RESEARCH REPORT



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RBWH



CANCER CARE SERVICES

Metro North Health

Table of Contents

| Cancer Care Services | 1 |
|---|------|
| Clinical Research | 2 |
| Haematology & Bone Marrow Transplant | 3 |
| Haemophilia Centre | . 17 |
| Cancer Care Nursing Professorial Precinct | . 19 |
| Medical Oncology | . 26 |
| Radiation Oncology | 55 |
| Allied Health Professions | 65 |

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Cancer Care Services



Dr Glen Kennedy Executive Director RBWH Cancer Care Services MNHHS

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

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

2020 represented another year of fantastic achievement in research for Cancer Care. The annual CCS Research Retreat bought together virtually for the first time, saw investigators from CCS and senior hospital and district executives to enable planning to ensure that research remains at the forefront of our service both now and into the future.

Highlights in 2020 include progressing the commencement a local clinical trial incorporating locally manufactured chimeric antigen receptor T-cells (CAR-T) as well as participation in several commercial CAR-T studies. Our oncology team has been at the forefront of COVID research into exploring the psychosocial impacts of COVID-19 on oncology workforces during the pandemic

Our Research Advisory Group (RAG) continued to link and develop cancer research across our district. Establishment of a research trial database has also significantly improved our ability to track and plan our clinical trial resources more effectively. Establishment of a Cancer Care Trust committee has allowed the establishment of a cancer-care grant round for investigators in 2021.

Other research highlights for the year are detailed in our separate departmental reports.

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

We look forward to 2021 to continue to strive to expand and embed research within CCS across all patient and disease groups, incorporating new and novel approaches to care within clinical, translational and basic science research programmes and partnerships, aiming to constantly improve clinical outcomes for our patients.

Clinical Research



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

Cancer care services recognises the critical role that research can play in the optimal care of our patients. We believe that the integration of research into daily clinical care is the best way to improve outcomes through new diagnostic tests and treatments. Over the last 12 months, we have dealt with new challenges because of COVID19 pandemic precautions including the diversion of funding and clinical efforts to specific measures. Restriction of visitor numbers and in person attendance in clinic has also had a substantial impact on our traditional research activities. I would like to make a particular note of the extraordinary efforts of our clinical research coordinators and research administrators during this difficult year.

Despite these challenges, we have experienced many research highlights. We have a thriving cellular therapy program and have used clinical trials to deliver gene modified cellular therapies (CAR-T cells) to patients with blood cancers. Members of the Division have been lead or senior author on papers in top international journals including Blood, Leukemia, Nature Communications and contributed to papers in internationally renowned journals such as the New England Journal of Medicine, Nature, Immunity, Journal of Clinical Oncology, Blood, Lancet Oncology and many others.

We have contributed to national guidelines such as the management of cancer patients with COVID (MJA, 2020), A number of clinicians have worked towards and completed research higher degrees. Our staff have received research funding from NHMRC including Investigator grants, ideas grants and MRFF grant funding. This independently validates the high quality of our research and demonstrates that we are leading the way nationally.

Internally, we have expanded our research advisory group activities to help nurture and support research throughout Metro North. We have established a Cancer Care Trust committee to help review and distribute funding for investigator led research projects. This work will continue to grow in the coming years, and we seek to develop a comprehensive cancer care model.

We look forward to the further expansion of research activities in 2021, the development of ongoing academic/clinical collaborations and most importantly, many new treatment opportunities for patients with cancer.

| Name | Role | Department |
|----------------|--------------------------|--|
| Tracey Gilbert | Research Support Officer | Cancer Care Services, RBWH, QLD Health |

Haematology & Bone Marrow Transplant



Dr Cameron Curley Deputy Director Clinical Haematology & BMT

Despite the many unexpected challenges posed to all in 2020, the Haematology and BMT department continued to demonstrate its strong commitment to high quality patient care through the ongoing pursuit of research excellence. Improving the outcomes of patients with haematological malignancies, bleeding and thrombotic disorders remains a priority across the unit through the refinement of diagnostic techniques, improved prognostic accuracy, provision of novel therapeutics and supportive cares, improved understanding, management and prevention of therapeutic toxicities and the establishment of innovative care models.

The department had many notable publications in peer reviewed journals through the year with highlights in areas including: novel therapies for graft versus host disease post allogeneic BMT, the manufacture and efficacy of CD19 CAR T therapy, the molecular drivers of disease behaviour in myeloproliferative neoplasms and the impacts of nutritional support post stem cell transplant.

The Queensland Myeloid Genomics Project led by the Haematology/BMT unit at RBWH in collaboration with Pathology Queensland established a state-wide service to provide state of the art novel prognostication for children and adults with myeloid malignancy across QLD through the use of next generation sequencing to identify somatic mutations. Analyses presented through the year demonstrated significant clinical utility in refinement in decision making surrounding appropriate provision of allogeneic stem cell transplantation.

Fostering existing and establishing new research collaborations continued to remain a major focus for the department in 2020. Collaborators included: University of QLD, QUT, QIMR Berghofer, Pathology QLD, Genomics QLD, HIRF, the department of Critical Care, Cardiology, Australia Leukaemia and Lymphoma Group, Australasian Myeloma Research Consortium, Dietetics, Pharmacy and Nursing.

The department continued to be successful in the pursuit of Research Grants to drive investigator-initiated research and clinical trials. Notable Grants awarded in 2020 include:

- NHMRC Adoptive transfer of Tregs for cGVHD 2020-2021 (\$878k)
- Queensland Genomics CD19 CART cell 2020 (\$400k)
- RBWH Foundation grant Novel therapies in haematological malignancies 2020 (\$45k)
- QIMR Berghofer COVID-19 Research Fund COMBaT study 2020 (\$39k)

Research Awards and Achievements

| Recipient | Award | Event |
|--------------|---|---|
| Yatika Jivan | Discovery and Innovation Research Award | Herston Health Precinct Symposium, December 2020 |

Research Grants Awarded in 2020

| Investigator Names | RBWH Departments / Research Groups | Research Project Title | Granting Body | Total Awarded | Year/s |
|---|--|---|---|---------------|-----------|
| Ashleigh Scott | Haematology/BMT | Using novel brain imaging to define mechanisms of persisting central nervous system toxicity ("Chemobrain") following allogeneic progenitor cell transplantation. "Mineral" study | RBWH Foundation Diamond Care Grants | \$40,000 | 2018-21 |
| Ashleigh Scott | Haematology/BMT | RBWH Postgraduate Research Scholarship | RBWH | \$44,000 | 2018-21 |
| Siok Tey David Gottlieb Glen Kennedy | Haematology/BMT | A phase I clinical study of adoptive transfer of regulatory T cells (Tregs) and low-dose interleukin-2 (IL-2) for the treatment of chronic graft-versus-host disease (GVHD): gene- marking to inform rational combination therapy | NHMRC | \$878,748 | 2019-2021 |
| Heshani Mediwake | Cancer Care Services | Novel therapies in haematological malignancies | RBWH Foundation grant | \$ 45,992.57 | 2020-2021 |
| Siok Tey Glen Kennedy | Haematology/BMT | Chimeric Antigen Receptor (CAR) T cells targeting CD19 antigen. | Queensland Genomics | \$800,000 | 2019-2020 |
| Siok Tey Chris Fraser | Haematology/BMT/ QIMR | CHQ-QIMRB-RBWH Cancer Immunotherapy Project | Children's Hospital Foundation | \$80,000 | 2019-2020 |
| Steven Lane | Haematology/BMT Cancer Care Services | Translation of genetic findings to improve outcomes for patients with blood cancers. | NHMRC Investigator Grant, L1. | \$1,913,403. | 2021-2025 |
| Steven Lane | Haematology/BMT | Understanding Chemoresistance in AML | CSL Centenary Fellowship | \$1.25m | 2017-2021 |
| Steven Lane | Haematology/BMT | Interferon challenge | MPN Research Foundation (USA) | \$300,000 | 2018-2020 |
| Andrea Henden Cameron Curley Glen Kennedy Nicholas Weber Louisa Gordon | Haematology/BMT/ QIMR | The Queensland Myeloid Genomics Program - improving the survival of children and adults with myeloid cancers | Queensland Genomics | \$837,208 | 2019-2020 |
| Andrea Henden, Siok Tey, Cameron Curley, Patrick Harris, David Paterson, Robert Bird | Haematology and Bone Marrow Transplantation and Infectious Diseases | COVID-19 in patients with Haematology Malignancy treated with B cell Targeted Therapies "COMBaT" | QIMR Berghofer Medical Research Institute COVID-19 Research Fund | \$39,982 | 2020 |

| Lead Investigator Name | Other Study Investigators (RBWH staff in bold) | Research Project Title | Number of RBWH Patients Recruited in 2020 | Total number of Patients Recruited (all sites) |
|---------------------------|--|--|--|---|
| Ashleigh Scott | Glen Kennedy, Siok Tey, Paul Thomas, David Pattison | Pilot study of 18FGE-180-PET to assess acute gastrointestinal graft versus host disease | 0 | 8 |
| Ashleigh Scott | Leo Francis | TSPO in aGVHD - Histological features and anti-TSPO immunohistochemistry (anti- TSPO IHC) in acute gastrointestinal graft versus host disease (GI-GVHD) | 38 | 38 |
| Ashleigh Scott | Glen Kennedy, Katie McMahon, Olivier Salvado, Kate Thompson, Ada Lo | MINERAL: Magnetic Resonance Imaging and Quantitative Susceptibility Mapping (MRI-QSM) of brain iron to identify Chemotherapy- Associated Neurocognitive Impairment (CANI) in Acute Myeloid Leukaemia (AML) | 6 | 16 |
| Glen Kennedy | Simon Durrant, Jason Butler, James Morton, Ashish Misra, Siok Tey, Elango Subramonia Pillai, Cameron Curley | TCZ I/II: A phase I / II study of humanized anti-IL-6 receptor antibody Tocilizumab (TCZ) to prevent development of acute graft versus host disease (GVHD) post HLA-matched allogeneic haematopoietic progenitor cell transplantation (HPCT) | 0 | 54 |
| Glen Kennedy | Simon Durrant, Jason Butler, James Morton, Ashish Misra, Siok Tey, Elango Subramonia Pillai, Cameron Curley | TCZ II - A phase II study of humanized anti-IL-6 receptor antibody Tocilizumab (TCZ) to prevent development of acute graft versus host disease (GVHD) post HLA-mismatched allogeneic haematopoietic progenitor cell transplantation (HPCT) | 0 | 7 |

Current RBWH Department / Research Group Led Research Activity

| Lead Investigator Name | Other Study Investigators (RBWH staff in bold) | Research Project Title | Number of RBWH Patients Recruited in 2020 | Total number of Patients Recruited (all sites) |
|---------------------------|--|---|--|---|
| Glen Kennedy | Sanjoy Paul, David Ritchie, David Gottlieb, John Moore, Julian Cooney, Simon Durrant, Jason Butler, James Morton, Ashish Misra, Siok Tey, Elango Subramonia Pillai, Cameron Curley | TCZ III - A phase III randomized study of humanized anti-IL-6 receptor antibody Tocilizumab (TCZ) to prevent development of acute graft versus host disease (GVHD) post HLA-matched allogeneic haematopoietic progenitor cell transplantation (HPCT) | 0 | 105 |
| Glen Kennedy | Geoff Hill, Simon Durrant, Jason Butler, Ashish Misra, Siok Tey, Elango Subramonia-Pillai, Cameron Curley, James Morton | Peg-IFN - A phase I / II study of pegylated-Interferon-2alpha for relapsed haematological malignancy after allogeneic haematopoietic progenitor cell transplantation (HPCT) | 0 | 34 |
| Heshani Mediwake | Glen Kennedy, Siok Tey | NCAs in CARTs - Neurocognitive assessment in patients undergoing chimeric antigen receptor therapy | 2 | 5 |
| Heshani Mediwake | Glen Kennedy, Siok Tey | PRO's in CarTs - Patient reported outcomes (PROs) in patients undergoing chimeric antigen receptor T cell therapies (CAR Ts) | 2 | 5 |
| Siok Tey | Glen Kennedy, Simon Durrant, James Morton, Jason Butler, Elango Subramonia-Pillai, Cameron Curley, Ashish Misra | IL-17 – Observational study of IL-17-related cytokines in stem cell transplantation | 0 | 287 |
| Siok Tey | Glen Kennedy, Cheryl Hutchins | TREG Apheresis - Developing a method to generate regulatory T cells from healthy donors | 2 | 4 |
| Siok Tey | Glen Kennedy, Simon Durrant, James Morton, Jason Butler, Elango Subramonia-Pillai, Cameron Curley, Ashish Misra | IR Auto – Observational study of immune reconstitution in patients undergoing autologous stem cell transplantation | 0 | 17 |

| Lead Investigator Name | Other Study Investigators (RBWH staff in bold) | Research Project Title | Number of RBWH Patients Recruited in 2020 | Total number of Patients Recruited (all sites) |
|---------------------------|---|--|--|---|
| Siok Tey | Glen Kennedy, Simon Durrant, James Morton, Jason Butler, Elango Subramonia-Pillai, Cameron Curley, Ashish Misra | IR Allo - Observational study of immune reconstitution following stem cell transplantation | 0 | 44 |
| 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 | 1 | 6 |
| Siok Tey | Glen Kennedy, Cheryl Hutchins | Generating Chimeric Antigen Receptor (CAR T) cells from healthy volunteers | 3 | 3 |
| Steven Lane | Glen Kennedy | P1382 - Examination of genes that control the growth and survival of blood cancers | 0 | 27 |
| Nicholas Weber | Paul Thomas, Samuel Kyle, Glen Kennedy, Kirk Morris, Simon Gray | Pentixifor PET in MM - Pilot study of 68Ga-Pentixafor positron emission tomography (PET) imaging in multiple myeloma | 0 | 10 |

Collaborative Research Activity Involving RBWH Department / Research Group

| Lead Investigator Name | Other Study Investigators (RBWH staff in bold) | Research Project Title | Number of RBWH Patients Recruited in 2020 | Total number of Patients Recruited (all sites) |
|--|--|---|--|---|
| Monash University Peter MacCallum Cancer Centre | Elango Subramonia Pillai, 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 | 8 |
| The Australasian Leukaemia & Lymphoma Group (<i>ALLG</i>): A/Prof Andrew Wei | Glen Kennedy, 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 | 13 |
| ALLG: A/Prof Andrew Wei | Glen Kennedy, 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 | 3 | 44 |

| Lead Investigator Name | Other Study Investigators (RBWH staff in bold) | Research Project Title | Number of RBWH Patients Recruited in 2020 | Total number of Patients Recruited (all sites) |
|--|---|--|--|---|
| ALLG: | Jason Butler, Cameron Curley, Simon Durant, Glen Kennedy, Steven Lane, Ashish Misra, Kirk Morris, James Morton, Elango | NHL 29 – A Phase II study of Ibrutinib, Rituximab and mini- CHOP therapy in very elderly patients with newly diagnosed DLBCL | 0 | 4 |
| Prof Judith Trotman | Subramonia Pillai, Nicholas Weber | | | |
| Dr Emma Verner | | | | |
| ALLG: Prof Harry lland A/Prof Andrew Wei | Steven Lane, Cameron Curley, Jason Butler, Nicholas Weber, Elango Subramonia Pillai | APML5: A phase 1 pharmacokinetic evaluation of oral arsenic trioxide in previously untreated patients with acute promyelocytic leukaemia | 0 | 3 |
| ALLG: A/Prof Andrew Wei | Steven Lane, 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 | 2 | 7 |
| | - | | | |
| ALLG: Dr David Yeung Prof Deborah White | Steven Lane, 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) | 1 | 3 |
| FIOI Debolan White | | | | |
| ALLG: Dr Sushrut Patil Prof David Curtis | Siok Tey, Jason Butler, Cameron Curley, Simon Durrant, Glen Kennedy, Ashleigh Scott, James Morton, Elango Subramonia Pillai, Andrea Henden | BM12 CAST: Study of using Cyclophosphamide After Sibling-donor allogeneic stem- cell Transplantation (CAST) in patients with acute leukaemia and myelodysplasia: a randomised study comparing cyclosporin and methotrexate to cyclosporin and post- transplantation cyclophosphamide for graft- versus-host disease prophylaxis. | 3 | 3 |
| ALLG - Dr Shaun Fleming A/Prof Andrew Wei Dr Ashish Bajel Dr Matthew | Cameron Curley, Ashleigh Scott, Kirk Morris, Nicholas Weber | BLAM: A phase IIb study of Blinatumomab + Cytarabine (AraC) and Methotrexate in adult B-precursor Acute Lymphoblastic Leukaemia | 0 | 0 |
| Greenwood | | | | |
| Monash University | Jason Butler, Nicholas Weber | MRDR - Myeloma and Related Diseases Registry | 30 | 82 |
| | | | | |

| Lead Investigator Name | Other Study Investigators (RBWH staff in bold) | Research Project Title | Number of RBWH Patients Recruited in 2020 | Total number of Patients Recruited (all sites) |
|--|--|---|--|---|
| A/Professor Peter Mollee Professor Andrew Spencer | Nicholas Weber, Cameron Curley, Jason Butler, Kirk Morris, Elango Subramonia Pillai, Siok-Keen Tey, Ashleigh Scott | AMaRC 03-16 - 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 | 6 |
| State of QLD - Qld Genomics Health Alliance | Andrea Henden, Cameron Curley, Nicholas Weber, Louisa Gordon | QMGP - Queensland Myeloid Genomics Program Evaluation | 5 | 7 |
| Dr Tina Skinner - University of Queensland Princess Alexandra Hospital | Nicholas Weber, Leonie Naumann | The MyeEx Study: The Effect of an Individualised Exercise Intervention on Functional, Biological and Quality of Life Outcomes in Patients with Multiple Myeloma | 2 | 3 |
| Queensland Youth Cancer Service | Kirk Morris | National Projects with CanTeen - The Youth Cancer Service Experience of Care Survey | | |
| Prof Maher Ghandi Translational Research Institute | Jason Butler | FL Prognostic - Integrating immunity and genetics in Follicular Lymphoma to establish a prognostic score fit for the modern era | 0 | 30 |
| Rajiv Khanna | Siok Tey, Glen Kennedy | P992: Immune monitoring of stem cell transplant patients | 0 | 47 |
| Dr Simon McRae Royal Adelaide Hospital Jane Mason | Nick Weber, Michelle Spanevello | BioMarin BMN 270-301 - A Phase 3 Open-Label, Single- Arm Study To Evaluate The Efficacy and Safety of BMN 270, an Adeno-Associated Virus Vector–Mediated Gene Transfer of Human Factor VIII in Hemophilia A Patients with Residual FVIII Levels = 1 IU/dL Receiving Prophylactic FVIII Infusions. | 0 | 5 |
| Dr Dominic Pepperell Fiona Stanley Hospital, WA Jane Mason | Nick Weber, Michelle Spanevello | BioMarin BMN 270-902 - A Prospective Non-Interventional Study of Bleeding Episodes, Factor VIII Infusions, and Patient-Reported Outcomes in Individuals with Severe Hemophilia A | 0 | 5 |
| Dr Chee Wee Tan Royal Adelaide Hospital Jane Mason | Nick Weber, Michelle Spanevello | A Phase 3b, Single Arm, Open- Label Study to Evaluate the Efficacy and Safety of BMN 270, an Adeno-Associated Virus Vector–Mediated Gene Transfer of Human Factor VIII, with Prophylactic Corticosteroids in Hemophilia A Patients | 0 | 5 |

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| Dr David Kliman Kinghorn Cancer Centre, NSW Ashleigh Scott | Andrea Henden, Cameron Curley, Elango Subramonia Pillai, Glen Kennedy, Jason Butler, Siok Tey | Vedolizumab-3035 - A Randomized, Double-Blind, Placebo-Controlled, Multicenter Study to Evaluate the Efficacy and Safety of Vedolizumab in the Prophylaxis of Intestinal Acute Graft-Versus-Host Disease in Subjects Undergoing Allogeneic Hematopoietic Stem Cell Transplantation | 4 | 8 |
| Prof Harry Iland Royal Prince Alfred Hospital Steven Lane | Steven Lane | ULTRA HIGH RISK APL: Retrospective review of outcomes for patients with ultra high-risk acute promyelocytic leukaemia | 3 | 3 |
| Kirk Morris | Greg Hapwood, Kevin Lee , Georgina Hodges, Hock Lai, Nadya Kisiel , Stewart Hunt | REPOCH: A Multicenter retrospective analysis of outcomes of relapsed/refractory Hodgkins lymphoma patients undergoing salvage treatment followed by high dose therapy | 0 | 0 |
| Dr Greg Hapwood Kirk Morris | Stephen Boyle | PTLD LNR: Clinical outcomes and predictors of progression in post-transplant lymphoproliferative disorder in the PET era | 0 | 0 |
| Dr Michael Dickinson PMCC 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 | 1 | 6 |
| Dr Michael Dickinson PMCC 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 | 1 | 5 |
| Dr Pratyush Giri Royal Adelaide Hospital Jason Butler | Cameron Curley, Simon Durrant, Kirk Morris, Elango Subramonia Pillai, Siok Tey, Nicholas Weber, Glen Kennedy | Acerta 308 ECHO – A Phase 3, Randomized, Double blind, Placebo controlled, Multicenter Study of BR alone Versus in Combination with Acalabrutinib (ACP 196) in Subjects with Previously Untreated Mantle Cell Lymphoma | 0 | 3 |
| Dr Hang Quach St Vincent's Hospital Melbourne Jason Butler | Cameron Curley, Simon Durrant, Elango Subramonia Pillai, Siok Tey, Nicholas Weber, Kirk Morris | Amgen Candor 275 – Randomized, Open-label, Phase 3 Study Comparing Carfilzomib,Dexamethasone, and Daratumumab to Carfilzomib and Dexamethasone for the Treatment of Patients With Relapsed or Refractory Multiple Myeloma | 0 | 7 |

