: 10.1088/978-0-7503-3907-0ch3

Basaula D, Simpson-Page E, **Crowe SB, Kairn T**. Treatment verification. 3D Printing in Radiation Therapy. 2023 Dec. doi: 10.1088/978-0-7503-3907-0ch10

Kairn T, Crowe SB, Kron T. Conclusions. 3D Printing in Radiation Therapy. 2023 Dec. doi: 10.1088/978-0-7503-3907-0ch12

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Kairn T, Tino R, Leary M, Yeo AU. Costs. 3D Printing in Radiation Therapy. 2023 Dec. doi: 10.1088/978-0-7503-3907-0ch6

Kairn T, Wilks R, Peet SC. Patient treatments. 3D Printing in Radiation Therapy. 2023 Dec. doi: 10.1088/978-0-7503-3907-0ch9

Tino R, Asfia A, Katsifis GA, Novak JI, **Crowe SB**. Processing. 3D Printing in Radiation Therapy. 2023 Dec. doi: 10.1088/978-0-7503-3907-0ch5

Tino R, Leary M, Katsifis GA, Novak JI, **Crowe SB**. Design. 3D Printing in Radiation Therapy. 2023 Dec. doi: 10.1088/978-0-7503-3907-0ch4

Simpson-Page E, Basaula D, **Crowe SB**. Quality Management. 3D Printing in Radiation Therapy. 2023 Dec. doi: 10.1088/978-0-7503-3907-0ch7

Yeo AU, **Kairn T**. Quality assurance. 3D Printing in Radiation Therapy. 2023 Dec. doi: 10.1088/978-0-7503-3907-0ch8.

Keynote or Plenary Lectures given in 2023

| Date | Title |
|------------|--|
| 18/4/2023 | Prof Lizbeth Kenny , “What is Quality Assurance and why is it important for Interventional Oncology”. European Conference on Interventional Oncology, Stockholm, Sweden |
| 18/4/2023 | Prof Lizbeth Kenny , “Planning in Radiation Oncology, from chinagraph pencils to supercomputers”. European Conference on Interventional Oncology, Stockholm, Sweden |
| 19/6/2023 | Prof Lizbeth Kenny , “The bots have taken over, Ethics and Standards in AI (in healthcare)”. Trans-Tasman Radiation Oncology Group Annual Scientific Meeting, Adelaide, South Australia |
| 27/6/2023 | Prof Lizbeth Kenny , “Quality Assurance: Lessons from Radiation Oncology and the creation of the Cardiovascular and Interventional Radiological Society of Europe Standards of Practice in Interventional Oncology, Interventional Radiology Society of Australasia, Sydney Australia |
| 20/6/2023 | A/Prof Charles Lin : Trans-Tasman Radiation Oncology Group Annual Scientific Meeting - Plenary session: Head, Neck and Skin - Session Chair |
| 20/6/2023 | A/Prof Charles Lin , Horizon scan – introduction. Trans-Tasman Radiation Oncology Group Annual Scientific Meeting, Adelaide, South Australia |
| 19/6/2023 | William McDowall : Trans-Tasman Radiation Oncology Group Annual Scientific Meeting - Technical Research Workshop- Session Chair |
| 23/8/2023 | Prof Lizbeth Kenny . Artificial Intelligence (AI) in Radiation Oncology. Royal Australian and New Zealand College of Radiologists (RANZCR) AI Contouring Workshop. Online |
| 27/9/2023 | Prof Lizbeth Kenny . An Overview of human papilloma virus (HPV) and Oropharyngeal Cancer. Multidisciplinary Dental Academy Scientific Meeting. Daylesford, Victoria |
| 22/10/2023 | Kate Stewart - Accuray Australasian Symposium 2023 (Session Chair) |
| 22/10/2023 | Jemma Walsh - Accuray Australasian Symposium 2023 (Session Chair) |
| 22/11/2023 | Prof Lizbeth Kenny . Ethics and Standards for AI in Medicine on behalf of Royal Australian and New Zealand College of Radiologists. Artificial Intelligence Care Conference. Melbourne, Australia |
| 18/10/2023 | Prof Lizbeth Kenny . How Quality Assurance is changing Interventional Oncology. RANZCR ASM. Brisbane, Australia |
| 5/10/2023 | Prof Lizbeth Kenny . Artificial Intelligence in Research. Wiley Research Seminar. Melbourne, Australia |