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|---|---|--|--|---|
| Prof Andrew Spencer The Alfred Jason Butler | Cameron Curley, Kirk Morris, Simon Durrant, Nicholas Weber, Elango Subramonia Pillai, Ashleigh Scott | Karyopharm BOSTON - A Phase 3 Randomized, Controlled, Open-Label study of Selinexor, Bortezomib, and Dexamethasone (SVD) Versus Bortezomib and Dexamethasone (VD) In Patients With Relapsed or Refractory Multiple Myeloma (RRMM) | 0 | 3 |
| Prof David Ritchie RMH Jason Butler | Siok Tey, Glen Kennedy, Cameron Curley, Elango Subramonia Pillai, Ashleigh Scott, Simon Durrant, James Morton | Novartis REACH 2 – A phase III randomized open-label multi- center study of ruxolitinib vs. best available therapy in patients with corticosteroid- resistant acute graft vs. host disease after allogenic stem cell transplantation | 0 | 16 |
| Prof Constantine Tam St Vincent's Melbourne 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 | 3 |
| Dr Noemi Horvath Royal Adelaide Hospital Simon Durrant | Jason Butler, Cameron Curley, Glen Kennedy, Kirk Morris, Elango Subramonia Pillai, Nicholas Weber | Abbvie M14-031 BELLINI – A Phase 3, Multicenter, Randomized, Double Blind Study of Bortezomib and Dexamethasone in Combination with Either Venetoclax or Placebo in Subjects with Relapsed or Refractory Multiple Myeloma Who are Sensitive or Naïve to Proteasome Inhibitors | 0 | 1 |
| Simon Durrant | Jason Butler, Elango Subramonia Pillai | Pfizer Ski Extension B1871040 – An Open-Label Bosutinib Treatment Extension Study for Subjects With Chronic Myeloid Leukemia (CML) Who Have Previously Participated in Bosutinib Studies B1871006 or B1871008 | 0 | 4 |
| Simon Durrant | Jason Butler, Elango Subramonia Pillai, Cameron Curley, Glen Kennedy | Novartis RESPONSE 2 – Randomized, open label, multicentre phase IIIb study evaluating the efficacy and safety of ruxolitinib versus best available therapy in patients with polycythemia vera who are hydroxyurea resistant or intolerant | 0 | 4 |

| Lead Investigator Name | Other Study Investigators (RBWH staff in bold) | Research Project Title | Number of RBWH Patients Recruited in 2020 | Total number of Patients Recruited (all sites) |
|--|---|---|--|---|
| Dr Sushrut Patil Royal Adelaide Hospital Simon Durrant | Jason Butler, Elango Subramonia Pillai, Cameron Curley, Glen Kennedy, Nicholas Weber, Kirk Morris | Amgen 292 VERDI – A Phase 2/3 Multi-center Study Comparing Blinatumomab to Standard of Care in Subjects with Relapsed/Refractory Aggressive B-Cell Non Hodgkin Lymphoma | 0 | 2 |
| Siok Tey | Glen Kennedy, Cameron Curley, Jason Butler, Elango Subramonia-Pillai, Ashleigh Scott, Simon Durrant, James Morton | CSL Behring MODULAATE - A Phase 2/3, Multicenter, randOmized, Double-blind, placebo-controlled, stUdy to evaLuate the safety and efficacy of Alpha-1 AntiTrypsin for the prEvention of graft- versushost disease in patients receiving hematopoietic cell transplant | 3 | 4 |
| Siok Tey | Jason Butler, Cameron Curley, Elango Subramonia- Pillai, Ashleigh Scott | PCYC 1140 INTEGRATE – A Randomized, Double-Blind Phase 3 Study of Ibrutinib in Combination With Corticosteroids versus Placebo in Combination With Corticosteroids in Subjects with New Onset Chronic Graft Versus Host Disease (cGVHD) | 0 | 5 |

Research Publications

- Anderson S, Bank M, Brown T, Weber N, Kennedy G & Bauer J. Nutrition support during allogeneic stem cell transplantation: evidence versus practice. Supportive Care in Cancer. 2020 March():. doi:10.1007/s00520-020-05397-x. Epub 2020 Mar 10
- Andersen S, Staudacher H, Weber N, Kennedy G, Varelias A, Banks M &Bauer J. Pilot study investigating the effect of enteral and parenteral nutrition on the gastrointestinal microbiome post-allogeneic transplantation. British Journal of Haematology. 2020; 188 (4): 570-581.
- Ardalan ZS, Chandran S, Vasudevan A, Angus P, Grigg A, He S, Macdonald GA, Strasser SI, Tate CJ, Kennedy GA, Testro A & Gow PJ Liver Transplantation. Management of patients with erythropoietic protoporphyria related progressive liver disease 2019; 25 (11): 1620-1633.
- 4. Austin RJ, Straube J, Bruedigam C, Pali G, Jacquelin S, Vu T, Green J, Grasel J, Lansink L, Cooper L, Lee S, Chen N, Lee C, Haque A, Heidel FH, D'Andrea R, Hill GR, Mullally A, Milsom MD, Bywater M*, Lane SW*. Distinct effects of ruxolitinib and interferon-alpha on murine JAK2V617F myeloproliferative neoplasm hematopoietic stem cell populations. Leukemia 2020. 34(4): 1075-89. (*denotes equal contribution)
- Bhurani M, Admojo L, Van Der Weyden C, Twigger R, Bazargan A, Quach H, Zimet A, Coyle L, Lindsay J, Radeski D, Hawkes E, Kennedy G, Irving I, Gutta N, Trotman J, Yeung J, Dunlop L, Hua M, Giri P, Yuen S, Panicker S, Moreton S, Khoo L, Scott A, Kipp D, McQuillan A, McCormack A, Dickinson M, Prince H. Pralatrexate in relapsed/refractory T-cell lymphoma: a retrospective multicentre study. Leuk Lymphoma 2020. 7: 1-7. https://dx.doi.org/10.1080/10428194.2020.1827241
- 6. Bruedigam C, Lane SW. Taking the brakes off programmed cell death. Will it work for AML in older patients? The Hematologist. 2020 June
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- 38. Wong P, Chambers D, Godbolt D, Lane SW. Intravascular large B-cell lymphoma presenting with extensive pulmonary embolism. Br J Haem 2020, In Press
- 39. Zhang P, Ganesamoorthy D, Nguyen SH, Au R, Coin LJ, **Tey SK.** Nanopore sequencing as a scalable, cost-effective platform for analyzing polyclonal vector integration sites following clinical T cell therapy.
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- 41. Wong P, Chambers D, Godbolt D, Lane SW. Intravascular large B-cell lymphoma presenting with extensive pulmonary embolism. Br J Haem 2020, In Press

Conference Presentations – Invited Speaker, Oral and Poster

Invited Speaker

- 1. **Tey, S.** Clinical translation of gene-modified cellular immunotherapy QIMRB / RBWH experience. Queensland Immunotherapy Network, 21/10/2020.
- 2. Tey, S. Academic CAR T cell program at RBWH/QIMRB. HSANZ QLD, 31/10/2020.
- 3. **Tey S**. Phase I clinical trial using gene-modified T cells within an academic setting. 8th Australasia Vaccine and Immunotherapeutics Development Meeting, 10/11/2020.
- 4. Tey, S. Point-of-care manufacture of CAR T cells. Brisbane Cancer Conference, 27/11/2020.
- 5. Tey, S. Clinical translation Phase I clinical trial using gene-modified T cells. BDHP Immunology Symposium, 9/12/2020
- 6. Scott, A. Novel imaging of leukaemia and GVHD. Herston Symposium, 11/12/2020.

Oral Presentations

- Anstee NS, Pomilio G, Levis M, MacRaild S, Murray M, Rawling T, Kennedy GA, Grigg A, Schwarer A, Enjeti AK, D'Rozario J, Marlton P, Bilmon I, Ivey A, Ong DM, Roberts AW & Wei AH. The impact of sorafenib on phospho-FLT3 inhibition and *FLT3*-ITD MRD after chemotherapy: correlative studies from the phase 2 randomized study of sorafenib versus placebo in combination with intensive chemotherapy in previously untreated patients with *FLT3*-ITD acute myeloid leukemia (ALLG AMLM16)
- 2. Oral presentation, American Society of Hematology 62nd Annual Meeting, Blood 2020; #272
- 3. Jivan, Y. Queensland Myeloid Genomics Project. Herston Health Precinct Symposium, December 2020
- 4. Wei AH, Kennedy GA, Morris KL, Grigg A, He S, Schwarer A, Ting SB, Enjeti AK, D'Rozario J, Latimer M, Marlton P, Bilmon I, Taper J, Cull G, Tiley C, Verner E, Hahn UH, Hiwase D, Iland H, Murphy N, Ravanathan S, Nguyen U, Ong DM, Loo S, Tiong IS, Wall M, Anstee NS, Murray M, Rawling T Leadbetter J, Bajel A & Roberts AW. Results of a phase 2, randomized, double-blind study of sorafenib versus placebo in combination with intensive chemotherapy in previously untreated patients with FLT3-ITD acute myeloid leukemia (ALLG AMLM16) Oral presentation, American Society of Hematology 62nd Annual Meeting, Blood 2020; #591

Poster Presentations

1. Brown T, Elissa Pacheco E, Frederiksen P & Kennedy G. Implementation of Structured Interdisciplinary Bedside Rounds (SIBR) in Cancer Care: Evaluation from an Allied Health perspective

Poster presentation, Clinical Oncology of Australia (COSA) 47th Annual Scientific Meeting, Brisbane November 2020

- Minson A, Hamad N, Butler J, Westerman D, Ritchie D, Blombery P, Seymour J, Tam C & Dickinson M. 1132 A Phase II, Open-Label, Single Arm Trial to Assess the Efficacy and Safety of the Combination of Tisagenlecleucel and Ibrutinib in Mantle Cell Lymphoma (TARMAC). Oral and Poster Abstracts, 62nd ASH Annual Meeting and Exposition, December 5-8, 2020.
- 3. Ahern ES, Gasper HM, Chan B, Roberts NA, Hughes BG, Wyld D, **Kennedy G**, Eastgate MA & Lwin Z. Psychosocial impacts of COVID-19 on oncology workforces: metro versus regional Australia

Poster presentation, American Society of Clinical Oncology 2020 Quality Care Symposium; Abstract #111

- Gasper H, Ahern E, Wheatley H, Roberts N, McGuire P, Wyld D, Kennedy G, Eastgate M, Henden A & Thaker D. Caregiver burden and experience of an Australian geriatric oncology population during COVID-19 pandemic. Poster presentation, Clinical Oncology of Australia (COSA) 47th Annual Scientific Meeting, Brisbane November 2020
- Gasper H, Ahern E, Roberts N, Eastgate M, Wyld D, Hughes B, Kennedy G, Chan B & Lwin Z. Developing a semiqualitative protocol to explore the psychosocial impact of COVID-19 on cancer care staff throughout the pandemic. Poster presentation, 2020 Medical Oncology of Australia (MOGA) Abstract and Poster Program for Medical Oncology Advanced Trainees and Young Oncologists. Virtual meeting, August 2020.
- 6. Gasper H, Ahern E, Wheatley H, Roberts N, McGuire P, Wyld D, **Kennedy G**, Eastgate M, Henden A & Thaker D. The role of a Geriatric Oncology service in building resilience during the COVID-19 pandemic

Poster presentation, Clinical Oncology of Australia (COSA) 47th Annual Scientific Meeting, Brisbane November 2020

7. Sharplin KM, Ritchie D, Gottlieb D, Bilmon I, Panicker S, Kennedy GA, Curley C, Purtill D, Cooney J, Doocey R, Berkahn L, Milliken S, Di Ciaccio PR, Bardy PG, Spencer A, Curtis DJ, Patil SS, Larsen SR, Perera T, Butler A, Greenwood M, Watson AM, Lai HC, Wong E, Tran S & Hamad N. An Australasian Bone Marrow Transplant Registry (ABMTR) study of the trends and outcomes of allogeneic haematopoietic stem cell transplantation (HSCT) in Hodgkin lymphoma between 2009-2019: relapse remains the most common cause of death post transplantation. Poster presentation, American Society of Hematology 62nd Annual Meeting

Blood 2020; poster #2435

8. Di Ciaccio PR, Ritchie D, **Kennedy GA**, Milliken S, Purtill D, Gottlieb D, Perera T, Yeung DT, Larsen SR, Doocey R, Greenwood M, **Durrant S**, Watson AM, Butler A, Khot A, **Curley C** & Hamad N.

Allogeneic stem cell transplantation for mantle cell lymphoma can achieve durable remission and myeloablative conditioning is associated with inferior survival: An Australasian Bone Marrow Transplant Recipient Registry study. Poster presentation, American Society of Hematology 62nd Annual Meeting

Blood 2020; poster #335

- 9. Di Ciaccio PR, Greenwood M, Kennedy GA, Milliken S, Gottlieb D, Ritchie D, Purtill D, Larsen SR, Spencer A, Perera T, Yeung DT, Durrant S, Butler A, Watson AM, Lai HC, Doocey R, Goodman HJ, Kerridge IH, Arthur C, Curley C, Stewart C, Micklethwaite KP, Collins J, Cooney J & Hamad N. Allogeneic stem cell transplantation for diffuse large B cell lymphoma can achieve durable remissions: an Australasian Bone Marrow Transplant Recipient Registry study. Poster presentation, American Society of Hematology 62nd Annual Meeting. Blood 2020; poster #3363
- Noye J, Kennedy G, Scott A. Early Immunosuppresive Therapy for Idiopathic Pneumonia Syndrome Prior to Bronchoscopy Is Associated with Favourable Outcomes. Oral and Poster Abstracts, 62nd ASH Annual Meeting and Exposition, December 5-8, 2020.
- 11. Roberts NA, Chan B, Ahern ES, Gasper HM, **Kennedy G**, Hughes BG, Wyld D, Eastgate MA & Lwin Z. Emotional impact of COVID-19 preparations on metro and regional cancer workforces in Queensland Australia: "We are all in this together". Poster presentation, American Society of Clinical Oncology 2020 Quality Care Symposium; Abstract #44
- 12. McGuire P, **Curley C, Barnes A**. Shared care collaborating with GPs to free capacity and improve the care experience of low risk haematology patients. Herston Health Precinct Symposium 2020, Oct 2020.
- Jivan Y, Weber N, Henden A, Aung H, Seymour L, Lane S, Morris K, Barnes A and Curley C. Enhancing outcomes in myeloid malignancies through next generation genomic sequencing: The Queensland Myeloid Genomics Program. Herston Health Precinct Symposium, December 2020

Haemophilia Centre



Dr Jane Mason A/Director of Haemophilia Queensland Haemophilia Centre

2020 was an 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 continued recruitment and dosing for phase 3 haemophilia A gene therapy studies. For most individuals with severe haemophilia A, lifelong home intravenous infusions of recombinant factor VIII concentrate are required every 2-3 days to maintain factor levels and prevent serious bleeds. The possibility that a once off infusion of gene therapy will lead to sustained liver production of factor VIII (and remove the need for any ongoing intravenous therapy) is a very exciting prospect for our patient cohort and the wider haemophilia community. Successful participation in these novel studies has enabled us to develop experience and further our local operating procedures around safe administration of Genetically Modified Organism (GMO) based therapies. The QHC looks forward to being involved in further gene therapy studies in both Haemophilia A and Haemophilia B in 2021.

The QHC also continue as an active site in a multi-centre phase 3 study evaluating the efficacy of a factor VIII mimetic (Emicizumab) given via monthly subcutaneous injection.

We continue to collaborate with the Australian Haemophilia Centre's Directors Organisation (AHCDO) in projects involving Australian Bleeding Disorder's Registry (ABDR) data.

| Lead Investigator Name | Other Study Investigators (RBWH staff in bold) | Research Project Title | Number of RBWH Patients Recruited in 2020 | Total number of Patients Recruited (all sites) |
|---------------------------|---|--|--|--|
| Scott Russell | Dr. Peter Window, Simon Whitehart, Jane Mason | Does the use of video- conferencing in physiotherapy consultations of adult patients with bleeding disorders change clinical recommendations when compared to audio- conferencing? | 27 | 27 |

Current RBWH Department / Research Group Led Research Activity

| Lead Investigator Name | Other Study Investigators (RBWH staff in bold) | Research Project Title | Number of RBWH Patients Recruited in 2020 | Total number of Patients Recruited (all sites) |
|---|---|---|--|---|
| Dr Simon McRae Royal Adelaide Hospital Jane Mason | Nick Weber, Michelle Spanevello | BioMarin BMN 270-301 - A Phase 3 Open-Label, Single- Arm Study To Evaluate The Efficacy and Safety of BMN 270, an Adeno-Associated Virus Vector–Mediated Gene Transfer of Human Factor VIII in Hemophilia A Patients with Residual FVIII Levels = 1 IU/dL Receiving Prophylactic FVIII Infusions. | 0 | 5 |
| Dr Dominic Pepperell Fiona Stanley Hospital, WA Jane Mason | Nick Weber, Michelle Spanevello | BioMarin BMN 270-902 - A Prospective Non-Interventional Study of Bleeding Episodes, Factor VIII Infusions, and Patient-Reported Outcomes in Individuals with Severe Hemophilia A | 0 | 5 |
| Dr Chee Wee Tan Royal Adelaide Hospital Jane Mason | Nick Weber, Michelle Spanevello | A Phase 3b, Single Arm, Open-Label Study to Evaluate the Efficacy and Safety of BMN 270, an Adeno-Associated Virus Vector–Mediated Gene Transfer of Human Factor VIII, with Prophylactic Corticosteroids in Hemophilia A Patients | 0 | 5 |

Research Publications

Journal Articles

 Campbell S, Mason J, Prasad R, Ambrose H, Hunt S, Tran H. Acquired haemophilia and haemostatic control with recombinant porcine FVIII: case series. Internal Medicine Journal. 2020 Feb 11. doi: 10.1111/imj.14773. [Epub ahead of print]

Cancer Care Nursing Professorial Precinct



Michael Smith Director Cancer Nursing

The Cancer Nursing Professorial Precinct is a strategic collaboration between nurses in Cancer Care Services, Royal Brisbane and Women's Hospital, and academics in the School of Nursing, Queensland University of Technology. The Precinct is supported and led by Distinguished Professor Patsy Yates and operationalised by the Nursing Executives and Nurse Researcher team. The aim of the Precinct is to build capacity for high-quality clinically relevant nursing research that leads to improved patient outcomes.

The Cancer Care Nursing Professorial Precinct has achieved several significant achievements in 2020, despite being impacted by the COVID-19 pandemic. In 2020,16 nurse-led projects were conducted within the department funded by over \$180,000 in competitive research funding. Cancer Care nurses have continued to pursue research-higher degrees, with four cancer care nurses enrolled in a Doctor of Philosophy and two in a Master of Research. The successful continuation of the Nursing Research Internship program, led by Dr Gavin, has seen clinical nurses enhance their research knowledge and experience and obtain internal and externally competitive funding. The work conducted in the Nursing Research Internship program is improving patient outcomes in the clinical areas through direct knowledge translation. Cancer Care Research continues to foster relationships with academic institutions, including QUT, UQ, Griffith, USQ, QIMR, industry partners and professional organisations.

Of note, Natasha Roberts (Prostate Cancer Specialist Nurse and Doctoral Candidate) was the first nurse to be awarded a highly competitive Metro North Clinician Researcher Fellowship for her work supporting men with prostate cancer. Dr Nicole Gavin has continued to grow her body of work in the field of infection prevention and central lines, and Dr Elise Button in the field of palliative care, with multiple successful projects, presentations and publications. In the closing months of 2021, the Cancer Nursing Professorial Precinct welcomed a new member to the team; Brighid Scanlon, is a Doctoral Candidate whose body of work covers health equity and disparity research, with a particular focus on cancer outcomes within vulnerable populations. We congratulate all the nurses in Cancer Care Services for their research achievements and thank them for their hard work in what has been a difficult year for all.

Research Awards and Achievements

| Recipient | Award | Event |
|--------------|------------------|---------------------------------------|
| Nicole Gavin | Highly Commended | Cancer Care Services Research Retreat |

Research Grants Awarded in 2020

| Investigator Names | RBWH Departments / Research Groups | Research Project Title | Granting Body | Total Awarded | Year/s |
|---|---|---|--|---------------|---------------|
| Nicole Gavin, Veronica Percival, Elise Button, Jenni Leutenegger, Cameron Curley and Grant Partridge | Cancer Care Services | 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) | Susan Suduk OneDay to Conquer Cancer 2019 Diamond Care Grant | \$39,812 | 2019- 2020 |
| Nicole Gavin, Veronica Percival, Elise Button, Jenni Leutenegger, Cameron Curley and Grant Partridge | Cancer Care Services | 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) | Rosemary Bryant Foundation | \$24,998 | 2019- 2021 |
| Nicole Gavin, Samantha Keogh (QUT/AVATAR), Loise Marquart (QIMR), Nicole Marsh (RBWH/AVATAR), Makrina Totsika (QUT) and Catherine Saxby (RBWH/AVATAR) | Cancer Care Services | Standard versus perforated peripheral intravenous catheter (SURF Trial): a pilot randomised controlled trial. | Metro North Collaborative Research Grants 2019 | \$49,410 | 2019- 2020 |
| Elise Button, Nicole Gavin, Jason Butler, Michael Smith and Patsy Yates (QUT) | Cancer Care Services | Exploring the values, preferences, choices for care, and decision making of people with a haematological malignancy, their carer and health care professions (EXPLORE) study | Royal Brisbane and Women's Hospital Diamond Care Grant 2018 | \$29,571 | 2018- 2020 |
| Elise Button, Jason Butler and Patsy Yates (QUT) | Cancer Care Services | Best practice care for people with a haematological malignancy who are at risk of deteriorating and dying (PROMOTE) study | Royal Brisbane and Women's Hospital Post-doctoral Fellowship 2019 | \$50,000 | 2019- 2020 |
| Brighid Scanlon, David Wyld, Jo Durham (QUT), Mark Brough (QUT) | Cancer Care Services | Equity across the cancer care continuum for culturally and linguistically diverse migrants living in Australia | Royal Brisbane and Women's Hospital post-graduate scholarship | \$38,871 | 2020- 2022 |
| Natasha Roberts | Cancer Care Services | A co-designed implementation science strategy with clinicians, consumers and researchers to structure improved nurse-led symptom management in medical oncology care | Royal Brisbane and Women's Hospital Diamond Care Grant 2019 | \$39,027 | 2019- 2020 |

| Investigator Names | RBWH Departments / Research Groups | Research Project Title | Granting Body | Total Awarded | Year/s |
|--|--|--|--|---------------|---------------|
| Amanda Ullman (GU/AVATAR), Natasha Roberts, Nicole Marsh (RBWH/AVATAR), Emily Larsen (GU/AVATAR) and Claire Rickard (GU/AVATAR) | Nursing and Midwifery Research Centre | Consumer-led innovation to implement improvements in central venous access device management: the Vascular Access Project | Royal Brisbane and Women's Hospital Diamond Care Grant 2019 | \$38,775 | 2019- 2020 |

Current RBWH Department / Research Group Led Research Activity

| Lead Investigator Name | Other Study Investigators (RBWH staff in bold) | Research Project Title | Number of RBWH Patients Recruited in 2020 |
|---------------------------|--|--|--|
| Nicole Gavin | Nicole Gavin, Veronica Percival, Elise Button, Jenni Leutenegger, Cameron Curley and 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) | |
| Nicole Gavin | Glen Kennedy, Sarah Andersen, Elise Button and Rebecca Lippiatt David Paterson (UQCCR), Claire Rickard (GU/AVATAR) and Nicola Angel (Microba) | 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 (The Microbiome Study) | |
| Nicole Gavin | Samantha Keogh (QUT/AVATAR), Loise Marquart (QIMR), Nicole Marsh (RBWH/AVATAR), Makrina Totsika (QUT) and Catherine Saxby (RBWH/AVATAR) | Standard versUs peRForated peripheral intravenous catheter. The SURF trial: a pilot randomised controlled trial | |
| Elise Button | Patsy Yates (QUT), Sara Baniahmadi (QUT), Marghie Murgo (University of Sydney), Angie Dalli (Australian Commission on Safety and Quality in Health Care). | <u>QUA</u> lity Comprehe <u>N</u> sive End-of-Life Care: S <u>T</u> andard Five (QUANTum) study | |
| Elise Button | Nicole Gavin, Jason Butler, Michael Smith and Patsy Yates (QUT) | Exploring the values, preferences, choices for care, and decision making of people with a haematological malignancy, their carer and health care professions (EXPLORE) study | |
| Elise Button | Nicole Gavin, Natasha Roberts, Jason Butler, Greg Merlo (UQ) and Patsy Yates (QUT) | Identifying risk of deteriorating and dying in people with a haematological malignancy (IDENTIFY study) | |
| Nicole Gavin | Andrea Lane, Emily Russell, Paul Klages, Tracy Glynn, Melissa Eastgate, Jenni Leutenegger, Eve Hutchinson, Amanda Sutherland, Carolina Sandler (QUT IHBI), Samantha Keogh (QUT IHBI), Bronwyn Clark (UQ), Greg Merlo (UQ), Jaimi Greenslade (RBWH) and Krispin Hajkowicz (RBWH) | A Pilot Randomised Controlled Trial exploring the administration of intravenous antibiotics via stationary intravenous pole and pump versus portable CADD pump to improve patient outcomes and hospital-acquired complications in patients diagnosed with cancer (The Active Trial) | |

| Lead Investigator Name | Other Study Investigators (RBWH staff in bold) | Research Project Title | Number of RBWH Patients Recruited in 2020 |
|---------------------------|--|---|--|
| Nicole Gavin | Francesca Boyte, Glen Kennedy, Grant Partridge, Therese Hayes and Elise Button | Will priming intravenous administration sets with monoclonal antibodies reduce the incidence of hypersensitivity reactions? A randomised Controlled Trial | |
| 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, 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 | |
| Brighid Scanlon | David Wyld, Jo Durham (QUT), Mark Brough (QUT) | Equity across the cancer care continuum for culturally and linguistically diverse migrants living in Australia | |
| Mary-Ellen Yarker | Carol Windsor (QUT) and Jennifer Fox (QUT) | The role of oncology nurse in shared decision making for patients undergoing radiation and/or chemotherapy treatment. | |
| Robyn Matthews | Elise Button, Raymond Chan (QUT) and Patsy Yates (QUT) | Factors influencing self-efficacy of healthcare professionals towards end-of-life care in acute care settings. | |
| Michael Smith | Louise Baldwin (QUT) | How does the cancer care coordination role within an Australian oncology facility align with peak professional body position statements and guidelines? | |
| Justine Leach | Elise Button, Raymond Chan (QUT) and Patsy Yates (QUT) | Nurse-led clinics and health related quality of life and financial toxicity/symptom burden of cancer patients in the community oncology outpatient setting | |
| Judy Avery | Associate Professor Sonya Osborne (USQ), Dr Aletha Ward (USQ), Dr Catriona Brooker (USQ) | Debriefing acute care nurses in the workplace. | |
| 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 | |

Collaborative Research Activity Involving RBWH Department / Research Group

| Lead Investigator Name | Other Study Investigators (RBWH staff in bold) | Research Project Title | Number of RBWH Patients Recruited in 2020 |
|-------------------------------|---|---|--|
| Amanda Ullman (GU/AVATAR), | Nicole Marsh (RBWH/AVATAR), Emily Larsen (GU/AVATAR), Claire Rickard (GU/AVATAR), Natasha Roberts | Consumer-led innovation to implement improvements in central venous access device management: the Vascular Access Project | |
| Monika Janda (QUT) | Kim Alexander (QUT), Natasha Roberts, David Wyld | Patient Reported Outcomes in the Medical Oncology Setting (iPROMOS) | |

| Lead Investigator Name | Other Study Investigators (RBWH staff in bold) | Research Project Title | Number of RBWH Patients Recruited in 2020 |
|---|--|--|--|
| Haryana Dhillon (Australia New Zealand Urogenital and Prostate Cancer Trials Group) | lan Davis, Craig Gedye, (Australia New Zealand Urogenital and Prostate Cancer Trials Group), Natasha Roberts | Patient Experience of Participating in a Clinical Trial | |
| Prostate Cancer Clinical Trials Consortium, LLC (PCCTC) | Natasha Roberts, Jeffrey Goh, Aneta Suder | IRONMAN: International registry for men with advanced prostate cancer | |
| Natasha Roberts | Medical Oncology, Radiation Oncology, Haematology Cancer Care Services, RBWH | Poster Project: A study to describe oncology patient perceptions of research | |

Research Publications

- Beesley V, Turner J, Chan R, Yates P, Gordon L, Burge M, Eastgate M, Staneva A, Northfield S, Beebe H, Wyld D, Neale R. Supporting patients and carers affected by pancreatic cancer: a feasibility study of a counselling intervention. *European Journal of Oncology Nursing*, 101729.
- Rickard CM, Flynn J, Larsen E, Mihala G, Playford EG, Shaw J, Keogh S, Ullman A, Zhang L, Gavin NC, Kleidon T, Chopra V, McCarthy S, Kuerten Rocha P & Marsh N (2020) Needleless connector decontamination for prevention of central venous access device infection: a pilot randomized controlled trial. American Journal of Infection Control https://doi.org/10.1016/j.ajic.2020.07.026.
- Van Oers, HA, Teela, L, Schepers, SA, Grootenhis, MA, Haverman, L, the ISOQOL PROMs and PREMs in Clinical Practice Implementation Science Group (Natasha Roberts). (2020). A retrospective assessment of the KLIK PROM portal implementation using the Consolidated Framework for Implementation Research (CFIR). Quality of Life Research, DOI: 10.1007/s11136-020-02586-3.
- 4. Malili, K, Santana, MJ, the PROMs and PREMs in clinical practice implementation science work group (Natasha Roberts). (2020). Using implementation science to inform the integration of electronic patient-reported experience measures (ePREMs) into healthcare quality improvement: description of a theory-based application to primary care. Quality of Life Research DOI: 10.1007/s11136-020-02588-1.
- Gavin NC, Kleidon T, Larsen E, O'Brien C, Ullman A, Northfield S, Mihala G, Runnegar N, Marsh N & Rickard CM (2020) Innovation in peripherally inserted central catheter designs: a feasibility randomized controlled trial comparing hydrophobic polyurethane with polyurethane. Trials 21, 787, https://doi.org/10.1186/s13063-020-04699-z
- 6. Campbell J, **Button E, Roberts N & Gavin NC** (2020) Skin and wound care for individuals with graft versus host disease: A scoping review protocol. BMJ Open (accepted for publication)
- 7. **Gavin NC,** Marsh N, Marquart L, O'Brien C, Totsika M & Keogh S (2020) Standard versUs peRForated peripheral intravenous catheter. The SURF trial: a pilot randomised controlled trial protocol. Vascular access 6(2) 9
- Witilink, LM, King, M, Muller, F, Sousa, MS, Tang, M, Pendlebury, A, Pittman, J, Roberts NA, Mileshkin, L, Mercieca-Bebber, R, Tait, M-A, Campbell, R, Rutherford, C. (2020). A Systematic Review of the Impact of Contemporary Treatment Modalities for Cervical Cancer on Women's Self-reported Quality of Life. Supportive Care in Cancer 28(10), 4627-4644.
- 9. Roberts NA, Alexander K, Wyld D, Janda M. (2020). Statistical Process Control assessed implementation fidelity of patient reported outcomes in routine care. Journal of Clinical Epidemiology 127, 76-86
- 10. Gasper H, Ahern E, Roberts NA, Chan B, Lwin Z. (2020). COVID-19 and Cancer Care Workforce: The Human Perspective. Seminars in Oncology 47(5), 309-311.

- Stover AM, Haverman L, van Oers H, Greenhalgh J, Potter CM, Ahmed, S, Gibbons, E, Manalili, K, Potter, C, Roberts, N, Santana, M, van Oers, H. (2020). Using an implementation science approach to implement and evaluate Patient-Reported Outcome Measures (PROM) initiatives in routine care settings. Quality of Life Research doi.org/10.1007/s11136-020-02564-9
- Roberts, NA, Janda, M, Stover, A, Alexander, K, Wyld, D, Mudge, A. (2020). Using the Integrated Promoting Action Research in Health Services (iPARIHS) Framework to evaluate implementation of Patient Reported Outcome Measures (PROMs) into routine care in a medical oncology outpatient department. Quality of Life Research DOI: 10.1007/s11136-020-02669-1
- 13. Campbell, J, Gavin, N, Button, E, Roberts, N. (2020). Skin and wound care for individuals with graft versus host disease: a scoping review protocol. BMJ Open 10:e038567.

Conference Presentations – Invited Speaker, Oral and Poster

Invited Speaker

- 1. **Button, E.** Palliative care for people with a haematological malignancy. Centre for Palliative Care Research and Education, statewide online education event, October 2020.
- 2. Button, E. How can oncology nurses practice a palliative approach for their patients? Cancer Nurses Society of Australia, national online education event (September 2020.
- 3. **Button E.** Providing palliative and end of life care for people with a haematological malignancy. Haematology Society of Australia and New Zealand (New Zealand Branch meeting), Dunedin 2020 (online presentation due to COVID).
- 4. Gavin NC. A new way to look at catheter related infections. AusMed Lecture. Brisbane. February 2020
- 5. Gavin NC. Panel member. Engaging Consumers in Research. Herston Symposium. December 2020
- 6. **Gavin NC**. From the bedside to the bech and back again: using laboratory data to inform nursing practice. Year of the Nurse and Midwife. Herston Symposium. December 2020
- Gavin NC. From induction to day+100 post-transplant: how the gut microbiome impacts bloodstream infections in patients diagnosed with AML – results of an observational study. Cancer Care and Infection. Herston Symposium. December 2020
- Roberts, N. "Using the Promoting Action Research in Health Services (iPARIHS) framework to study implementation of PROMs into oncology care". Symposium. October 2020. ISOQOL 2020, Prague.
- 9. **Roberts, N.** "Creating a clinical pathway in the face of a Pandemic". Main symposium. ANZUP mini-ASM 2020, November 2020.
- 10. **Roberts, N.** "Exploring the experiences of caring for patients with genitourinary cancers among nursing and allied health professionals during COVID-19". Nursing and Allied Health Session. ANZUP mini-ASM, November 2020.
- 11. **Roberts, N.** "Implementation Science and Teletrials". Pre-conference workshop. Clinical Oncology Society Australia Annual Scientific Meeting, November 2020, Brisbane QLD.

Oral Presentations

 Scanlon, B. Ortiz, E, Durham, J. Effectiveness of Interventions for Hepatitis B and C: A systematic review of Vaccination, Screening, Health Promotion and Linkage to Care Within High Income Countries. Joint Australasian HIV&AIDS and Sexual Health Conference (Virtual). November 2020.

Oral Presentations

- Choge, J, Ryan, C, James, C, Battersby, C, Richardson, L, Roberts, N. Barriers and enablers to supporting a diverse workforce at the Royal Brisbane and Women's Hospital. Herston Health Precinct Symposium, Brisbane, December 2020. Oral presentation
- Roberts, NA, Janda M, Alexander K, Wyld D. Factors in controlled clinical trials reported to impact implementation of patient-reported outcome measures (PROMSs) into routine care: A systematic review. Oral presentation, International Society for Quality of Life Congress, Prague. October 2020. Oral presentation.
- Ahern, E, Gasper, H, Chan, B, Roberts, NA, Hughes, B, Eastgate, M, Wyld, D, Kennedy, G, Lwin, Z. (2020). Psychosocial impacts of COVID-19 on oncology workforces: Metro vs Regional Australia. Herston Health Precinct Symposium, December 2020. Oral Presentation.

Poster Presentations

- 1. **Scanlon, B.** Ortiz, E, Durham, J. Effectiveness of Interventions for Hepatitis B and C: A systematic review of Vaccination, Screening, Health Promotion and Linkage to Care Within High Income Countries. Joint Australasian HIV&AIDS and Sexual Health Conference (Virtual). November 2020.
- Gavin NC, Kleidon T, Larsen E, O'Brien C, Ullman A, Northfield S, Mihala G, Runnegar N, Marsh N & Rickard CM. A comparison of hydrophobic polyurethane and polyurethane peripherally inserted central catheter: results from a feasibility randomized controlled trial. Herston Symposium. December 2020
- 3. **Gavin** NC, Wignall E, Marsh N, Marquart L, O'Brien C, Verderosa A, Totsika M, Dobeli K & Keogh S. Standard versUs peRForated peripheral intravenous catheter (SURF): a pilot randomised controlled trial preliminary findings
- 4. Herston Symposium. December 2020
- Ahern E, Gasper H, Chan B, Roberts N, Hughes B, Wyld D, Kennedy G, Eastgate M, Lwin Z. Psychosocial impacts of COVID-19 on oncology workforces: metropolitan vs regional Australia. American Society of Clinical Oncology (ASCO) Quality Care Symposium 9th-10th October 2020. Virtual
- Gasper H, Ahern E, Roberts N, Wheatley H, McGuire P, Wyld W, Kennedy G, Eastgate M, Henden A, Thaker D. The role of a Geriatric Oncology service in building resilience during the COVID-19 pandemic. Clinical Oncology Society of Australia (COSA) Annual Scientific Meeting 2020. 10-14 Nov 2020. Brisbane/Virtual.
- Gasper H, Ahern E, Roberts N, Wheatley H, McGuire P, Wyld W, Kennedy G, Eastgate M, Henden A, Thaker. Caregiver burden and experience of an Australian geriatric oncology population during COVID-19 pandemic. Clinical Oncology Society of Australia (COSA) Annual Scientific Meeting 2020. 10-14 Nov 2020. Brisbane/Virtual.
- 8. Roberts NA, Chan B, Ahern ES, Gasper HM, Kennedy G, Hughes BGM, Wyld D, Eastgate MA, Lwin Z. Emotional impact of COVID-19 preparations on metro and regional cancer workforces in Queensland Australia: "We are all in this together". American Society of Clinical Oncology (ASCO) Quality Care Symposium 9th-10th October 2020. Virtual
- Ahern, E, Gasper, H, Chan, B, Roberts, NA, Hughes, B, Eastgate, M, Wyld, D, Kennedy, G, Lwin, Z. (2020). Psychosocial impacts of COVID-19 on oncology workforces: Metro vs Regional Australia. American Society for Clinical Oncology (ASCO) Quality Care Symposium. Chicago, US. August 2020. Poster Presentation

Medical Oncology



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

Despite the many challenges that 2020 provided, the vast majority of the Department of Medical Oncology's research program was able to continue throughout 2020. That this was the case reflected the dedication and hard work of all involved in maintaining ongoing research across CCS in general throughout the year. All involved should be congratulated on their ability to rapidly adapt practices to the changing circumstances, thereby allowing continuation of the majority of the department's programs.

I would like to highlight several of the departments 2020 achievements. I feel those listed initially clearly demonstrate the ongoing development of the Medical Oncology Departments research program -

- Maintaining access for patients to clinical trials treatment. The ability of the team to rapidly adjust to changing circumstances and allow the majority of the departments clinical trials to remain open to our patients was exceptional. While recruitment of new patients was affected for a period of the year, all patients receiving therapy on a clinical trial were able to continue therapy, and new patients continued to be recruited to most studies for most of the year. The development of several new innovative practices by the research team was a key factor in allowing this to occur.
- Successful higher degree candidates. Two individuals who had undertaken fellowships in Medical Oncology at RBWH completed higher degrees in 2020. Dr Elizabeth Ahern completed her PhD through Uni Qld, and Dr Rahul Ladwa completed a MPhil, also through Uni Qld. In addition to completing their higher degrees, both were also successful in obtaining full time consultant positions in large tertiary hospitals.
- Research grants. Multiple departmental staff have been part of successful research grant applications over the last year, including 2 major CCQ grants, multiple NHMRC MRFF grants, as well as number of local grants
- Departmental staff were involved in an increasing number of research projects, both local and in collaboration with colleagues in other institutions
- Research publications and presentations. Departmental output included almost 50 publications and more than 50 conference presentations in 2020.

A final point that I think reflects the quality of the departments current research program. Despite all the challenges just to maintain clinical services to our patients during COVID, a number of members of the department worked together to develop several new research projects specifically focused on COVID related issues. Initial concepts were rapidly refined and research protocols developed, ethics approvals obtained, and recruitment commenced. Projects progressed at a rapid rate, data was analysed, and initial results submitted for presentation and publication in a remarkably short timeframe. All this was done by the investigators themselves without additional support or funding.

The success of these efforts was demonstrated at the 2020 Herston Health Precinct Symposium, where A/Prof Zarnie Lwin received the Dr Stephen Morrison Clinical Research Award for her oral presentation "Psychosocial impacts of COVID-19 on oncology workforces: Metro vs Regional Australia", submitted on behalf of the team of departmental researchers involved in this project.

Research Awards and Achievements

| Recipient | Award | Event |
|-------------|--|---|
| Zarnie Lwin | Dr Stephen Morrison Clinical Research Award | 2020 Herston Health Precinct Symposium |

Research Grants Awarded in 2020

| Investigator Names | RBWH Departments / Research Groups | Research Project Title | Granting Body | Total Awarded | Year/s |
|--|--|---|--|---------------|-----------|
| Medical Oncology Clinical Trials Unit | Medical Oncology | Clinical Trials Data Management Grant | Queensland Cancer Fund | \$125,000 | 2020 |
| Penelope Webb, Raymond Chan, Bena Brown, David Wyld , Sabe Sabesan, Louisa Gordon, Gunter Hartel, Melissa Eastgate , Laurelie Wishart, Rebecca Nund | Medical Oncology | PROMISE: patient- Reported Outcome Measures in cancer care: a hybrid effectiveness- Implementation trial to optimise symptom control and health service experience. | Cancer Council Queensland Accelerating Collaborative Cancer Research (ACCR) Grant, QIMR Grant | \$2,000,000 | 2020-2023 |
| Mark Smyth, Nicola Waddell, Andreas Moller, Michele Teng, Harsha. Gowda, John Pearson, Tobias Bald, Peter Simpson, Elizabeth Ahern , David Fielding, Brett Hughes. | Medical Oncology | LUCKISTARS. Lung cancer knowledge in immunogenomics to stratify therapeutic resistance and sensitivity. | Cancer Council of Queensland, AACR- 0000000027, QIMR Grant | \$2,000,000 | 2020-2023 |
| Niall Tebbutt, Jeanne Tie, Chris Karapetis, Steve Ackland, Connie Diakos, Matthew Burge , Naureen Starling, Tony Dhillon, Christine Bishop, David Church, David Lau, Kate Mahon, Sonia Yip, Sophia Frentzas, Yoko Tomita, Kate Wilson | Medical Oncology | POLEM Trial, a phase III randomised study of Avelumab plus fluoropyrimidine-based chemotherapy as adjuvant treatment for stage III dMMR or POLE exonuclease domain mutant colon cancer. | MRFF International Clinical Trials Collaborations Grant | \$981,313 | 2020-2024 |
| Po-Ling Inglis, Olga Kondrashova, Nicola Waddell, Sunil Lakhani, Amy McCart Reed, | Medical Oncology, Pathology | Integration of machine learning in breast cancer prognosis by profiling the tumour Microenvironment (Q- IMPROvE) | Collaborative Research Grant MNHHS and QIMR | \$50,000 | 2020-2021 |

| Investigator Names | RBWH Departments / Research Groups | Research Project Title | Granting Body | Total Awarded | Year/s |
|---|--|--|---|---------------|-----------|
| John Atherton, Kristyan Guppy- Coles, Sandhir Prasad, Po-Ling Inglis | Cardiology, Medical Oncology | Feasibility and Diagnostic Accuracy of Novel Echocardiographic Approaches to allow Screening and Monitoring for Left Ventricular Systolic Dysfunction by Novice Healthcare Staff | Heart Foundation 2019 Vanguard | \$150,000 | 2020-2021 |
| Hayes S, Obermair A, Janda M, Eakin E, Shannon C, Goh J, Beesley V, Vagenas D, Spence R | Surgery, Medical Oncology | A Phase II trial evaluating feasibility, safety and efficacy of an individually- tailored exercise intervention during chemotherapy for recurrent ovarian cancer | NHMRC MRFF EPCDR Ovarian Cancer Grant | \$884,172 | 2020-2023 |
| Sunil Lakhani (UQ) Amy Reed (UQCCR), Christopher Pyke (Mater), Cameron Snell (Mater), Nicole McCarthy (Wesley), Ken O'Byrne (PAH), Valentine Hyland (Pathology), Owen Ung (Surgery), Natasha Woodward (Mater), Euan Walpole (PAH), Peter Simpson (UQ), Stephen Rose (CSIRO), Fares Al-Ejeh (QIMR), Po-Ling Inglis, Ben Green (CCS) | Pathology, Surgery, Cancer Care Services | High risk breast cancer genomic sequencing project platform Queensland wide | MRFF Genomics grant | 2,800,000 | 2020-2022 |
| Chee Khoon Lee, Michael Friedlander, Clare Scott, Sherene Loi, Tarek Meniawy, Jeffrey Goh, Anna deFazio Alicia Jenkins, Alison Davis, Rachel O'Connell | Medical Oncology | PARAGON-II: Phase 2 basket study of an ARomatase inhibitor plus PI3KCA inhibitor or CDK4/6 inhibitor in women with hormone receptor positive recurrent/metastatic Gynaecological Neoplasms. | MRFF Clinical Trials Activity (Rare Cancers, Rare Diseases and Unmet Need) –2019 Reproductive Cancers Grant Opportunity | \$1,995,422 | 2020-2023 |
| Paul Thomas, John Hooper, Trent Munro, David Wyld, Luke Perrin, Rohan Lourie, Stephen Rose, Simon Puttick | Medical Oncology, Nuclear Medicine | A new radio-imaging agent to guide targeted therapy for epithelial ovarian cancer | NHMRC MRFF – Emerging Priorities and Consumer Driven Research - 2019 Ovarian Cancer Research Grant. (APP1199422) | \$1,893,306 | 2020-2024 |

| Investigator Names | RBWH Departments / Research Groups | Research Project Title | Granting Body | Total Awarded | Year/s |
|---|--|---|---|---------------|-----------|
| Vanessa Beesley, Rachel Neale, Jane Turner, Patsy Yates, David Wyld , Raymond Chan, Louisa Gordon | Medical Oncology | PRoCESS: Pancreatic cancer Relatives Counselling and Education Support Service trial. Assessing the effect of nurse-led counselling, compared with information alone, on participant- reported outcomes and use of medical services. | NHMRC MRFF – Research Grant (APP1200326) | \$801,229 | 2020-2024 |
| Linda Mileshkin, Yeh Chen Lee, Martin Stockler, Yoland Antill, Pearly Khaw, Pamela Pollock, Elizabeth Barnes, Paul Cohen, Michelle Wilson, Elizabeth Christie, Jeffrey Goh . | Medical Oncology | Adjuvant Tislelizumab plus chemotherapy after post- operative pelvic chemoradiation in high risk endometrial cancer: the ADELE study | NHMRC MRFF – Research Grant | \$1,633,241 | 2020-2022 |
| Teresa Brown, Judy Bauer, Brett Hughes . | Nutrition and Dietetics | A Feasibility study to investigate taste changes post-treatment in patients with head & neck cancer and their association with genes and dietary behaviour. | RBWH Fellowship | \$45,788 | 2020-2021 |
| Mark Nalder, Matthew Burge, Melissa Eastgate, David Wyld | Medical Oncology | Reducing severe toxicity and hospitalisations related to 5-Fluorouracil (5-FU) chemotherapy | 2021 MNHHS SEED Innovation Funding (awarded Dec 2020) | \$88,488 | 2021 |

Current RBWH Department / Research Group Led Research Activity

| Lead Investigator Name | Other Study Investigators | Research Project Title | Number of RBWH Patients Recruited in 2020 | Total number of Patients Recruited (all sites) |
|--------------------------------|--|---|--|--|
| Natasha Roberts, David Wyld | Monika Janda, Kim Alexander | Patient Report Outcomes (PROs) in a medical oncology setting: A low risk project to identify staff perceptions about the use of PRO data in a clinical setting | 0 | Not available |
| Matthew Burge | Melissa Eastgate , David Wyld, Shu Lee Euan Walpole (PAH) | Prospective evaluation of FOLFIRINOX for metastatic or locally advanced Pancreatic Cancer | 3 | 20 |
| David Wyld | Louisa Gordon, John Leyden, Kate Wakelin, Michael Michael, Nick Pavlakis | F-NET Project: Financial Outcomes in people with Neuro-Endocrine Tumours | 0 (In follow-up) | 82 |
| Matthew Burge | Paul Thomas , David Wyld , Melissa Eastgate Stephen Rose, Nick O'Rouke, Davis Cavallucci, Richard Bryant. | Imaging the CXCR-4 Chemokine receptor with a novel PET tracer in pancreatic cancer. | 0 | 9 |

| Lead Investigator Name | Other Study Investigators | Research Project Title | Number of RBWH Patients Recruited in 2020 | Total number of Patients Recruited (all sites) |
|--|--|--|--|--|
| Matthew Burge | Paul Thomas, Andrew Stevenson, David Wyld (CCS), Melissa Eastgate , Stephen Rose, David Clark, Craig Harris, Damien Petersen, David Taylor, Carina Chow, Paul Tesar (DMI), Michelle Grogan | A pilot study of CXCR-4 PET scanning in operable rectal cancer. | 0 | 5 |
| David Wyld | Julie Moore, Mark Wan | Neuroendocrine Tumours: Epidemiologic trends in Queensland | Not applicable | 4580 QLD cases |
| Brett Hughes | Elizabeth Ahern, Bill Dougall, Mark Smyth (PAH) | Pharmacodynamics of Pre- Operative PD1 CheckpOint Blockade and Receptor Activator of NF-KB Ligand (RANKL) Inhibition in Non- Small Cell Lung Cancer (NSCLC) – a phase 1B/2 trial. POPCORN | 1 | 1 |
| Natasha Roberts (Cancer Care Services/Queensland University of Technology) | Monika Janda , Kim Alexander, David Wyld | Patient Reported Outcomes in the Medical Oncology Setting (iPROMOS) | 0 | 538 |
| David Wyld | David Chan (Sydney), S Singh, A Thawer, C Fingrut, R Yelamanchila (Canada) | Understanding the Barriers to the Development of a Shared Care Model for the Treatment of Patients with Neuroendocrine Tumours (NETs): Optimization of care between NET Speciality Centres and General/Local/Community Oncologist | Online survey. Not applicable | Online survey. 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 available | 19 |
| David Wyld | Julie Moore, Nancy Tran, Michael Wyld | Neuroendocrine Neoplasms in the Paediatric, Adolescent and Young Adult Population in Queensland, Australia. | Not applicable | Audit 653 Qld Cases |
| Natasha Roberts | Haryana Dhillon, Phillip Parente, Craig Gedye, Australia New Zealand Urogenital and Prostate Cancer Trials Group | Patient Experience of Participating in a Clinical Trial | 0 | Not available |
| Natasha Roberts (Cancer Care Services/Queensland University of Technology) | Medical Oncology, Radiation Oncology, Haematology Cancer Care Services, RBWH | Poster Project: A study to describe oncology patient perceptions of research | 0 | Not available |
| Melissa Eastgate | Geoffrey Bryant, Mathew Burge , Darshit Thaker, David Wyld , Cameron Curley, Michele Cremen, Buth | Cancer patient reported outcomes: putting theory into practice. | Not available | 40 |
| | Michele Grogan, Jemma Byth | | | |

| Lead Investigator Name | Other Study Investigators | Research Project Title | Number of RBWH Patients Recruited in 2020 | Total number of Patients Recruited (all sites) |
|--|---|--|--|--|
| Brett Hughes (Cancer Care Services) Elizabeth Ahern (Cancer Care Services/Queensland Institute of Medical Research Berghofer), | Martin Batstone, Mark Smyth and Bill Dougall (QIMR) | Expression of novel immune markers in mucosal head and neck squamous cell carcinoma (HNSCC) specimens | Not applicable | Not applicable |
| Melissa Eastgate Elizabeth Ahern (Cancer Care Services/Queensland Institute of Medical Research Berghofer Anna Kuchel | Ailin Lepetier, Jason Madore, Mark Smyth (QIMR) | Multiplex immunofluorescence assessment of melanoma biopsies and response to immunotherapy | Not applicable | Not applicable |
| Brett Hughes, Elizabeth Ahern (Cancer Care Services/Queensland Institute of Medical Research Berghofer) | Martin Batstone, Mark Smyth and Bill Dougall (QIMR) | Immune Biomarker Evaluation in Oral Mucosal Squamous Cell Carcinoma: a prospective tissue collection | Not applicable | Not applicable |
| David Wyld | Julie Moore, Nathan Dunn, Nancy Tran | Small Intestinal Neuroendocrine neoplasms in Qld – 2001 – 2015. Stage at diagnosis and survival | Not applicable | 778 Qld cases |
| 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 available | Not available |
| Melissa Eastgate | Rosalind Jeffrey (Neurosurgery), Margaret Cummings (Pathology), Elizabeth Ahern, Anna Kuchel , Shu Lee (Medical Oncology Ipswich), Michael Colditz (Neurosurgery) | Clinicopathologic feature predicting survival after brain metastasectomy in melanoma | Not applicable | Not applicable |
| Wessling C, Gavin N, | Russell E, Glynn T, Eastgate M, Hajkowicz K, Klages P, Leutenegger J, Sandler C, Clark B, Hutchinson E, Sutherland A, | A Randomised Controlled Trial exploring the administration of intravenous antibiotics and fluids via intravenous pole and pump versus portable CADD pump to improve mobility in patients diagnosed with cancer (The Active Trial) | Not available | Not available |
| Elizabeth Ahern, Harry Gasper, Sudha Rao (QIMRb) | Sumudu Britton (RBWH ID), Melissa Eastgate, 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 available | Not available |
| Elizabeth Ahern, Harry Gasper, Natasha Roberts, Zarnie Lwin | David Wyld, Melissa Eastgate, Brett Hughes, Glen Kennedy, | CoVID-19 in cancer patients: Health Services Research and Qualitative Research Arm | Not applicable | Not applicable |
| Po-Ling Inglis | Quan Tran, Anna Kuchel, Sean Stephens (Neurosurgery) | Pineal germinoma: A 13 year Queensland experience | Not available | 14 |

| Lead Investigator Name | Other Study Investigators | Research Project Title | Number of RBWH Patients Recruited in 2020 | Total number of Patients Recruited (all sites) |
|---|--|--|--|--|
| Darshit Thacker, Elizabeth Ahern, Harry Gasper, Hermione Wheatly | David Wyld, Melissa Eastgate, Glen Kennedy , Andrea Henden, Peter McGuire | Socio-Psychological and Physical Impact of Covid-19 Pandemic on Elderly Oncology Patients: A Comprehensive Study at North Lakes Cancer Care Services | Not applicable | Not applicable |
| Lucy Corke | Matthew Burge | Pembrolizumab in previously treated microsatellite instability- high/deficient mismatch repair metastatic colorectal cancer | Not available | Not available |
| Lucy Corke | Brett Hughes, Chiyan Lau, David Fielding, David Fairbairn, Ben Lundie | Rebiopsy rates and outcomes at diagnosis and at progression on first line EGFR TKI therapy in advanced non-small cell lung cancer | Not available | Not available |
| Laura Tam | Melissa Eastgate, Marcin Dzienis | A retrospective audit examining the feasibility and durability of response following re-challenge with immune checkpoint inhibitor post grade 3-4 immune-related adverse event | Not applicable | Not applicable |
| Mark Flower | Brett Hughes, Melissa Eastgate, Anna Kuchel, Elizabeth Ahern, Yong Yeung | Immune checkpoint inhibitor hepatotoxicity rates, associations and clinical management audit | Not applicable | Not applicable |
| Melissa Eastgate | Lindy Jeffree (Neuro Surg), Margaret Cummings (PathQLD) Elizabeth Ahern (CCS), Anna Kuchel (CCS), Shu Fen Lee (IPWH), Michael Colditz (Neuro Surg) | Audit of outcomes of melanoma patients undergoing neurosurgery | Not applicable | Not applicable |
| Matthew Burge, Victoria Whitehall (QIMR) | David Wyld (CCS), Melissa Eastgate (CCS), Alison Hadley (CCS), Brett Hughes (CCS), Po-ling Inglis (CCS), Zarnie Lwin (CCS), Jeff Goh (CCS), Darshit Thaker (CCS), Bahram Forouzesh (RKH), Dr Sudhakar Vemula (RKH), Elizabeth Ahern (CCS/QIMRB) Dr Jennifer Borowsky (RBWH/QIMRB) | The Royal Brisbane and Prince Charles Hospital metastatic Colorectal Cancer database: A prospective observational cohort study examining clinical and molecular biomarkers | 35 | 224 |
| Fiona Paxton-Hall | Matthew Burge, David Wyld | Outcome and toxicity of salvage therapy with 177 Lu- dotatate in patients with metastatic neuroendocrine tumours | Not available | Not available |
| Melissa Eastgate | Sudha Rao (QIMRB), David Wyld, Kathy You, Robert McCuaig (QIMRB), Haidar Al- Saig, Harry Gasper, Jeff Goh, Brett Hughes, Po Inglis, Anna Kuchel, Zarnie Lwin, Darshit Thaker | Immunotherapy STARS (Stratifying Therapeutic Resistance and Sensitivity) - immunotherapy treatment cohort | Not available | Not available |

| Lead Investigator Name | Other Study Investigators | Research Project Title | Number of RBWH Patients Recruited in 2020 | Total number of Patients Recruited (all sites) |
|-----------------------------------|--|---|--|--|
| Harry Gasper | Melissa Eastgate, David Wyld, Matthew Burge | What are the patterns of referral, diagnosis, treatment and outcomes for patients with small bowel adenocarcinoma within our Hospital and Healthcare Service, and how do they compare to accepted international standards? | Not applicable | Not applicable |
| Harry Gasper, Melissa Eastgate | Michele Teng (QIMRB), Mark Smyth (QIMRB), Margaret Cummings (PathQLD), Rosalind Jeffree (Neurosurgery), Shu Lee, Anna Kuchel, Elizabeth Ahern | MISTY trial (Melanoma Immunotherapy Stratification and Treatment Sensitivity) Cutaneous Malignancies Group | 0 | 0 |
| 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 | 21 cases | 21 cases |
| 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 | 123 cases | 123 cases |
| David Wyld | Julie Moore, Nancy Tran, Ben Lawrence, Kate Parker, Sharon Pattison, Michael Wyld | Neuroendocrine neoplasms in the paediatric adolescent and young adult population – comparing New Zealand and Queensland Australia | 170 Qld cases. RBWH numbers unavailable | 170 cases |
| David Wyld | Danica Cossio, Julie Moore, Phillipa Youl, Nancy Tran, Michael Wyld | Patterns of care for patients diagnosed with neuroendocrine cancer in Queensland | Not applicable | Not applicable |
| Harry Gasper | Zarnie Lwin , Elizabeth Ahern, Natasha Roberts , Bryan Chan | COVID-19 and the Multi- disciplinary team meeting: An audit of modifications in response to the pandemic. | Audit. Not applicable | Audit. Not applicable |

Collaborative Research Activity Involving RBWH Department / Research Group

| Lead Investigator Name | Other Study Investigators | Research Project Title | Number of RBWH Patients Recruited in 2020 | Total number of Patients Recruited (all sites) |
|--|--------------------------------------|--|--|---|
| Australasian Gastrointestinal Trials Group | Matthew Burge (Cancer Care Services) | INTEGRATE II A Randomised Phase III Double Blind Placebo Controlled Study of regorafenib in Refractory Advanced GastroOesophageal Cancer | 0 | 4 |

| Lead Investigator Name | Other Study Investigators | Research Project Title | Number of RBWH Patients Recruited in 2020 | Total number of Patients Recruited (all sites) |
|---|---|---|--|---|
| 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) | 4 | 7 |
| Australasian Gastrointestinal Trials Group | David Wyld (Cancer Care Services) | CONTROL NETS: Phase II multi-arm, randomised open label trial of Lutetium-177 Octreotate peptide receptor radionucleotide therapy, capecitabine/temozolamide chemotherapy, or the combination in the first or second line treatment of low to intermediate grade gastroenteropancreatic neuroendocrine tumours | 0 (in follow-up) | 14 |
| Walter and Eliza Hall Institute | Matthew Burge (Cancer Care Services) | DYNAMIC: Circulating Tumour DNA Analysis Informing Adjuvant Chemotherapy in Stage II Colon Cancer | 0 (in follow-up) | 22 |
| Walter and Eliza Hall Institute | Matthew Burge (Cancer Care Services) | Evaluation of temporal dynamics of RAS Mutation emergence in Cell Free DNA (cfDNA) in response to first-line cetuximab anti-EGFR therapy in Patients with Metastatic Colorectal Cancer | 0 (in follow-up) | 5 |
| Centre for Medical Psychology and Evidence Based Decision Making | Matthew Burge (Cancer Care Services) | CHALLENGE: A Phase III study of the impact of a Physical Activity program on Disease- Free Survival in patients with high risk Stage II or Stage III Colon Cancer: a randomised controlled trial (CO.21) | 3 | 22 |
| Australasian Gastrointestinal Trials Group/National Cancer Centre, Singapore | Melissa Eastgate (Cancer Care Services) | ASCOLT: Aspirin for Dukes C and high risk Dukes B Colorectal Cancers: An international, multi-centre, double blind, randomised placebo controlled Phase III trial (AGITG) | 1 | 7 |
| Australasian Gastrointestinal Trials Group | Matthew Burge (Cancer Care Services) | MODULATE: Modulation of the tumour microenvironment using either vascular disrupting agents or STAT3 inhibition in order to synergise with PD1 inhibition in microsatellite stable, refractory colorectal cancer. (AGITG) | 1 | 13 |
| Australasian Gastrointestinal Trials Group/ Walter and Eliza Hall Institute | Matthew Burge (Cancer Care Services) | DYNAMIC III: Circulating Tumour DNA Analysis Informing Adjuvant Chemotherapy in Stage III Colon Cancer: A Multicentre Phase II/III Randomised Controlled Study (AGITG, WEHI) | 9 | 20 |

| Lead Investigator Name | Other Study Investigators | Research Project Title | Number of RBWH Patients Recruited in 2020 | Total number of Patients Recruited (all sites) |
|---|---|--|--|---|
| Australasian Gastrointestinal Trials Group/ Walter and Eliza Hall Institute | Matthew Burge (Cancer Care Services) | DYNAMIC-Pancreas: Circulating Tumour DNA Analysis Informing Adjuvant Chemotherapy in Early Stage Pancreatic Cancer: A Multicentre Randomised Study (WEHI, AGITG) | 2 | 2 |
| Australasian Gastrointestinal Trials Group | Matthew Burge (Cancer Care Services) | DOCTOR: A Randomised Phase II Trial of Pre-operative Cisplatin, 5 Fluorouracil and Docetaxel or Cisplatin, 5 Fluorouracil, Docetaxel plus Radiotherapy based on poor early response to standard chemotherapy for resectable adenocarcinoma of the oesophagus and/or OG Junction | 0 (in follow-up) | 12 |
| Australia New Zealand Gynaecological Oncology Group | Jeffrey Goh (Cancer Care Services) | VELIA (M13-694) A Phase 3 Placebo Controlled Study of Carboplatin/Paclitaxel With or Without Concurrent and continuous Maintenance Veliparib in Subjects with Previously Untreated Stages III or IV High Grade Serous Epitheal Ovarian, Fallopian Tube, or Primary Peritoneal Cancer | 0 (in follow-up) | 2 |
| Australia New Zealand Gynaecological Oncology Group | Alison Hadley (Cancer Care Services) | OUTBACK - A PHASE III trial of adjuvant chemotherapy following chemoradiation as primary treatment for locally advanced cervical cancer compared to chemoradiation alone | 0 (in follow-up) | 15 |
| Australia New Zealand Gynaecological Oncology Group | Jeff Goh (Cancer Care Services) | PARAGON: A study to assess the activity of anastrozole, an aromatase inhibitor, in women with oestrogen receptor and/or progesterone receptor positive (ER/PR+ve) and therefore potentially hormone responsive recurrent or metastatic gynaecological cancers | 0 (in follow-up) | 16 |
| Australia New Zealand Gynaecological Oncology Group | Jeff Goh (Cancer Care Services) | OVAR 2.21: A prospective randomized Phase III trial of carboplatin/ gemcitabine/ bevacizumab vs. carboplatin/pegylated liposomal doxorubicin/ bevacizumab in patients with platinum-sensitive recurrent ovarian cancer. | 0 (in follow-up) | 8 |
| Australia New Zealand Gynaecological Oncology Group | Jeff Goh (Cancer Care Services) | ICON 8: an international trial comparing weekly chemotherapy with 3 weekly chemotherapy for women with ovarian cancer, fallopian tube cancer or primary peritoneal cancer | 0 (in follow-up) | 2 |

| Lead Investigator Name | Other Study Investigators | Research Project Title | Number of RBWH Patients Recruited in 2020 | Total number of Patients Recruited (all sites) |
|--|---|--|--|---|
| Australia New Zealand Urogenital and Prostate Cancer Trials Group | David Wyld (Cancer Care Services) | Phase III BEP Trial: A randomised phase 3 trial of accelerated versus standard BEP chemotherapy for participants with intermediate and poor-risk advanced germ cell tumours | 1 | 5 |
| Australia New Zealand Urogenital and Prostate Cancer Trials Group | Aneta Suder (Cancer Care Services) | ENZAMET Trial: A randomised phase 3 trial of enzalutamide in first line androgen deprivation therapy for metastatic prostate cancer | 0 (in follow-up) | 2 |
| Cooperative Trials Group for Neuro- oncology | Zarnie Lwin (Cancer Care Services) | ACED: Randomised phase II study of acetazolamide plus dexamethasone versus dexamethasone alone for management of cerebral oedema in recurrent or progressive high grade gliomas. | 0 (in follow-up) | 4 |
| Cooperative Trials Group for Neuro- oncology | Zarnie Lwin (Cancer Care Services) | VERTU - Veliparib, Radiotherapy and Temezolomide trial in Unmethylated MGMT Glioblastoma: A Randomised Phase II study of veliparib + radiotherapy (RT) with adjuvant temozolomide (TMZ) + veliparib versus standard RT + TMZ followed by TMZ in newly diagnosed glioblastoma (GBM) with unmethylated O (6)- methylguanine-DNA methlytransferase | 0 (in follow-up) | 25 |
| Cooperative Trials Group for Neuro- oncology | Po-Ling Inglis (Cancer Care Services) | CATNON: Phase III trial comparing no adjuvant chemotherapy versus adjuvant therapy until progression for anaplastic glioma without 1p/19q loss. An EORTC/NCI- C/RTOG/MRC/HUB/ intergroup study | 2 | 2 |
| Australia New Zealand Breast Cancer Trials Group | Michelle Nottage (Cancer Care Services) | PALbociclib CoLlaborative Adjuvant Study: A Randomized Phase III Trial of Palbociclib With Standard Adjuvant Endocrine Therapy Versus Standard Adjuvant Endocrine Therapy Alone for Hormone Receptor Positive (HR+) / Human Epidermal Growth Factor Receptor 2 (HER2)- Negative Early Breast Cancer . PALLAS | 0 (in follow-up) | 20 |
| Australia New Zealand Breast Cancer Trials Group | Po-Ling Inglis (Cancer Care Services) | Penelope B: Phase III study evaluating palbociclib (PD- 0332991), a Cyclin-Dependent Kinase (CDK) 4/6 Inhibitor in patients with hormone-receptor- positive, HER2-normal primary breast cancer with high relapse risk after neoadjuvant chemotherapy | 0 (in follow-up) | 1 |

| Lead Investigator Name | Other Study Investigators | Other Study Investigators Research Project Title | | Total number of Patients Recruited (all sites) |
|---|---|---|---------------------|---|
| Australia New Zealand Breast Cancer Trials Group/Breast International Group | Michelle Nottage (Cancer Care Services) | TEXT-Bone: A substudy of the TEXT trial to evaluate serial bone markers for bone remodeling, serial growth factors, and bone mineral density | 0 (in follow-up) | 5 |
| Australia New Zealand Breast Cancer Trials Group/Breast International Group | Michelle Nottage (Cancer Care Services) | TEXT: A Phase III Trial Evaluating the Role of Exemestane plus GnRH analogue as Adjuvant Therapy for premenopausal women with endocrine responsive breast cancer | 0 (in follow-up) | 11 |
| Australia New Zealand Breast Cancer Trials Group/Breast International Group | Michelle Nottage (Cancer Care Services) | An International multi-centre study of tamoxifen vs. Anastrozole in postmenopausal women with hormone sensitive ductal carcinoma in situ (DCIS) IBIS II | 0 (in follow-up) | 11 |
| Australia New Zealand Breast Cancer Trials Group/ECOG-ACrIN | Po-Ling Inglis (Cancer Care Services) | TAILORx Program for the Assessment of Clinical Cancer Tests (PACCT-1): Trial Assigning IndividuaLized Options for Treatment: The TAILORx Trial | 0 (in follow-up) | 1 |
| Australia New Zealand Breast Cancer Trials Group/Breast International Group | Michelle Nottage (Cancer Care Services) | Suppression of Ovarian Function Trial (SOFT) A Phase III Trial Evaluating the the Role of Ovarian function Suppression and the Role of Exemestane as Adjuvant therapies for premenopausal women with Endocrine responsive breast cancer | 0 (in follow-up) | 6 |
| Walter and Eliza Hall Institute | Matthew Burge (Cancer Care Services) | Pancreatic cancer: Understanding Routine Practice and Lifting End results (PURPLE) A Prospective Pancreatic Cancer clinical registry | 37 | 115 |
| 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 | 1 | 4 |
| Australia New Zealand Urogenital and Prostate Cancer Trials Group | Jeffrey Goh (Cancer Care Services) | UNISoN - anzUp Nivo->Ipi+Nivo Sequential Non-clear cell - Proposed Phase II Sequential Cohort Trial Of Single Agent Nivolumab, Then Combination Ipilimumab + Nivolumab In Metastatic Or Unresectable Non-Clear Cell Renal | 0 (in follow-up) | 12 |
| Australia New Zealand Urogenital and Prostate Cancer Trials Group | Jeffrey Goh (Cancer Care Services) | TheraP: A randomised phase 2 trial of 177 Lu-PSMA617 theranostic versus cabazitaxel in men with progressive metastatic castration resistant prostate cancer | 0 (in follow-up) | 26 |

| Lead Investigator Name | ator Other Study Investigators Research Project Title | | Number of RBWH Patients Recruited in 2020 | Total number of Patients Recruited (all sites) |
|---|---|---|--|---|
| 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 | 2 | 7 |
| Australasian Gastrointestinal Trials Group | Matthew Burge (Cancer Care Services) | LIBERATE - phase II study evaluating liquid biopsies to profile metastatic colorectal cancer. | 0 (in follow-up) | 3 |
| Australasian Gastrointestinal Trials Group | Matthew Burge (Cancer Care Services) | A randomised phase 2 study of Panitumumab monotherapy versus fluoropyrimidine and bevacizumab as first line therapy for RAS wild type metastatic colorectal cancer. (MONARCC study) | 6 | 7 |
| Australia New Zealand Gynaecological Oncology Group | Jeffrey Goh (Cancer Care Services) | Phase II clinical trial of the PARP inhibitor, olaparib, in HR- deficient metastatic breast and relapsed ovarian cancer in patients without germline mutations in BRCA1 and BRCA2: The EMBRACE study. | 0 | 0 |
| Australia New Zealand Gynaecological Oncology Group/United Kingdom Medical Research Council | Jeffrey Goh (Cancer Care Services) | ICON 9: to assess the efficacy, safety and tolerability of maintenance cediranib in combination with olaparib therapy compared to single agent cediranib maintenance in women with relapsed platinum sensitive ovarian, fallopian tube or primary peritoneal cancer. (ANZGOG/UK MRC) | 3 | 3 |
| Australia New Zealand Gynaecological Oncology Group | Jeffrey Goh (Cancer Care Services) | iPRIME - A phase II study of durvalumab and tremilumumab in combination with carboplatin and paclitaxel, as neoadjuvant treatment for newly diagnosed, advanced high grade serous ovarian cancer (ANZGOG) | 1 | 3 |
| Australia and New Zealand Melanoma Trials Group | Melissa Eastgate (Cancer Care Services) | A Phase Ib/II Trial of Ipilimumab-Nivolumab- Denosumab and Nivolumab- Denosumab in Patients with Unresectable Stage III and IV Melanoma. (ANZMTG 01.15.) CHARLI | 4 | 5 |
| Australia and New Zealand Melanoma Trials Group | Melissa Eastgate (Cancer Care Services) | A randomised phase III study of duration of Anti-PD-1 therapy in metastatic melanoma (STOP- GAP) (ANZMTG) | 1 | 1 |
| Australian Lung Cancer Trials Group | Brett Hughes (Cancer Care Services) | NIVORAD - A randomised phase 2 trial of nivolumab and stereotactic ablative body radiotherapy in advanced non- small cell lung cancer, progressing after first or second line chemotherapy. | 0 (in follow-up) | 3 |

| Lead Investigator Name | Other Study Investigators | Research Project Title | Number of RBWH Patients Recruited in 2020 | Total number of Patients Recruited (all sites) |
|---|---|---|--|---|
| Australian Lung Cancer Trials Group/ European Thoracic Oncology Platform | Brett Hughes (Cancer Care Services) | STIMULI: Small cell lung carcinoma Trial with nivolumab and Ipili-MUmab in LImited disease. A randomised open- label phase II trial of consolidation with nivolumab and ipilimumab in limited-stage SCLC after chemo- radiotherapy. (ALTG, ETOP) | 0 (in follow-up) | 2 |
| Melbourne Health | Michelle Nottage (Cancer Care Services) | NOMINATOR: GENOMIC MATCHING TREATMENT FOR RARE CANCERS Feasibility of performing genomic testing of rare cancers to match the cancer to treatment. | 0 (in follow-up) | 37 |
| Australia New Zealand Urogenital and Prostate Cancer Trials Group | Jeffrey Goh (Cancer Care Services) | UNICAB: A phase II trial of single agent cabozantinib in patients with locally advanced or metastatic non-clear cell renal cell carcinoma post immunotherapy or who are unsuitable for immunotherapy (ANZUP 1802). | 1 | 3 |
| Australia New Zealand Gynaecological Oncology Group | Jeffrey Goh (Cancer Care Services) | MOCCA – A Multicentre Phase II randomised trial of MEDI4736 versus physician's choice chemotherapy in recurrent ovarian clear cell adenocarcinomas. | 0 (in follow-up) | 3 |
| Bryan Day QIMR Berghofer Medical Research Institute | Po Ling Inglis , (Cancer Care Services), Rosalind Jeffree (Neurosurgery) | Novel Therapies for Brain Cancer | Not available | Not available |
| Kate Roberts (Princess Alexandra Hospital), Ken O'Byrne (Queensland University of Technology), | Brett Hughes, Zarnie Lwin (Cancer Care Services) | A multi-institutional retrospective audit of patients with metastatic malignancy treated with nivolumab through the Open Access Scheme at the Princess Alexandra Hospital, the Royal Brisbane and Womens' Hospital, and The Prince Charles Hospital | Not applicable | Not applicable |
| Lisa Guccione (PMCC), Penelope Schofield (Swinburne University), Michael Michael (PMCC), Mustafa Khasraw (RNSH), Timothy Price (TQEH), Nick Pavlakis (RNSH), Megan Rogers (PMCC), Karla Gough (PMCC), Grace Kong (PMCC), Simone Leyden (Unicorn Foundation), John Leyden (Unicorn Foundation) | David Wyld (Cancer Care Services) | DEFINING NETs - Defining the supportive care needs and psychological morbidity of patients with Functioning versus Non-Functioning Neuroendocrine Tumours (NETs). | 0 (in follow-up) | 10 |

| Lead Investigator Name | Other Study Investigators | Research Project Title | Number of RBWH Patients Recruited in 2020 | Total number of Patients Recruited (all sites) |
|--|--|--|--|---|
| Manoj Bhatt (Nuc Med) | David Wyld, Matthew Burge, (Cancer Care Services), Rahul Ladwa (PAH) Peter Garcia, David Pattison, Kevin Lee, Samuel Kyle, Nicholas Dowson, Jye Smith (Nuclear Medicine), Steven Goodman, Stephen Rose (CSIRO). | Pilot project to assess liver metastases by comparing novel, dynamic and static functional imaging, and also morphological imaging with standard of care in WHO Grade I and Grade II Neuroendocrine Tumour (NET). | Not applicable | Not applicable |
| Claudia Rutherford (Quality of Life Office, University of Sydney) | Natasha Roberts (Cancer Care Services/Queensland University of Technology) | Systematic Review of Quality of Life Measures | Not applicable | Not applicable |
| University of New South Wales | David Wyld (Cancer Care Services), Robert Henderson (Neurology) | Peripheral Neuropathy in Chemotherapy-treated Patients: Predictors, Assessment strategies and Functional Outcomes IN FOCUS Study (Identifying Neurological and Functional Outcomes in Cancer Survivors Study) | 0 | 59 |
| University of New South Wales | David Wyld (Cancer Care Services), Robert Henderson (Neurology) | IN FOCUS: The use of duloxetine for the treatment of chemotherapy-induced peripheral neuropathy | 1 | 1 |
| Olivia Newton-John Cancer Research Institute | Po-Ling Inglis (Cancer Care Services) | A phase I safety and bioimaging trial of KB004 in patients with glioblastoma | 1 | 2 |
| International Society for Quality of Life | Natasha Roberts (Cancer Care Services) | Proxy reported patient reported outcomes measures | Not available | Not available |
| Walter and Eliza Hall Institute | Zarnie Lwin (Cancer Care Services) | EX-TEM: Phase III Trial of Extended Temozolomide in Newly Diagnosed Glioblastoma (WEHI) | 2 | 3 |
| 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) | 1 | 1 |
| Australia New Zealand Gynaecological Oncology Group | Jeffrey Goh (Cancer Care Services) | AtTEnd: Phase III Double-Blind Randomized Placebo Controlled Trial of Atezolizumab in Combination with Paclitaxel and Carboplatin in Women With Advanced/Recurrent Endometrial Cancer (Atezolizumab Trial in Endometrial cancer - AtTEnd) (MaNGO, ANZGOG) | 1 | 1 |
| 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) | 2 | 2 |

| Lead Investigator Name | Other Study Investigators | Research Project Title | Number of RBWH Patients Recruited in 2020 | Total number of Patients Recruited (all sites) |
|--|---|--|--|---|
| Cooperative Trials Group for Neuro- oncology | Zarnie Lwin (Cancer Care Services) | MAGMA Trial: The Multi-Arm GlioblastoMa Australasia Trial (COGNO) | 2 | 2 |
| Peter MacCallum Cancer Centre | David Wyld (Cancer Care Services) | NET SANGUIS: The potential role of circulating DNA in the management of neuroendocrine tumours. | 0 | 0 |
| 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 | 1 | 1 |
| Amanda Love (Endocrinology) Marianne Elston (NZ), Richard Carrol (NZ), Eva Segelov (Monash) | David Wyld (Cancer Care Services) | Assessment of hypopituitarism rates following peptide receptor radionuclide therapy for neuroendocrine tumours. | 0 (in follow-up) | 66 (study total. RBWH Numbers unavailable) |
| John Clouston (DMI) Roger Bain (DMI) | Nigel Mott (DMI), Ken Mitchell (DMI), Karin Steinke (DMI), Sam Davis (DMI) Melissa Eastgate (CCS) | The Metro North Interventional Oncology database: a prospective observational cohort study examining outcomes for interventional oncology procedures. | Not available | 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 | 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 | 72 | 154 |
| Teresa Brown (Nutrition and Dietetics) | Judy Bauer (University of Queensland), Brett Hughes (Cancer Care Services) Elizabeth Ahern (Cancer Care Services) | "Sarcopenia in HNSCC patients undergoing definitive concurrent CRT and associations with clinical outcomes" | Not available | Not available |

| Lead Investigator Name | Other Study Investigators | Research Project Title | Number of RBWH Patients Recruited in 2020 | Total number of Patients Recruited (all sites) |
|--|--|--|--|---|
| Breast Cancer Trials. Austrian Breast & Colorectal Cancer Study Group (ABCSG). | Michelle Nottage, Po-Ling Inglis (Cancer Care Services) | BRCA-P. A Randomized, Double-Blind, Placebo- Controlled, Multi-Center, International Phase 3 Study to determine the Preventive Effect of Denosumab on Breast Cancer in Women carrying a BRCA1 Germline Mutation | 1 | 1 |
| Australia New Zealand Urogenital and Prostate Cancer Trials Group | Aneta Suder (Cancer Care Services) | UPFRONT PSMA. A Randomised Phase 2 Study of Sequential 177Lu-PSMA617 and Docetaxel versus Docetaxel in Metastatic Hormone-Naïve Prostate Cancer. | 0 | 0 |
| Hao-Wen Sim, Helen Wheeler, Kathryn Field, David Espinoza, Michael Buckland, Kimberly Kaufman | Zarnie Lwin, Benjamin Chua (Cancer Care Services) | PICCOG: PARP and Immune Checkpoint inhibitor COmbination for relapsed IDH- mutant high-grade Glioma | Not available | Not available |
| Colleen Nelson (PAH) | Brett Hughes, Zarnie Lwin, Elizabeth Ahern, Margot Lehman (PAH), Maggie Fung (PAH), Lidija Janovic (PAH), Irina Oleinikova (PAH), Simon Wood (PAH), Morgan Pokorny (PAH) | Liquid lung Biopsy: Laboratory Based Study of Circulating Tumour Cells in Human Blood | 15 | 15 |
| Alex Broom (UNSW) | Zarnie Lwin (CCS) Emma Kirby (UNSW), David Wyld (CCS) Renata Kokanović (Monash University), Jonathan Adams (UTS), Eng-Siew Koh (Liverpool Hospital), Paul de Souza (Liverpool Hospital) Lisa Woodland (Multicultural Health Service) | Cultural biographies, medical knowledges: A sociological study at the intersection of cancer and culture | Not available | Not available |
| Peter MacCallum Institute | David Wyld (CCS), Melissa Eastgate (CCS) | GoTHAM: A Merkel Cell Carcinoma (MCC) study testing the immunotherapy drug Avelumab in combination with either radionuclide therapy or external beam radiotherapy | 0 | 0 |
| Peter MacCallum Institute | Melissa Eastgate (CCS) | 03.18 I-MAT Trial - A randomised, placebo-controlled, phase II trial of adjuvant Avelumab in patients with stage I-III Merkel cell carcinoma | 0 | 0 |
| Walter and Eliza Hall Institute | Anna Kuchel (CCS), Jeffrey Goh (CCS), Natasha Roberts(CCS) | iTestis: Bioinformatics for Testis Cancer | 0 | 0 |
| David Chan (RNSH) | Paul Roach (RNSH), Dale Bailey (RNSH), Bob Li (MSKCC,USA) Garry Ulaner (MSKCC,USA), W. Victoria Lai (MSKCC,USA), David Wyld (CCS), David Pattison (Nuc Med), Rahul Ladwa (PAH) | The prognostic impact of dual PET in bronchial neuroendocrine neoplasms (NEN) | 15 cases | 15 cases |

| Lead Investigator Name | Other Study Investigators | Research Project Title | Number of RBWH Patients Recruited in 2020 | Total number of Patients Recruited (all sites) |
|--|--|--|--|---|
| Prostate Cancer Clinical Trials Consortium, LLC (PCCTC) | Jeffrey Goh (CCS), Aneta Suder (CCS) | IRONMAN: International registry for men with advanced prostate cancer | 0 | 0 |
| William McGahan (Surg) | Matthew Burge (CCS) | A retrospective review of outcomes of patients who participated in the PET/CT pancreas study | Not applicable | Not applicable |
| William McGahan (Surg) | Matthew Burge (CCS) | A retrospective review of the patterns of care in patients with pancreatic cancer in the Metro- North Health District | Not applicable | Not applicable |
| Unicorn Foundation | David Wyld (CCS)An Observational, Multi-centr Non-Interventional Programm to Register Patients Diagnose With Neuroendocrine Neoplasms (NENs) and Moni their Patterns of Care in Australian Hospitals. Planet Registry | | 0 | 0 |
| BioGrid Australia | Jeffrey Goh (CCS) | Analyzing Treatment Patterns and Outcomes from Real-World Patients with Castrate-Resistant Prostate Cancer (CRPC). ePAD | 5 | 13 |
| BioGrid Australia Matthew Burge | | Study of Clinical Outcomes and Analysis of Bevacizumab use in Metastatic Colorectal Cancer. TRACC | 35 | 161 |

Research Publications

- Ahern E, Allen MJ, Schmidt A, Lwin Z, Hughes BGM. Retrospective analysis of hospital admissions due to immune checkpoint inhibitor-induced immune-related adverse events (irAE). Asia Pac J Clin Oncol. [Internet] 2020 Jun 9. doi: 10.1111/ajco.13350
- 2. Alexander M, Pavlakis N, John T, O'Connell R, Kao S, **Hughes BGM**, Lee A, Hayes SA, Howell VM, Clarke SJ, Millward M, Burbury K, Solomon B, Itchins M. A multicenter study of thromboembolic events among patients diagnosed with ROS1-rearranged non-small cell lung cancer. Lung cancer 2020; 142:34-40. doi: 10.1016/j.lungcan.2020.01.017
- Atkinson V, Khattak A, Haydon A, Eastgate M, Roy A, Prithviraj P, Mueller C, Brignone C, Triebel F. Eftilagimod alpha, a soluble lymphocyte activation gene-3 (LAG-3) protein plus pembrolizumab in patients with metastatic melanoma. Journal for ImmunoTherapy of Cancer 2020 Nov 24;8(2):e001681. doi:10.1136/ jitc-2020-001681
- 4. Balogun J, Haynes C, **Lwin Z**, Nduom E, Puduvalli V, Venere M, Zadeh G. Providing a Global Platform for Communication and Exchange in Neuro-Oncology. Neuro Oncol. 2020 Sep 30. [Internet] DOI: 10.1093/neuonc/noaa219
- Barbour AP, Samra JS[,] Haghighi KS, Donoghoe MW, Burge M, Harris MT, Chua YJ, Mitchell J, O'Rourke N, Chan H, Gebski VJ, Gananadha S, Croagh DG, Kench JG, Goldstein D; Australasian Gastro-Intestinal Trials Group (AGITG) GAP investigators. The AGITG GAP Study: A Phase II Study of Perioperative Gemcitabine and Nab-Paclitaxel for Resectable Pancreas Cancer. Ann Surg Oncol. 2020 Jan 29. doi: 10.1245/s10434-020-08205-2.

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- 50. Hussain M, Mateo J, Fizazi K, Saad F, Shore N, Sandhu S, Chi KN, Sartor O, Agarwal N, Olmos D, Thiery-Vuillemin A, Twardowski P, Roubaud G, Özgüroğlu M, Kang J, Burgents J, Gresty C, Corcoran C, Adelman CA, de Bono J; PROfound Trial Investigators. Survival with Olaparib in Metastatic Castration-Resistant Prostate Cancer. N Engl J Med. 2020 Dec 10;383(24):2345-2357. doi: 10.1056/NEJMoa2022485. Epub 2020 Sep 20 (Suder A)
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Invited Speaker

- 1. Burge M. Recent Colorectal Cancer Clinical Trials and Impact on Practice. Brisbane Cancer Conference. 26 Nov 2020 Brisbane
- 2. Cubitt A. Teletrials the New Norm? North Lakes and Beyond. Clinical Oncology Society of Australia (COSA) Annual Scientific Meeting 2020. 10-14 Nov 2020. Brisbane/Virtual
- 3. Eastgate M. Translational research getting from bedside to the bench. Brisbane Cancer Conference. 26 Nov 2020 Brisbane
- 4. Gasper H. Treatment of advanced urothelail cancer & clinical trials update. Brisbane Cancer Conference. 26 Nov 2020 Brisbane
- 5. Gasper H. Molecular genomics in lung cancer the rapid rise of Targeted therapy. Inaugural Herston Health Precinct Symposium 2020. 7-11 Dec 2020 Brisbane
- 6. Goh J. Treatment of advanced Renal Cancer & ongoing clinical trials. Brisbane Cancer Conference. 26 Nov 2020 Brisbane
- 7. Ives A. Conducting Research During a Pandemic: Lessons Learned and Innovations Introduced. Brisbane Cancer Conference. 26 Nov 2020 Brisbane
- Lwin Z.: Inauguration Ceremony of the 1st Annual Neuro-Oncology Symposium, Pakistan Society of Neuro-Oncology (PASNO). 2020 Sep 4-6. Virtual
- 9. Lwin Z. COGNO International Clinical Research Subcommittee (ICRS) and Educational and Outreach committee update. Cooperative Trials Group for Neuro-Oncology 2020 Sep 18. Virtual
- **10.** Lwin Z. Covid 19 and the Cancer Care Workforce: A Semi-Qualitative Research Study. Clinical Directorate performance Meeting Metro North Hospital and Health Service Operations Executive2020 Sep 28.
- 11. Lwin Z. Relevance of PASNO: Asian Society of Neuro-Oncology perspective. 1st Annual Neuro-Oncology Symposium. Pakistan Society of Neuro-Oncology (PASNO). 2020 Sep 4-6. Virtual
- 12. Lwin Z. ASNO outreach and Collaboration. 2020 Society for NeuroOncology. (SNO) Virtual Meeting. 19-21 Nov 2020
- **13.** Lwin Z. Psychosocial impacts of COVID-19 on oncology workforces: Metro vs Regional Australia. Inaugural Herston Health Precinct Symposium 2020. 7-11 Dec 2020 Brisbane
- Lwin Z. ESMO 2020 Highlights on lenvatinib plus pembrolizumab in advanced solid tumours: LEAP-005 study Oral Proferred Paper. youtube <u>https://www.youtube.com/watch?v=WWGJ9DdaBAE</u> ESMO highlights from ESMO conference 20 Sep 2020.
- 15. Lwin Z, Discusses the Results of the LEAP-005 Trial in Advanced Solid Tumors. https://www.onclive.com/view/dr-lwinon-the-results-of-the-leap-005-trial-in-advanced-solid-tumors OncLive 20 Sep 2020
- 16. Lwin Z. Provides perspective on the safety and efficacy of combining TKIs with checkpoint inhibitors. ESMO Virtual Congress 2020 Highlights. Youtube https://www.youtube.com/watch?v=3HQ_uEajCWw Oncology Business Review 24 Sep 2020
- **17.** Lwin Z. Speculates on future development of combo pembrolizumab + lenvatinib. ESMO Virtual Congress 2020 Highlights. Youtube <u>https://www.youtube.com/watch?v=DJLJs-4efag</u> Oncology Business Review 25 Sep 2020
 - 18. Lwin Z. Shares the design and outcomes of the LEAP-005 Phase II study investigating the combination of pembrolizumab and lenvatinib in gastrointestinal (GI) cancer presented at the 2020 ESMO Virtual Congress. Youtube <u>https://www.youtube.com/watch?v=KDJtOnHRdhM</u> Oncology Business Review 25 Sep 2020

Invited Speaker

- Lwin Z. LBA41 LEAP-005: Phase II Study Of Len Plus Pembro In Pts With Previously Treated AST. ESMO Virtual Congress 2020 Youtube <u>https://www.oncologytube.com/video/39484/zarnie-lwin-md-zarnielwin-rbwhfoundation-lba41---leap-005-phase-ii-study-of-len-plus-pembro-in-pts-with-previously-treated-ast?channelName=ESMO_5f6371f989ce1 Oncology Tube 30 Sep 2020
 </u>
- 20. Thaker D. Oncologist view of OncoGeriatric assessment and its impact. Brisbane Cancer Conference. 26 Nov 2020 Brisbane
- **21. Wyld D, Thaker D.** Geriatric Oncology Services across Queensland: One Aim, Different Approaches. Introduction: Setting the scene. Brisbane Cancer Conference. 26 Nov 2020 Brisbane
- 22. Wyld D. Plenary lecture Survivorship for patients with neuroendocrine tumours. Brisbane Cancer Conference. 26 Nov 2020 Brisbane
- 23. Wyld D. Neuroendocrine Cancer Australia live patient forum videoconference. World NET cancer day on 10 Nov 20

Oral Presentations

- Ahern E, Cubitt A, Ives A, Naidoo R, Godbolt D, Murphy F, O'Byrne K, Lwin Z, Hughes B. POPCORN: Pharmacodynamics of Pre-Operative PD1 Checkpoint Blockade and RANKL Inhibition in Non-Small Cell Lung Cancer (NSCLC): a phase 1B/2 investigator-sponsored trial in progress. Medical Oncology Group of Australia (MOGA) 2020 Abstract and Poster Program for Australian Medical Oncology Trainees and Young Oncologists. 2020 Aug 14-21. Virtual.
- Burge M. MONARCC A randomized phase 2 study of panitumumab monotherapy and panitumumab (pan) plus 5 Fluorouracil (5-FU) as first line therapy for RAS and BRAF wild type metastatic colorectal cancer (mCRC). An AGITG clinical trial. Australian Gastro-Intestinal Trials Group 22 Annual Scientific Meeting 2020 Virtual.
- Burtness B, Rischin D, Greil R, Soulières D, Tahara M, de Castro G, Psyrri A, Basté N, Neupane P, Bratland A, Fuereder T, Hughes BGM, Mesia R, Ngamphaiboon N, Rordorf T, Ishak WZW, Ge J, Swaby R, Gumuscu B, Harrington K. Efficacy of first-line (1L) pembrolizumab by PD-L1 combined positive score (CPS) <1 and 1-19 in recurrent and/or metastatic (R/M) head and neck squamous cell carcinoma (HNSCC): KEYNOTE-048 subgroup analysis. AACR 2020. American Association for Cancer Research April 27-28. Virtual Miami Florida
- 4. González-Martín A, Chung H, Saada-Bouzid E, Yanez E, Senellart H, Cassier PA, Basu B, Ghori R, Kubiak P, Smith A, Norwood K, Lwin Z. Efficacy and Safety of Lenvatinib Plus Pembrolizumab in Patients with Previously Treated Ovarian Cancer in the Multicohort Phase 2 LEAP-005 Study. Oral Plenary Session. International Gynecologic Cancer Society 2020 Sep 10-13. Virtual
- 5. Harrington KJ, Rischin D, Greil R, Soulieres D, Tahara M, Castro G, Psyrri A, Baste N, Neupane PC, Bratland A, Fuereder T, Hughes BGM, Mesia R, Ngamphaiboon N, Rordorf T, Ishak WZW, Zhang Y, Gumuscu B, Swaby RF, Burtness B. KEYNOTE-048: Progression after the next line of therapy following pembrolizumab (P) or P plus chemotherapy (P+C) vs EXTREME (E) as first-line (1L) therapy for recurrent/metastatic (R/M) head and neck squamous cell carcinoma (HNSCC). American Society of Clinical Oncology Virtual Scientific Program 2020 May 29-31.
- 6. Hofman M, Emmett L, Sandhu S, Iravani A, Joshua A, Goh J, Pattison D, Tan H, Kirkwood I, Ng S, Francis R, Gedye C, Rutherford N, Zhang A, McJannett M, Stockler M, Violet J, Williams S, Martin A, Davis I. A randomised phase II trial of ¹⁷⁷Lu-PSMA-617 (Lu-PSMA) theranostic versus cabazitaxel in metastatic castration resistant prostate cancer (mCRPC) progressing after docetaxel: Initial results (TheraP (ANZUP 1603) American Society of Clinical Oncology Annual Meeting 2020 May 29-31. Virtual
- Leighl NB, Laurie SA, Goss GD, Hughes BGM, Stockler MR, Tsao MS, Kulkarni S, Blais N, Joy AA, Mates M, Rana P, Yadav S, Underhill C, Lee CW, Bradbury PA, Hiltz A, Dancey J, Ding K, Badillo FEV. CCTG BR.34: A randomized trial of durvalumab and tremelimumab +/- platinum-based chemotherapy in patients with metastatic (Stage IV) squamous or nonsquamous non-small cell lung cancer (NSCLC). American Society of Clinical Oncology Virtual Scientific Program 2020 May 29-31.

Oral Presentations

- Lwin Z, Gomez-Roca C, Saada-Bouzid E, Yanez E, Longo Muñoz F, Im S, Castanon E, Senellart H, Graham D, Voss M, Doherty M, Lopez J, Ghori R, Kubiak P, Jin F, Norwood K, Chung HC LEAP-005 Phase 2 study of Lenvatinib Plus Pembrolizumab in Patients with Previously Treated advanced solid tumours. Oral Proferred Papers. European Society for Medical Oncology (ESMO) 2020 Sep 19-21. Virtual.
- 9. O'Malley DM, Oza AM, Lorusso D, Aghajanian C, Oaknin A, Dean A, Colombo N, Weberpals JI, Clamp AR, Scambia G, Leary A, Holloway RW, Gancedo MA, Fong PC, **Goh JC**, Armstrong DK, Banerjee S, García-Donas J, Swisher EM, Cameron T, Maloney L, Goble S, Lin KK, Ledermann JA, Coleman RL. Post progression outcomes in patents with ovarian carcinoma associated with a mutation in a non-BRCA homologous recombination repair gene receiving rucaparib maintenance treatment: Results from phase 3 study ARIEL 3. Society of Gynaecologic Oncology. 2020 Mar 28-31. Virtual.
- 10. Sim H-W, Lwin Z, Gan H, Ahern E, Parakh. National rare brain tumour registry. Cooperative Trials Group for Neuro-Oncology 2020 Sep 18. Virtual
- Soo W, Steer C, Thaker D, Lane H, Mackenzie P, Kelly B, Snape-Jenkins S, Wheatley. Improving the quality of care for older patients with cancer: Implementing comprehensive geriatric assessment and management from theory into practice. Panel discussion. Clinical Oncology Society of Australia (COSA) Annual Scientific Meeting 2020. 10-14 Nov 2020.Brisbane/ Virtual.
- 12. Weberpals J, Oza A, Lorusso D, Scambia G, Aghajanian C, Oaknin A, Dean A, Colombo N, Clamp AR, Leary A, Holloway RW, Amenedo Gancedo M, Fong PC, **Goh JC**, O'Malley DM, Armstrong DK, Banerjee S, García-Donas J, Swisher EM, Cameron T, Maloney L, Goble S, Coleman RL, Ledermann JA. Postprogression Efficacy Outcomes From the Phase 3 ARIEL3 Study of Rucaparib in Patients With Platinum-Sensitive Recurrent Ovarian Carcinoma Associated With Either BRCA1 or BRCA2 Mutations. International Gynecologic Cancer Society 2020 Sep 10-13. Virtual

- Agar MR, Nowak A, Hovey E, Barnes E, Simes J, Vardy J, Wheeler H, 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. Phase II randomised placebo-controlled double-blind study of acetazolamide versus placebo for cerebral oedema in recurrent and/or progressive high-grade glioma requiring treatment with dexamethasone. Society for NeuroOncology (SNO) 19-21 November 2020 Virtual
- Ahern, E, Cubitt A, Ives A, Naidoo R., Godbolt D, Murphy F, O'Byrne K, Lwin Z, Hughes BGM. POPCORN: Pharmacodynamics of Pre-Operative PD1 Checkpoint Blockade and RANKL Inhibition in Non-Small Cell Lung Cancer (NSCLC): A phase 1B/2 investigator-sponsored trial in progress. Medical Oncology Group of Australia (MOGA) 2020 Aug 14-21. Virtual.
- Ahern E, Gasper H, Chan B, Roberts N, Hughes B, Wyld D, Kennedy G, Eastgate M, Lwin Z. Psychosocial impacts of COVID-19 on oncology workforces: metropolitan vs regional Australia. American Society of Clinical Oncology (ASCO) Quality Care Symposium 9th-10th October 2020. Virtual
- 4. Ahern E, Kuchel A, Okano S, Pelecanos A, Whitehall V, Eastgate M, Wyld D, Burge M. Clinicopathological characteristics of metastatic colorectal cancer in young patients treated at three hospitals in Queensland, Australia. Australian Gastro-Intestinal Trials Group 22 Annual Scientific Meeting 2020 Virtual.
- Andelkovic V, Xu W, Gasper H, Oliveira N, Middleton K, Feng S, Dzienis M, Ahern E, Goh J, Thaker D, McCarthy N, Chan B, O'Byrne K, Ladwa R. Evaluation of a virtual meeting platform for state-wide oncology education during the COVID-19 pandemic. APJCO 16:S8 108-207 Clinical Oncology Society of Australia (COSA) Annual Scientific Meeting 2020. 10-14 Nov 2020. Brisbane Virtual

- Antonarakis ES, Rodriguez JMMP, Gross-Goupil M, Goh JC, Vaishampayan UN, De Wit R, Alanko T, Fukasawa S, Tabata K, Feyerabend S, Berger R, Wu H, Kim J, Schloss C, Qiu P, Suttner L, Cristescu R, Marton MJ, De Bono JS. Biomarker analysis from the KEYNOTE-199 trial of pembrolizumab in patients (pts) with docetaxel-refractory metastatic castration-resistant prostate cancer (mCRPC). American Society of Clinical Oncology Virtual Scientific Program 2020 May 29-31.
- 7. Brose M, Panaseykin Y, Konda B, De La Fouchardiere C, Hughes BGM, Gianoukakis A, Park YJ, Romanov I, Krzyzanowska M, Binder T, Dutcus C, Xie R, Taylor M. A Multicenter, Randomized, Double-blind, Phase 2 Study of Lenvatinib (LEN) in Patients (Pts) With Radioiodine-Refractory Differentiated Thyroid Cancer (RR-DTC) to Evaluate the Safety and Efficacy of a Daily Oral Starting Dose of 18 mg vs 24 mg. ESMO Asia 2020.
- Burge M, Steer C, Sjoquist K, Chantrill L, Karapetis C, Nott L, Espinoza D, Oostendorp M, Yip S, Cuff J, Tebbutt N, MONARCC: A randomised phase II study of Panitumumab monotherapy and panitumumab plus 5 fluorouracil as first line therapy for RAS and BRAF wild type metastatic colorectal cancer. An Australasian Gastro-Intestinal Trials Group (AGITG) trial. American Society of Clinical Oncology Gastrointestinal Cancers Symposium 2020 Jan 23-25; San Francisco USA
- 9. Corke L, Burge M, Eastgate M, Wyld D. Pembrolizumab for microsatellite instability-high/deficient mismatch repair metastatic colorectal cancer. Australian Gastro-Intestinal Trials Group 22 Annual Scientific Meeting 2020 Virtual.
- Denys H, Oza AM, Lorusso D, Aghajanian C, Oaknin A, Dean A, Colombo N, Weberpals JI, Clamp AR, Scambia G, Leary A, Holloway RW, Gancedo MA, Fong PC, **Goh JC**, O'Malley DM, Dirix L, Vergote I, Cameron T, Maloney L, Goble S, Coleman RL, Ledermann JA. Effect of response to last platinum-based chemotherapy in patients with platinum-sensitive, recurrent ovarian carcinoma in ARIEL3 (NCT01968213; EudraCT 2013-000518-39), the phase 3 study of rucaparib as maintenance treatment. Belgian Society of Medical Oncology (BSMO) – 22nd Annual Meeting, 2020 Feb 14-15, Gent, Belgium
- 11. Diaz LA, Le DT, Kim TW, Van Cutsem E, Geva R, Jaeger D, Hara H, Burge ME, O'Neil BH, Kavan P, Yoshino T, Guimbaud R, Taniguchi H, Elez E, Al-Batran S, Boland PM, Cui Y, Mayo CA, Marinello P, Andre T. Pembrolizumab monotherapy for patients with advanced MSI-H colorectal cancer: Longer-term follow-up of the phase II, KEYNOTE-164 study. American Society of Clinical Oncology (ASCO) Virtual Scientific Program 2020 May 29-31.
- 12. Felip E, Minotti V, Tan DSW, Wolf J, Mark M, Boyer M, **Hughes BGM**, Bearz A, Moro-Sibilot D, Le X, Vazquez JP, Liu N, Hao L, Cheng Y, Tiedt R, Cobo M. Efficacy and safety of capmatinib plus nivolumab in pretreated patients with EGFR wild-type non-small cell lung cancer. World Conference on Lung Cancer (WCLC) 2020 Aug 8
- 13. Flower M, Nelles R, Yeung Y, Kuchel A, Ahern E, Eastgate M, Hughes B. Immune checkpoint inhibitor hepatotoxicity rates and clinical outcome Audit of real-world experience from The Royal Brisbane and Women's Hospital. Medical Oncology Group of Australia (MOGA) 2020 Aug 14-21. Virtual.
- Fong L, Chu M, George S, Hughes B, Carthon B, Merchan J, Harshman L, Munneke B, Kwei L, Hotson A, Mobasher M, Miller R. Adenosine Receptor Blockade with Ciforadenant ± Atezolizumab in Advanced Metastatic Castration Resistant Prostate Cancer (mCRPC). American Society of Clinical Oncology ASCO GU 2020. Virtual 2020 Feb 13-15
- Gan H, Cher L, Inglis P, Lwin Z, Lau E, Wichmann C, McDonald A, Ackermann U, Coombs N, Remen K, Guo N, Lee ST, Gong S, Palmer J, Pathmaraj K, O'Keefe G, Scott F, Day B, Boyd A, Thomas P, Ahmed O, Chappell D, Durrant C, Scott A. Phase I safety and bioimaging trial of KB004 (ifabotuzumab) in patients with glioblastoma. J Nucl Med May 1, 2020 61(supplement 1) 1562. Society of Nuclear Medicine and Molecular Imaging. Virtual. 2020 Jul 11-14
- 16. Gasper H, Ahern E, Roberts N, Eastgate M, Wyld D, Hughes B, Kennedy G, Chan B, Lwin Z. Developing a semiqualitative protocol to explore the psychosocial impact of COVID-19 on cancer care staff throughout the pandemic. Medical Oncology Group of Australia (MOGA) Abstract and Poster Program for Australian Medical Oncology Trainees and Young Oncologists 2020 Aug 14-21. Virtual
- 17. Gasper H, Ahern E, Roberts N, Wheatley H, McGuire P, Wyld D, Kennedy G, Eastgate M, Henden A, Thaker D. The role of a Geriatric Oncology service in building resilience during the COVID-19 pandemic. Clinical Oncology Society of Australia (COSA) Annual Scientific Meeting 2020. 10-14 Nov 2020. Brisbane Virtual
- Gasper H, Ahern E, Roberts N, Wheatley H, McGuire P, Wyld D, Kennedy G, Eastgate M, Henden A, Thaker. Caregiver burden and experience of an Australian geriatric oncology population during COVID-19 pandemic. Clinical Oncology Society of Australia (COSA) Annual Scientific Meeting 2020. 10-14 Nov 2020. Brisbane/Virtual

- Gedye C, Pook D, Krieger L, Harris C, Goh JC, Kichenadasse G, Gurney H, Underhill C, Parnis F, Joshua A M, Ferguson T, Roncolato F, Harrison M, Morris M, Begbie S, Hovey E, George M, Prithviraj P, Liow E, Davis ID, on behalf of The Australian and New Zealand Urogenital and Prostate Cancer Trials Group. UNISON: Nivolumab (N) then ipilimumab + nivolumab (I + N) in advanced non clear cell renal cell carcinoma (nccRCC) (ANZUP 1602) American Society of Clinical Oncology Genitourinary Cancers Symposium 2020 Feb 13-15; San Francisco, USA
- González-Martín A, Chung HC, Saada-Bouzid E, Yanez E, Senellart H, Cassier PA, Basu B, Ghori R, Kubiak P, Smith A, Norwood K, Lwin Z. Leap-005: Evaluating the safety and efficacy of lenvatinib and pembrolizumab in patients previously treated for ovarian cancer, a multi-cohort phase 2 study. European Society of Gynaecological Oncology (ESGO) 14-16 December 2020. Virtual
- Greil R, Rischin D Harrington K, Soulières D, Tahara M, de Castro G, Psyrri A, Baste N, Neupane P, Bratland A, Fuerder T, Hughes BGM, Mesia R, Ngamphaiboon N, Rordorf T, Ishak WZW, Lin J, Swaby R, Gumuscu B, Burtness B. Long-term outcomes from KEYNOTE-048: pembrolizumab alone (P) or with chemotherapy (P+C) versus EXTREME (E) as first-line therapy for recurrent/metastatic (R/M) head and neck squamous cell carcinoma (HNSCC). European Society for Medical Oncology (ESMO) 2020 Sep 19-21. Virtual.
- 22. Grob JJ, Gonzalez Mendoza R, Basset-Seguin N, Vornicova O, Schachter J, Joshi A, Meyer N, Grange F, Piulats JM, Bauman JR, Zhang P, Gumuscu B, Swaby RF, Hughes BGM. Efficacy and Safety of Pembrolizumab for Recurrent/Metastatic Cutaneous Squamous Cell Carcinoma (cSCC): Phase 2 KEYNOTE-629 Study. European Association of Dermato Oncology 2020. 22-25 April 2020, Virtual Vilnius, Lithuania.
- Harshman LC, Chu M, George S, Hughes BGM, Carthon BC, Fong L, Merchan JR, Kwei L, Hotson AN, Mobasher M, Miller RA. Adenosine receptor blockade with ciforadenant +/- atezolizumab in advanced metastatic castration resistant prostate cancer (mCRPC). American Society of Clinical Oncology Genitourinary Cancers Symposium 2020 Feb 13-15; San Francisco, USA
- 24. **Hughes BGM**, Gonzalez Mendoz R, Basset-Seguin N, Vornicova O, Schachter J, Joshi A, Meyer N, Grange F, Piulats JM, Bauman JR, Chirovsky D, Zhang P, Gumuscu B, Swaby RF, Grob JJ. Health-Related Quality of Life (HRQoL) of Pembrolizumab for Recurrent or Metastatic (R/M) Cutaneous Squamous Cell Carcinoma (cSCC) in KEYNOTE-629. Multidisciplinary Head and Neck Cancers Symposium 2020 Feb 27-29. Scottsdale, USA.
- 25. Kulasinghe A, Kapeleris J, Kenny L, **Hughes BGM**, Warkiani M, Vela I, Thiery JP, O'Byrne K, Punyadeera C. Characterization of the tumour microenvironment and liquid biopsy in head and neck and non-small cell lung cancer. AACR 2020. American Association for Cancer Research April 27-28. Virtual Miami Florida.
- Ladwa R, Pattison DA, Smith J, Goodman S, Burge ME, Rose S, Dowson N, Wyld D. Pretherapeutic 68Ga-DOTATATE PET SUV predictors of survival of radionuclide therapy for metastatic neuroendocrine tumors. American Society of Clinical Oncology Virtual Scientific Program 2020 May 29-31.
- 27. Mercieca-Bebber R, Barnes EH, Wilson K, Samoon Z, Walpole E, Mai T, Ackland S, Burge M, Dickie G, Watson D, Leung J, Wang T, Bohmer R, Cameron D, Simes J, Gebski V, Smithers M, Thomas J, Zalcberg J, Barbour A, Patientreported outcome (PRO) results from AGITG DOCTOR: A randomised phase 2 trial of tailored eoadjuvant therapy for resectable oesophageal adenocarcinoma, ESMO Virtual Congress 2020; 2020 September 19-21.
- Mizrahi D, Park SB, Li T, Timmins H, Trinh T, Au K, Battaglini E, Wyld D, Henderson R, Grimison R, Ke H, Marker J, Wall B, Goldstein D. Haemoglobin, body mass index and age as risk-factors for paclitaxel-and oxaliplatin-induced peripheral neuropathy. ESMO 2020 (Virtual). Annals of Oncology Volume 31, Supplement 6, November 2020, Page S1371.
- 29. Molassiotis A, Brown T, Cheng HL, Byrnes A, Chan R, **Wyld D, Eastgate M**, Yates P, Marshall A, Fichera R, Isenring E, To KF, Ko PS, Lam W, Lam YF, Au LF, Lo SR. The effects of a family-centered psychosocial-based nutrition intervention in patients with advanced cancer: the PiCNIC2 pilot randomised controlled trial. Clinical Oncology Society of Australia (COSA) Annual Scientific Meeting 2020. 10-14 Nov 2020. Brisbane/Virtual.
- 30. Nalder M, Ladwa R, Raina A, Burge M, Love A, Pattison D, Ramsay S, Lee K, Wyld D. Lu-DOTATATE peptide receptor radionuclide therapy (PRRT) in patients with somatostatin-expressing neuroendocrine tumours: A retrospective review of real-world evidence of efficacy and safety from an Australian Tertiary Cancer Centre. Australian Gastro-Intestinal Trials Group 22 Annual Scientific Meeting 2020 Virtual.

- 31. Pavlakis N, Ransom DT, Wyld D, Sjoquist KM, Asher R, Gebski V, Wilson K, Kiberu AD, Burge ME, Macdonald W, Roach P, Pattison DA, Butler P, Price TJ, Michael M, Lawrence BJ, Bailey DL, Leyden JC, Zalcberg JR, Turner JH. First results for Australasian Gastrointestinal Trials Group (AGITG) control net study: Phase II study of 177Lu-octreotate peptide receptor radionuclide therapy (LuTate PRRT) +/- capecitabine,temozolomide (CAPTEM) for midgut neuroendocrine tumors (mNETs). American Society of Clinical Oncology Gastrointestinal Cancers Symposium 2020 Jan 23-25; San Francisco, USA
- 32. Pavlakis N, Ransom D, Wyld D, Sjoquist K, Asher R, Wilson K, Macdonald W, Roach P, Pattison D, Butler P, Leyden S, Turner H. Australasian Gastrointestinal Trials Group (AGITG) CONTROL NET Study: Phase II Studies of Lu-Octreotate Peptide Receptor Radionuclide Therapy (LuTate PRRT) +/- Capecitabine' Temozolomide (CAPTEM) or CAPTEM Alone for Neuroendocrine Tumours (NETs). Neuroendocrinology 2020;110:1–312. doi.org/10.1159/000506496. European Neuroendocrine Tumour Society Conference 2020 Mar 11-13. [Virtual Conference] Barcelona, Spain
- 33. Pavlakis N, Ransom DT, Wyld D, Sjoquist KM, Asher R, Gebski V, Wilson K, Kiberu AD, Burge ME, Macdonald W, Roach P, Pattison DA, Butler P, Price TJ, Michael M, Lawrence BJ, Bailey DL, Leyden S, Zalcberg JR, Turner JH. Australasian Gastrointestinal Trials Group (AGITG) CONTROL NET Study: Phase II study evaluating the activity of 177Lu-Octreotate peptide receptor radionuclide therapy (LuTate PRRT) and capecitabine, temozolomide CAPTEM)— First results for pancreas and updated midgut neuroendocrine tumors (pNETS, mNETS). American Society of Clinical Oncology Virtual Scientific Program 2020 May 29-31.
- 34. Radhika Y, Chan D, Thawer A, Lo D, Singh S, Wyld D. Insights into the Practice Patterns, Challenges and the Role of a Shared Care Model in the Management of Neuroendocrine (NET) Patients in the Community. (D42) Neuroendocrinology 2020;110:1–312. doi.org/10.1159/000506496. European Neuroendocrine Tumour Society Conference. 2020 Mar 11-13. [Virtual Conference] Barcelona, Spain
- 35. Rischin D, Harrington JK, Greil R, Soulieres D, Tahara M, Castro G, Psyrri A, Baste N, Neupane PC, Bratland A, Fuereder T, Hughes BGM, Mesia R, Ngamphaiboon N, Rordorf T, Ishak WZW, Lin J, Gumuscu B, Swaby RF, Burtness B. Pembrolizumab (P) or P + chemotherapy (C) versus EXTREME (E) as first-line (1L) therapy for recurrent/metastatic (R/M) head and neck squamous cell carcinoma (HNSCC): analysis of KEYNOTE-048 by disease state.). American Society of Clinical Oncology Virtual Scientific Program 2020 May 29-31.
- 36. Rischin D, Khushalani NI, Schmults CD, Guminski AD, Chang ALS, Lewis KD, Lim AML, Hernandez-Aya LF, Hughes BGM, Schadendorf D, Hauschild A, Stankevich E, Booth J, Li S, Chen Z, Okoye E, Lowy I, Fury MG, Migden MR. Phase II study of cemiplimab in patients (pts) with advanced cutaneous squamous cell carcinoma (CSCC): Longer follow-up. American Society of Clinical Oncology (ASCO) Virtual Scientific Program 2020 May 29-31.
- 37. Roberts NA, Chan B, Ahern ES, Gasper HM, Kennedy G, Hughes BGM, Wyld D, Eastgate MA, Lwin Z. Emotional impact of COVID-19 preparations on metro and regional cancer workforces in Queensland Australia: "We are all in this together". American Society of Clinical Oncology (ASCO) Quality Care Symposium 9th-10th October 2020. Brisbane/Virtual.
- Roberts N, Wyld D, Smith M, Woollett K, Dickie G, Pearce A. Designing a prostate cancer specialist nurse service to meet the needs of patients: A mixed methods approach. Clinical Oncology Society of Australia (COSA) Annual Scientific Meeting 2020. 10-14 Nov 2020. Brisbane/Virtual.
- 39. Santucci J, Lee B, Burge M, Pattison S, Shapiro J, Thomson B, Michael M, Wong R, Clarke K, Sumitra A, Lipton L, Zielinski R, Nikfarjam M, Gibbs P. Investigating the "real-world" clinical impact of treatment sequencing in advanced pancreatic cancer outcomes: a PURPLE translational registry analysis. Australian Gastro-Intestinal Trials Group 22 Annual Scientific Meeting 2020 Virtual.
- 40. Schmidt AL, Anton A, Wong SS, Azad A, Kwan EM, Spain LA, Torres J, Muthusamy A, Parente P, Parnis F, **Goh JC**, Joshua AM, Pook DW, Gibbs P, Tran B, Weickhardt AJ. Treatment outcomes for metastatic castrate-resistant prostate cancer (mCRPC) patients (pts) following docetaxel (D) for hormone sensitive disease. American Society of Clinical Oncology Genitourinary Cancers Symposium 2020 Feb 13-15 San Francisco, USA

- 41. Subramaniam S, Toner GC, Stockler MR, Martin A, Pashankar F, Frazier L, Mazhar D, Ford K, Walpole E, Stevanovic AG, **Wyld D**, Troon S, Hanning FJ, Birtle A, Wheater M, Huddart R, White J, Spunt S, Grimison PS on behalf of the Australian and New Zealand Urogenital and Prostate Cancer Trials Group (ANZUP). An international randomised phase 3 trial of accelerated versus standard BEP chemotherapy for adult and paediatric male and female patients with intermediate and poor-risk metastatic germ cell tumours: P3BEP (ANZUP 1302). American Society of Clinical Oncology Gastrointestinal Cancers Symposium 2020 Jan 23-25; San Francisco, USA.
- 42. Subramaniam S, Toner GC, Stockler MR, Martin A, Pashankar F, Tran B, Jeffrey M, Mazhar D, Huddart R, Walpole E, Stevanovic AG, Wyld D, Hanning FJ, Wheater M, Balagtas JM, Troon S, Birtle A, White J, Grimison PS. P3BEP (ANZUP 1302): An international randomised phase 3 trial of accelerated versus standard BEP chemotherapy for male and female adults and children with intermediate and poor-risk metastatic germ cell tumours (GCTs). (413) Clinical Oncology Society of Australia (COSA) Annual Scientific Meeting 2020. 10-14 Nov 2020. Virtual. Asia-Pacific Journal of Clinical Oncology Vol 16, Issue S8 Nov 2020.
- 43. **Tam L, Wyld D**. Real-life incidences of intracardiac metastases in neuroendocrine neoplasms. Clinical Oncology Society of Australia (COSA) Annual Scientific Meeting 2020. 10-14 Nov 2020. Brisbane/Virtual.
- Tang KD, Zhang X, Kenny L, Hughes BGM, Vasani S, Punyadeera C. Salivary exosomes Carrier of High Risk Human Papillomavirus Causing Oropharyngeal Cancer. Australasian Extracellular Vesicles Conference 2020 Feb 12-14. Auckland, New Zealand
- 45. Tebbutt NC, Steer CB, Sjoquist KM, Chantrill LA, Karapetis CS, Nott LM, Espinoza D, Oostendorp M, Yip S, Cuff J, Burge ME. MONARCC: A randomized phase II study of panitumumab monotherapy and panitumumab (pan) plus 5 Fluorouracil (FU) as first-line therapy for RAS and BRAF wild type metastatic colorectal cancer (mCRC): An AGITG clinical trial. J Clin Oncol 38, 2020 (suppl 4; abstr TPS271). American Society of Clinical Oncology Gastrointestinal Cancers Symposium 2020 Jan 23-25; San Francisco USA.
- 46. Tie J, Cohen JD, Lo SN, Wang Y, Li L, Christie M, Lee M, Wong R, Kosmider S, Skinner I, Wong HL, Lee B, Burge ME, Yip D, Karapetis CS, Price TJ, Tebbutt NC, Haydon AM, Ptak J, Schaeffer MJ, Silliman N, Dobbyn L, Popoli M, Tomasetti C, Papadopoulos N, Kinzler KW, Vogelstein B, Gibbs P. Prognostic Significance of Post-Surgery Circulating Tumor DNA in Non-Metastatic Colorectal Cancer: Individual Patient Pooled Analysis of Three Cohort Studies. International Journal of Cancer. 2020 Sep 27. [Internet] https://doi.org/10.1002/ijc.33312
- 47. Voss MH, Hotson AN, Willingham S, Hughes BGM, Merchan JR, Fong L, Chu M, George S, Munneke B, Mobasher M, Miller MA. CD68+ tumor-associated myeloid cells as the target of adenosine-induced gene products and predictor of response to adenosine blockade with ciforadenant (cifo) in renal cell cancer (RCC). American Society of Clinical Oncology Virtual Scientific Program 2020 May 29-31.
- Wyld D, Elliott T, Wakelin K, Leyden S, Leyden J, Michael M, Pavlakis, N, Mumford J, Segelov E, Gordon L. The Economic Impact to Patients with Neuroendocrine Tumours. (J24). Neuroendocrinology 2020;110:1–312. doi.org/10.1159/000506496 European Neuroendocrine Tumour Society Conference. 2020 Mar 11-13. [Virtual Conference] Barcelona, Spain

Radiation Oncology



Dr Graeme Dickie Director Radiation Oncology

The culture of inter-disciplinary collaboration and advancing technology in research remains strong for radiation oncology in 2020. 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.

Physics and radiation therapy lead most of the investigator-initiated technical studies, with the supervision of higher degrees.

Our department collaborates with several national and international trial groups. For some studies, there is a requirement for independent QA for patient accrual, and our department has been able to meet those standards. We continue our collaboration with Queensland University of Technology, working with them to investigate circulating tumour cells and cancer markers in blood and saliva.

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. Our department has expanded surface guided radiotherapy, implemented quality-assured inspiration breath-hold technique and has expanded deformable registration for the planning and dosimetry review situations.

The radiation oncology team has been successful in securing grants to proceed with several studies, and in utilising grants obtained though the Herston Biofabrication Institute to implement radiation oncology-based projects utilising 3-D printing in a research framework.

Radiation Oncology was instrumental in developing the CCS Clinical Research Database and software application. This database has revolutionised the storage of research information allowing centralised storage of logistical and publication data and generation of research reports.

The radiation oncology team has had many research achievements in 2020, including:

A/Prof Benjamin Chua and team were awarded an RBWH foundation grant to support an RBWH investigator-initiated trial investigating the use of non-invasive biomarkers in glioblastoma.

Scott Crowe was awarded the ACPSEM Boyce Worthley Early Career Award for 2020. This is the highest honour the Australasian College of Physical Scientists and Engineers in Medicine (ACPSEM) can bestow on a Medical Physicist or Engineer who has been working in the field for under 10 years.

Tanya Kairn and Scott Crowe were awarded the Kenneth Clarke Journal Award 2020 for their paper "Application of retrospective data analysis to clinical protocol design: can the potential benefits of breath-hold techniques for breast radiotherapy be assessed without testing on patients?", which was published in the ACPSEM PESM journal on 8 March 2019.

Our work with the Queensland University of Technology has been widely reported:

- Edwards E (Reporter). Brisbane researchers detect previously undetectable throat cancer. Channel 7 news. Brisbane, Queensland. 11 May 2020.
- Read C. QUT test finds "hidden" cancers. 2020 May 14. Courier Mail, page 9.
- World-first saliva test detects hidden throat cancer. Oncology News, ONA Editor, 13 May 2020. <u>https://oncologynews.com.au/world-first-saliva-test-detects-hidden-throat-cancer/</u>
- Connor L. Australian Team Developing Saliva-Based Assay for HPV-Driven Oropharyngeal Cancer. 360 DX, New York, USA. 21 May 2020
- Layt S. Researchers take head and neck cancer by the throat. Brisbane Times, 28/7/2020. <u>https://www.brisbanetimes.com.au/national/queensland/researchers-take-head-and-neck-cancer-by-the-throat-20200727-p55fy2.html</u>

Research Awards and Achievements

| Recipient | Award | Event |
|--------------------------------|--|--|
| Scott Crowe | ACPSEM Boyce Worthley Early Career Award for 2020 | The highest honour the Australasian College of Physical Scientists and Engineers in Medicine (ACPSEM) can bestow on a Medical Physicist or Engineer who has been working in the field for under 10 years. The requirement of the award include contributions to the profession and the ACPSEM as well as research, as demonstrated by peer-reviewed publications. |
| Tanya Kairn and Scott Crowe | Kenneth Clarke Journal Award 2020 | For their paper "Application of retrospective data analysis to clinical protocol design: can the potential benefits of breath-hold techniques for breast radiotherapy be assessed without testing on patients?", which was published in the ACPSEM PESM journal on 8 March 2019. This award is decided by the journal Editorial Board and goes to the best article in the Physical & Engineering Sciences in Medicine. As voted by the Journal Editorial team based on originality, science, clarity, and impact. |

Research Grants Awarded in 2020

| Investigator Names | RBWH Departments / Research Groups | Research Project Title | Granting Body | Total Awarded | Year/s |
|---|--|--|--|---------------|------------------------------|
| Arutha Kulasinghe, Brett Hughes, Lizbeth Kenny, Ken O'Byrne, Chamindie Punyadeera | CCS DRO, DMO | Identification of predictive biomarkers for immune checkpoint blockade in head and neck cancer | Garnette Passe and Rodney Williams Memorial Foundation | \$367,500 | 30/6/2020- 29/6/2023 |
| Arutha Kulasinghe, Lizbeth Kenny , Ken O'Byrne, Brett Hughes , Ashani Weeraratna, Chamindie Punyadeera, Gaddy Getz, Majid Warkiani, Paul Leo | CCS DRO, DMO | Multidimensional spatial profiling of the tumour microenvironment and liquid biopsy to determine response to immunotherapy. | Cancer Australia and Cure Cancer (Priority driven Early Career Researcher Category) | \$100 000 | 30/06/2020 29/06/2021 |
| Graeme Dickie | CCS DRO | QCOG Cancer Clinical Trial Data Manager Grant | Queensland Clinical Oncology Group | \$56 000 | 2020 |
| Rachael Wilks | CCS DRO | Improving vaginal brachytherapy treatments by personalization using 3D printing (Application ID RBWH -PG-2021-096) | RBWH | \$39 633 | 2021 |
| Jennifer Edmunds | CCS DRO | TROG ASM | TROG Attendance Grant | \$1190 | 2020 |
| Jacqui Keller | CCS DRO | TROG ASM | TROG Attendance Grant | \$1190 | 2020 |
| Andrew Fielding, Steven Sylvander | CCS, QUT | PET/MRI Flex coils / interface for radiotherapy treatment planning | RBWH PPTF Education, Training & Research Funding | \$21,000 | 2020 |

| Investigator Names | RBWH Departments / Research Groups | Research Project Title | Granting Body | Total Awarded | Year/s |
|---|--|--|-----------------|---------------|-----------|
| Benjamin Chua, Rosalind Jeffree, Chamindie Punyadeera, Bryan Day, Paul Leo, Gunter Hartel, Juliana Muller Bark | CCS DRO | The use of non-invasive biomarkers in glioblastoma | RBWH foundation | \$49 999.21 | 2021 |
| Emilie Eadie, Brianna McCoola | CCS DRO (Radiation Therapy only) | Harnessing multi-media to provide patient education to tech savvy Adolescent and Young Adult cancer patients prior to Radiation Therapy | CAHRLI | \$5640.00 | 2020-2021 |

Current RBWH Department / Research Group Led Research Activity

| Lead Investigator Name | Other Study Investigators (RBWH staff in bold) | Research Project Title | Number of RBWH Patients Recruited in 2020 | Total number of Patients Recruited (all sites) |
|---------------------------|--|---|--|--|
| Marcus Hu | Robyn Cheuk , John Yaxley, John Mackean | Review of outcomes from salvage HDR brachytherapy for localised prostate recurrence. | 0 | 0 |
| Philip Chan | Paul Thomas (HIRF), Robyn Cheuk, Michelle Grogan, Graeme Dickie | Prognostic Value of Assessing Hypoxia in Tumours Using 18FMISO PET During a Course of Radiation Therapy – Proof of Concept Study | 0 | 3 |
| Benjamin Chua | Lindy Jeffree, Chamindie Punyadeera, Zarnie Lwin, Juliana Muller Bark, Yunxia Wan, Arutha Kulasinghe, Xi Zhang, Kai Tang, Bryan Day (QIMR) | The use of non-invasive biomarkers in glioblastoma: A pilot study | 14 | 20 |
| Scott Crowe | Paul Charles, Elise Obereigner, Rachael Wilks, Lee Heseltine, Graeme Dickie, Catherine Bettington, Philip Chan, Steven Sylvander, Tanya Kairn | Improving radiation oncology with 3D printing and Biofabrication | N/A | N/A |
| Scott Crowe | Tanya Kairn, Katie McMahon (HIRF), Louise Campbell (HIRF), Clare Berry (HIRF) | Characterisation of anatomical variations in the central nervous system | 0 | 13 |
| Graeme Dickie | Philip Chan, Rachael Wilks | Pulse Dose Rate Brachytherapy for cervix cancer, Royal Brisbane and Women's Hospital review | 0 | 202 |
| Alice Grigg | Catriona Hargrave | Retrospective evaluation of cardiac reduction between free- breathing (FB) and deep inspiration breath-hold (DIBH) radiation therapy for left-sided breast cancer patients | 0 | 20 |
| Tanya Kairn | Scott Crowe, Rachael Wilks, Nancy Yu, Craig Lancaster | In vivo monitoring of total skin electron dose using optically stimulated luminescence dosimeters | 0 | 9 |

| Lead Investigator Name | Other Study Investigators (RBWH staff in bold) | Research Project Title | Number of RBWH Patients Recruited in 2020 | Total number of Patients Recruited (all sites) |
|---|---|---|--|--|
| Charles Lin | Benjamin Chua, Lizbeth Kenny, Michelle Nottage, Brett Hughes , Michele Teng, Paul Thomas | A prospective study investigating the efficacy and toxicity of definitive chemo- radiation and immunotherapy (CRIO) in locally and / or regionally advanced cutaneous squamous cell carcinoma | 8 consented 7 registered | 10 |
| Charles Lin | Charles Lin, Megan Carroll , Ryan Somerville, Sarah Grigg | Carcinoma of Head and Neck with Perineural spread: Outcomes After Skull Base Surgery and Adjuvant Radiotherapy | | |
| Anthony Pagidas, Adrian Celati | Jemma Blyth, Michelle Grogan, Allison Dry , Catriona Hargrave | A Retrospective examination of changes in breast seroma volume and the feasibility of implementing simultaneous integrated boost in the treatment of breast cancer | 0 | 40 |
| Teague Moloney | Allison Dry, Kate Stewart, Cathy Hargrave | Clinical considerations for Computed Tomography (CT) acquisition and treatment verification for patients with Gastrointestinal/Endobiliary stents | 20 | 20 |
| Kate Stewart | Amelia Brinks (QUT), Dr Catriona Hargrave | Comparison of Dose Estimation Methods utilising Cone Beam CT images of patients receiving Radiation Therapy to Prostate and Head& Neck regions | 0 | 40 |
| Jemma Walsh (nee Devereaux) | Jemma Blyth, Elena Blyth, Gregory Rattray, Catriona Hargrave, Lisa Nissin, Julie Burbery | DIBH (Deep Inspiration Breath Hold)-BREaST Trial. Breath Hold Respiratory Endurance & Spirometry Training | 27 | 28 |
| Brianna McCoola | Jemma Blyth; Allison Dry | How has 2020 changed the way your RT dept provides clinical education? | N/A | N/A |
| Brianna McCoola; Julie-Anne Outhwaite | Cathy Hargrave | An Evaluation of a Paediatric Oncology model of Care to decrease anaesthesia rates | 0 | 250 |
| Emilie Eadie | Jenna Luscombe; Andy Huang; Brianna McCoola | AYA Patient Treatment Education Material development | N/A | N/A |
| Allison Dry | | Time-motion study: Utilisation within a Radiation Therapy Dept. during the COVID-19 Pandemic | N/A | N/A |
| Veronica Tippet; Christopher Walsh | Cathy Hargrave | Surface-Guided Radiation Therapy (SGRT) Utilisation for Stereotactic Body Radiation Therapy (SBRT) | 0 | 20 |

| Lead Investigator Name | Other Study Investigators (RBWH staff in bold) | Research Project Title | Number of RBWH Patients Recruited in 2020 | Total number of Patients Recruited (all sites) |
|--|--|--|--|--|
| Christopher Sweeney Tamim Niazi | Philip Chan (CCS DRO) | DASL-HiCaP: Darolutamide Augments Standard Therapy for Localized High-Risk Cancer of the Prostate (ANZUP1801). A randomized phase 3 trial of adding darolutamide to androgen deprivation therapy and definitive or salvage radiation in high risk, clinically localized prostate cancer | 6 consented 4 randomised | 4 |
| Hao-Wen Sim | Helen Wheeler Zarnie Lwin (CCS DMO) Kathryn Field Benjamin Chua (CCS DRO) David Espinoza Michael Buckland Kimberly Kaufman | PICCOG: PARP and Immune Checkpoint inhibitor COmbination for relapsed IDH- mutant high-grade Glioma | | |
| Catriona Hargrave | Alice Grigg (CCS DRO) Jemma Walsh (CCS DRO) | A multi-centre post- implementation review of the deep inspiration breath- hold (DIBH) technique for left-sided breast cancer radiation therapy | 0 | 20 |
| Jürgen Götz (UQ Queensland Brain Institute) | Benjamin Chua (CCS DRO) Scott Crowe (CCS DRO) Rob McDowall (CCS DRO) | Therapeutic Ultrasound for the Treatment of Brain Disorders | | |
| Henry Marshall (TPCH) | Benjamin Chua (CCS DRO) Luke Nicholls (CCS DRO) Rishendren Naidoo (TPCH) Katrina Hopcraft (TPCH) | CT screening for lung cancer in patients with chronic obstructive pulmonary disease | | |
| Danny Rischin (PMCC) | Charles Lin (CCS DRO) BRETT HUGHES (CCS MO) | Phase III trial of postoperative radiotherapy with or without REGN2810 in high risk cutaneous squamous cell carcinoma of the head and neck (cSCCHN) | 4 consented 2 randomised | 2 |
| Prof Stephen Ackland (Calvary Mater Newcastle Hospital) | Mathew Burge (CCS MO) Graeme Dickie (CCS DRO) | A randomised, placebo- controlled phase II trial of simvastatin in addition to standard chemotherapy and radiation in preoperative treatment for rectal cancer (SPAR) | 3 | 6 |
| Prof Sherene Loi (PMCC) | Robyn Cheuk (CCS DRO) Michelle Grogan (CCS DRO) | TROG 17.05 A randomised phase II trial comparing the efficacy of single fraction or multi-fraction SABR (Stereotactic ablative body radiotherapy) with AteZolizumab in patients with advanced Triple nEgative breast Cancer (AZTEC) | 2 consented 1 randomised | 4 |
| Michael D. Jenkinson PhD (University of Liverpool) | Catherine Bettington (CCS DRO) | ROAM - TROG 15.02 Radiation versus Observation following surgical resection of Atypical Meningioma: a randomised controlled trial | 0 | 1 |

Collaborative Research Activity Involving RBWH Department / Research Group

| Lead Investigator Name | Other Study Investigators (RBWH staff in bold) | Research Project Title | Number of RBWH Patients Recruited in 2020 | Total number of Patients Recruited (all sites) |
|--|---|---|--|--|
| Vincent Grégoire (EORTC) | Lizbeth Kenny (CCS DRO) | NIMORAL - TROG 14.03 (1219- ROG-HNCG) A blind randomized multicenter study of accelerated fractionated chemo- radiotherapy with or without the hypoxic cell radiosensitizer nimorazole (Nimoral), using a 15 gene signature for hypoxia in the treatment of squamous cell carcinoma of the head and neck | 0 | 5 |
| Danny Rischin (PMCC) | Lizbeth Kenny (CCS DRO) | HPV - TROG 12.01 A randomised trial of Weekly Cetuximab And Radiation Versus Weekly Cisplatin and Radiation in Good Prognosis Locoregionally Advanced HPV- Associated Oropharyngeal Squamous Cell Carcinoma | 0 | 52 |
| Chamindie Punyadeera (QUT) | Lizbeth Kenny (CCS DRO) | A simple saliva test to diagnose head and neck cancer at an early stage - head and neck cancer detection is a spitting distance away | 29 | 265 |
| Prof Rajiv Khanna (QIMR) | Lizbeth Kenny (CCS DRO) | P2191 Development of an Adoptive T Cell Therapy for HPV-Associated Malignancies | 1 | 44 |
| David Pryor | Charles Lin (CCS DRO) | TROG 16.03: A multi stage multi centre international randomised trial of Conventional care Or Radioablation (stereotactic body radiotherapy) for Extra-cranial oligometastatic disease in lung, breast and prostate cancer (CORE) | 0 | 2 |
| Shankar Siva | Charles Lin (CCS DRO) | TROG 15.03 Focal Ablative STereotactic RAdiosurgery for Cancers of the Kidney - A Phase II Clinical Trial (FASTRACK II) | 0 | 1 |
| Shankar Siva | Catherine Bettington (CCS DRO) | TROG 13.01 Stereotactic Ablative Fractionated Radiotherapy versus Radiosurgery for Oligometastatic Neoplasia to the Lung: A Randomised Phase II Trial (SAFRON II) | 0 | 1 |
| Scott Williams and Paul Nguyen (NHMRC) | Philip Chan (CCS DRO) | ENZARAD Randomised phase 3 trial of enzalutamide in androgen deprivation therapy with radiation therapy for high risk, clinically localised, prostate cancer | 0 | 10 |
| Kumar Gogna (RO Mater) | Catherine Bettington (CCS DRO) | SPLIT COURSE A single arm, prospective Phase II study of Split-Course Pelvic Radiotherapy for Locally Progressive, Castrate Resistant Prostate Cancer | 0 | 1 |

| Lead Investigator Name | Other Study Investigators (RBWH staff in bold) | Research Project Title | Number of RBWH Patients Recruited in 2020 | Total number of Patients Recruited (all sites) |
|---|---|---|--|--|
| Margot Lehman (PAH) | Philip Chan (CCS DRO) | P LUNG - TROG 11.03 A randomised phase III trial of High Dose Palliative Radiotherapy (HDPRT) versus concurrent Chemotherapy HDPRT (C-HDPRT) in patients with good performance status, locally advanced / small volume metastatic NSCLC not suitable for radical chemo-radiotherapy | 0 | 2 |
| Peter Graham (SGH) | Robyn Cheuk (CCS DRO) | STARS - TROG 08.06 A randomised comparison of anastrozole commenced before and continued during adjuvent radiotherapy for breast cancer versus anastrozole and subsequent anti-oestrogen therapy delayed until after radiotherapy. (STARS - Study of Anastrozole and Radiotherapy Sequencing) | 0 | 75 |
| Boon Chua (PMCC) | Lizbeth Kenny (CCS DRO) | DCIS - TROG 07.01 A randomised phase III study of radiation doses and fractionation schedules in non- low risk ductal carcinoma in situ (DCIS) of the breast | 0 | 3 |
| Maria Pearse (Auckland City Hospital) | Charles Lin (CCS DRO) | RAVES - TROG 08.03 Radiotherapy Adjuvant versus Early Salvage. A phase III multi- centre randomised trial comparing adjuvant radiotherapy (RT) with early salvage RT in patients with positive margins or extraprostatic disease following radical prostatectomy | 0 | 4 |

Research Publications

- 1. Ahern V, Thwaites D, Gorayski P, Hanna GG, **Kenny L,** Sasso G, Le H, Penniment M. Particle Therapy in Australia: iacta alea est! J Med Imaging Radiat Oncol. 2020 Sep 25. doi: 10.1111/1754-9485.13104. Online ahead of print.
- Banavar G, Ogundijo O, Toma R, Rajagopal S, Lim Y, Tang KD, Camacho F, Torres P, Gline S, Parks M, Kenny L, Dimitrova N, Perlina A, Tily H, Amar S, Vuyisich M, Punyadeera C. The salivary metatranscriptome as an accurate diagnostic indicator of oral cancer. Research Square 19 Aug 2020. DOI: 10.21203/rs.3.rs-55052/v1
- Bhatt KH, Neller MA, Srihari S, Crooks P, Lekieffre L, Aftab BT, Liu H, Smith C, Kenny L, Porceddu S, Khanna R. Profiling HPV-16-specific T cell responses reveals broad antigen reactivities in oropharyngeal cancer patients. J Exp Med. Epub 2020 July 27, 2020 Oct 5; 217(10):e20200389. doi: 10.1084/jem.20200389.
- Binny D, Mezzenga E, Sarnelli A, Kairn T, Crowe SB, Trapp JV. Departmental action limits for TQA energy variations defined by means of statistical process control methods. Physical and Engineering Sciences in Medicine 2020;43:29-34. doi: 10.1007/s13246-019-00791-0

- 5. Binny D, Spalding M, **Crowe SB**, Jolly D, **Kairn T**, Trapp JV, Walsh A. Investigating the use of Aperture Shape Controller in VMAT treatment deliveries. Med Dosim 2020, 45(3):P284-P292. DOI: 10.1016/j.meddos.2020.02.003
- Crowe SB, Bennett J, Lathouras M, Lancaster C, Sylvander SR, Chua B, Bettington C, Lin C, Kairn T. Impact of radiopacified bone cement on radiotherapy dose calculation. Physics and Imaging in Radiation Oncology, Vol 14, Epub 20 May 2020, Vol 14, p 12-16 doi.org/10.1016/j.phro.2020.04.004
- 7. **Crowe S**, Bezak E, Oliver L, Kron T. Medical physics training, education and professional recognition in Australia and New Zealand. Medical Physics International 2020 Dec; 8:417-421. www.mpijournal.org/MPI-v08i03.aspx
- Ekanayake Weeramange C, Tang KD, Vasani S, Langton-Lockton J, Kenny L, Punyadeera C. DNA Methylation Changes in Human Papillomavirus-Driven Head and Neck Cancers. Cells. 2020 May 31;9(6):E1359. doi: 10.3390/cells9061359
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- Hwang EJ, Gorayski P, Le H, Hanna GG, Kenny L, Penniment M, Buck J, Thwaites D, Ahern V. Particle Therapy Toxicity Outcomes: A Systematic Review. J Med Imaging Radiat Oncol. Epub 18 May 2020 doi: 10.1111/1754-9485.13036.
- 11. Joseph D, Denham JW, Steigler A, Lamb DS, Spry NA, Stanley J, Shannon T, Duchesne G, Atkinson C, Matthews JHL, Turner S, Kenny L, Christie D, Tai KH, Gogna NK, Kearvell R, Murray J, Ebert MA, Haworth A, Delahunt B, Oldmeadow C, Attia J. Radiation Dose Escalation or Longer Androgen Suppression to Prevent Distant Progression in Men With Locally Advanced Prostate Cancer: 10-Year Data From the TROG 03.04 RADAR Trial. Int J Radiat Oncol Biol Phys. 2020 Mar 15;106(4):693-702. doi: 10.1016/j.ijrobp.2019.11.415.
- 12. **Kairn T**, **Livingstone AG**, **Crowe SB**. Monte Carlo calculations of radiotherapy dose in "homogeneous" anatomy. Physica Medica 2020 Oct 1; 78:156-165. doi: 10.1016/j.ejmp.2020.09.019.
- Kairn T, Wilks R, Yu L, Lancaster C, Crowe SB. In vivo monitoring of total skin electron dose using optically stimulated luminescence dosimeter. Reports of Practical Oncology and Radiotherapy 2020;25(1):35-40. doi: 10.1016/j.rpor.2019.12.011
- 14. Kairn T, Zahrani M, Cassim N, Livingstone AG, Charles PH, Crowe SB. Quasi-simultaneous 3D printing of muscle-, lung- and bone-equivalent media: a proof-of-concept study. Physical and Engineering Sciences in Medicine. June 2020 Vol 43, p 701-710, 2020. doi: 10.1007/s13246-020-00864-5
- Kulasinghe A, Kapeleris J, Kenny L, Hughes B, Warkiani M, Vela I, Thiery J, O'Byrne K, Punyadeera C. Characterization of the tumor microenvironment and liquid biopsy in head and neck and non-small cell lung cancer. American Association for Cancer Research 15 Aug 2020. DOI: 10.1158/1538-7445.AM2020-3384
- Livingstone A, Crowe S, Sylvander S, Kairn T. Clinical implementation of a Monte Carlo based independent TPS dose checking system. Physical and Engineering Sciences in Medicine 2020, 43(3):1113-1123. DOI: 10.1007/s13246-020-00907-x
- 17. Liu T, David M, Batstone M, Clark J, Low TH, Goldstein D, Hope A, Hosni A, **Chua B**. The utility of postoperative radiotherapy in intermediate-risk oral squamous cell carcinoma. Int J Oral Maxillofac Surg. 2020 Jun 29:S0901-5027(20)30214-9. doi: 10.1016/j.ijom.2020.06.006. Online ahead of print.
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- 21. Morales JE, Butson M, Hill R, **Crowe SB**, Trapp JV. Monte Carlo calculated output correction factors for Gafchromic EBT3 film for relative dosimetry in small stereotactic radiosurgery fields. Physical and Engineering Sciences in Medicine. June 2020 Vol 43, p 609-616, 2020. doi: 10.1007/s13246-020-00860-9
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- Peet SC, Yu L, Maxwell S, Crowe SB, Trapp JV, Kairn T. Exploring the gamma surface: A new method for visualising modulated radiotherapy quality assurance results. Physica Medica 2020 Oct 1; 78:166-172. doi: 10.1016/j.ejmp.2020.09.021
- 24. Rahman ST, Pandeya N, Neale RE, McLeod DSA, Bain CJ, Baade PD, Youl PH, Allison R, Leonard S, Jordan SJ. Obesity Is Associated with BRAFV600E-Mutated Thyroid Cancer. Thyroid. Epub 4 May 2020. doi:10.1089/thy.2019.0654
- Rasheduzzaman M, Kulasinghe A, Dolcetti R, Kenny L, Johnson NW, Kolarich D, Punyadeera C. Protein glycosylation in head and neck cancers: From diagnosis to treatment. Biochim Biophys Acta Rev Cancer. 2020 Aug 25;1874(2):188422. doi: 10.1016/j.bbcan.2020.188422.
- 26. Rijken J, Crowe S, Trapp J, Kairn T. A review of stereotactic body radiotherapy for the spine. Physical and Engineering Sciences in Medicine 2020, 43(3):799-824. DOI: 10.1007/s13246-020-00889-w
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- 30. Tang KD, Vasani S, Menezes L, Taheri T, Walsh LJ, Hughes BGM, Frazer IH, Kenny L, Scheper GC, Punyadeera C. Oral HPV16 DNA as a screening tool to detect early oropharyngeal squamous cell carcinoma. Cancer Sci. 2020 Jul 26. doi: 10.1111/cas.14585. Online ahead of print.
- **31.** Tang KD, Vasani S, Taher T, Walsh LJ, **Hughes BGM, Kenny L,** Punyadeera C. An Occult HPV-Driven Oropharyngeal Squamous Cell Carcinoma Discovered Through a Saliva Test. Frontiers in Oncology, March 2020,doi.org/10.3389/fonc.2020.00408
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34. Yu L, Kairn T, Trapp JV, Crowe SB. Characteristics of inverse gamma histograms. Physical and Engineering Sciences in Medicine. June 2020 Vol 43, p 659-664, 2020. doi: 10.1007/s13246-020-00873-4

Book Chapters / Letters

1. **Kairn T.** Applying Good Software Development Processes in Practice. Diagnostic Radiology Physics with MATLAB 2020 Nov 24. Taylor and Francis, Boca Raton. doi: 10.1201/9781351188197.

Conference Presentations – Invited Speaker, Oral and Poster

Invited Speaker

- 1. **Kenny L** Radiation therapy: conventional radiotherapy, particle therapy and SABR which one and when? CIRSE, Germany (presentation online due to COVID-19), September 12-15 2020
- 2. **Kenny L**. Clinical Research for Improvement, Central Queensland Hospital and Health Service (CQHHS) Virtual Research Week. Virtual conference, Australia, 11 December 2020

Oral Presentations

- 1. Arrasappan, J. The Use of 3D-Printed Devices for a BCC Right Upper Ear Patient: A Case Study. ASMIRT Qld weekend conference: Rays on the Range. 7 November 2020. Toowoomba, Australia.
- 2. Charles P, Kairn T, Crowe SB. Over-response of EBT3 film in lung phantoms irradiated small fields", Engineering and Physical Sciences in Medicine 2020. 2-4 November 2020. Virtual Conference, Australia.
- 3. Crowe S, Lathouras M, Lancaster C, Kairn T. Barium-contrasted bone-cements: impact on dosimetry. European Society for Radiotherapy and Oncology 2020. Virtual Conference, Austria.
- 4. **Dry, A.** Time-motion study: Utilisation within a Radiation Therapy Dept. during the COVID-19 Pandemic. ASMIRT Qld weekend conference: Rays on the Range. 7 November 2020. Toowoomba, Australia.
- 5. **McCoola, B.** How has 2020 changed the way your RT dept provides clinical education? ASMIRT Qld weekend conference: Rays on the Range. 7 November 2020. Toowoomba, Australia.
- 6. **Mee, M**. Evaluation of a Deformable Quality Assurance Tool for Head and Neck Cancer Patients. ASMIRT Qld weekend conference: Rays on the Range. 7 November 2020. Toowoomba, Australia.
- Tippet, V. Can SGRT reduce IGRT for lung SBRT patients? ASMIRT Qld weekend conference: Rays on the Range. 7 November 2020. Toowoomba, Australia.
- 8. Vincent, D.; Morrison, K. Danger Will Robinson! Are we ready for Robots in Healthcare? ASMIRT Qld weekend conference: Rays on the Range. 7 November 2020. Toowoomba, Australia.
- Kairn T, Lathouras M, Sylvander S, Crowe S. Investigating dose calculation accuracy around gas-filled tissue expanders using 3D-printed phantoms. European Society for Radiotherapy and Oncology 2020. Virtual Conference, Austria.
- 10. Kairn T, Obereigner E, Tutaki T, Livingstone A, Cleland S, Dawes J, McDowall R, Simpson-Page E, Cassim N, Charles P, Sylvander S, Crowe S. Improving the accuracy and effectiveness of radiotherapy treatments through the clinical introduction of novel 3D-printed patient-specific boluses and positioning devices. Herston Health Precinct Symposium 2020. Brisbane, Australia.
- **11. Simpson-Page E, Livingstone A, Peet S, Crowe S.** 3D printed Winston Lutz phantom for LINAC Quality Assurance. Engineering and Physical Sciences in Medicine 2020. Virtual Conference, Australia.

Allied Health Professions



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

Allied Health Professions have expanded their research program in cancer care services throughout 2020. Our research incorporates multidisciplinary teams within the key cancer care service areas of radiation oncology, medical oncology, haematology/BMT. We value our ongoing collaboration with services such as QIMR, QLD PET Service, Gastroenterology, ENT, and others who form part of our research teams. This year we continued to expand research collaborations with major academic and clinical centres of excellence across Australia as well as the developing new research partnerships with teams in Asia, Europe, and the USA.

Allied Health research within the field of cancer care is dedicated to improving the delivery of care and outcomes for our patients and enhancing service delivery. We achieve this by leading a diverse range of studies that engage consumers and clinicians in the co-design of cancer services, examine outcomes to develop new clinical practices, education programs, and service delivery models, and utilise technology (virtual reality, telehealth and mHealth) to enhance the delivery of care.

The quality of Allied Health research has continued receive national and international recognition and we are proud of the many achievements celebrated during 2020. Highlights include –

- Dr Laura Moroney (Speech Pathology) had her degree conferred by The University of Queensland. Laura's PhD program examined the incidence and severity of dysphagia and related toxicities of patients with HNC cancer undergoing helical intensity modulated radiotherapy +/- chemotherapy to inform speech pathology management practices.
- Emilie Croisier (Nutrition & Dietetics) and Kirsty Quince (Physiotherapy) both received prizes for their research at national conferences.
- Allied Health clinicians were awarded 11 research grants totalling \$343,000.
- 30 research studies were led by Allied Health clinician researchers and 19 in collaboration with other teams.
- 8 peer reviewed publications and 14 national and international conference presentations.

7 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.

| Recipient | Award | Event |
|-----------------|--|--|
| Kirsty Quince | Best Oral Presentation – First Time Presenter | 13 th ALA Virtual Conference, 28th May, 5 July 2020 |
| Emilie Croisier | First Place in Three Minutes to Shine | Queensland Dietitians Symposium, 13th March 2020 |
| Emilie Croisier | People's Choice in Three Minutes to Shine | Queensland Dietitians Symposium, 13th March 2020 |
| Emilie Croisier | Best oral or poster presentation by a Health Practitioner researcher | Herston Symposium, 10th December 2020 |
| Clare Burns | Rising Star Category - Highly commended | Metro North HHS Research Excellence Awards, 29 th October 2020 |

Research Awards and Achievements

Research Grants Awarded in 2020

| Investigator Names | RBWH Departments / Research Groups | Research Project Title | Granting Body | Total Awarded | Year/s |
|---|--|--|--|-----------------------------------|-----------|
| Elise Gane, Shaun O'Leary, Caroline Speksnijder | RBWH Physiotherapy | Neck rehabilitation after neck dissection for head and neck cancer: a pilot intervention study. | ANZHNCS Research Foundation Board | \$15,000 | 2020 |
| Natasha Roberts, Leonie Naumann | Physiotherapy, Cancer Care | Nurse-led symptom management in medical oncology care | RBWH Foundation Diamond Care Grants 2019 | \$39,027 | 2019-2020 |
| Leonie Naumann, Jennifer Paratz, Hildegard Reul- Hirche, Michelle Cottrell, Clare Burns, Anna Finnane, Tracy Comans, Trevor Russell, Kirsty Quince | Physiotherapy, Speech Pathology, UQ | A telehealth model for education and monitoring of early lymphoedema detection and shoulder dysfunction in patients after breast cancer surgery: a pilot cohort study | RBWH Foundation Diamond Care Grants 2019 | \$12,816 | 2019-2020 |
| Kyla Stableford | Physiotherapy | Exercise during and after cancer treatment | 2020 RBWH Physiotherapy Department Internal Grant | \$6,402 | 2020-2021 |
| Natasha Roberts, David Wyld, Gary Power, Helene Jacmon, Teresa Brown , Leonie Naumann, Erin Molloy, Suzette Fox, Greg Lewis, Many Fairclough, Maree Grier, Kieron Barker, Therese Hayes, Jenni Leutenegger, Nicole Gavin, Elise Button | Cancer Care Services, Nutrition and Dietetics, Physiotherapy, Social Work, Psychology | A Co-designed implementation science strategy with clinicians, consumers and researchers for symptom- management in oncology care | Diamond Care Grants | \$39,027 | 2020 |
| Sarah Andersen, Teresa Brown, Glen Kennedy (CCS), Frederik Steyn (Neurology & UQ), Rebecca Fichera | Nutrition and Dietetics, Cancer Care Services, UQ | Energy expenditure in patients undergoing allogeneic stem cell transplantation | RBWH Foundation Research project grant | \$39,147 | 2020 |
| Sarah Andersen, Andrea Henden, Glen Kennedy, Merrilyn Banks | Nutrition and Dietetics, Clinical Haematology | Prebiotics, microbial diversity and clinical outcomes post allogeneic stem cell transplantation | Nutricia Research Foundation | € 28 900 (approx. \$46,500) | 2021 |
| Teresa Brown | Nutrition and Dietetics | A feasibility study to investigate taste changes post-treatment in patients with head and neck cancer and their association with genes and dietary behaviour | RBWH Foundation Postdoctoral Fellowship | \$45,788 | 2020 |

| Investigator Names | RBWH Departments / Research Groups | Research Project Title | Granting Body | Total Awarded | Year/s |
|---|--|--|--|---------------|-----------|
| Clare Burns | Speech Pathology, UQ, AusHSI (QUT) | Enhancing speech pathology dysphagia services through telepractice | MNHHS Clinician Fellowship | \$175,000 | 2019-2022 |
| Marissa Ryan, Christine Carrington, Liz Ward, Clare Burns , Centaine Snoswell, Mhairi Mackinnon | Pharmacy PAH, Cancer Care PAH, CFAHR Metro South, Speech Pathology | Development, implementation and evaluation of a Cancer Pharmacy Service for adult patients at the Princess Alexandra Hospital | Princess Alexandra Hospital Foundation Grant | \$25,000 | 2020 |
| Nadia de Silva, Lindy Jeffree, David Copland | Speech Pathology, Neurosurgery. UQ | Development of an innovative intra-operative language testing battery for patients with brain tumours | RBWH Diamond Care Grant | \$28,202.50 | 2020 |

Current RBWH Department / Research Group Led Research Activity

| Lead Investigator Name | Other Study Investigators (RBWH staff in bold) | Research Project Title | Number of Patients RBWH Recruited in 2020 | Total number of Patients Recruited (all sites) |
|------------------------------|--|---|---|--|
| Leonie Naumann | Jennifer Paratz, Michelle Cottrell, Hildegard Reul Hirche, Kirsty Quince (Physiotherapy), Clare Burns (Speech Pathology), Tracy Comans (UQ), Anna Finnane (UQ), Trevor Russell (UQ) | A telehealth model for education and monitoring for early lymphoedema detection and shoulder dysfunction in patients after breast cancer surgery: A pilot cohort study | 10 | 55 |
| Kirsty Quince | Leonie Naumann, Michelle Cottrell, Hildegard Ruel-Hirche (Physiotherapy), Kowsalya Murugappan (Centre for Breast Health, RBWH) | Incidence of lymphoedema following lymph node removal in the surgical treatment of breast cancer: a retrospective audit | 254 | 254 |
| Kyla Stableford | Leonie Naumann, Kirsty Quince, Julie Adsett (Physiotherapy) | Increasing exercise participation in the cancer care wards at Royal Brisbane and Women's Hospital | N/A | |
| Robyn Scheer | Nicole Andrews Erin Crofton (Occupational Therapy) | The effect of limb position on leg circumference measurements in patients diagnosed with lower limb lymphoedema. | | |
| Claire Blake | Merrilyn Banks (Nutrition & Dietetics), Mark Appleyard (Gastroenterology) | Cost effectiveness of Dietitian-led PEG service | N/A | |
| Claire Blake | Elise Treleaven, Ally di Bella, Teresa Brown, Adrienne Young (Nutrition & Dietetics), Jenni Leutenegger (Cancer Care), David Wyld (Cancer Care) | Implementation of patient-led malnutrition screening in the cancer care ambulatory setting | 96 | |

| Lead Investigator Name | Other Study Investigators (RBWH staff in bold) | Research Project Title | Number of Patients RBWH Recruited in 2020 | Total number of Patients Recruited (all sites) |
|------------------------------|--|---|---|--|
| Claire Blake | Rainbow Lai (UQ), Teresa Brown (Nutrition & Dietetics), Anita Pelecanos, David Smith (QIMR), Laura Moroney, Jennifer Helios (Speech Pathology), Brett Hughes, Liz Kenny, Benjamin Chua (Cancer Care), Judith Bauer (UQ) | Nutrition outcomes and treatment toxicities in patients with head and neck cancer receiving helical intensity-modulated radiotherapy | N/A | |
| Claire Blake | Teresa Brown (Nutrition & Dietetics), Anita Pelecanos (QIMR), Laura Moroney, Jennifer Helios (Speech Pathology), Brett Hughes, Liz Kenny (Cancer Care), | Enteral nutrition support and treatment toxicities in patients with head and neck cancer receiving helical intensity-modulated radiotherapy with concurrent chemotherapy or surgery | N/A | |
| Claire Blake | Anna Edwards (UQ), Elise Treleaven, Teresa Brown, Merrilyn Banks (Nutrition & Dietetics),), Brett Hughes, Charles Lin, Liz Kenny, Benjamin Chua (Cancer Care), Judith Bauer (UQ) | Outcomes of new model of care in head and neck cancer with pre chemoradiotherapy education and proactive tube feeding | N/A | |
| Claire Blake | Joanne Hiatt, Emma Osland (Nutrition & Dietetics), Kay Lasenby (Gastroenterology) | Consumer Engagement of gastrostomy service design and evaluation | 18 | |
| Emilie Croisier | Kelly D'Cunha (UQ), Teresa Brown (Nutrition & Dietetics), Judy Bauer (UQ) | Exploration of current dietetic practices for patients with gynaecological cancers undergoing radiotherapy in Australia: a cross sectional survey | 0 | |
| Emilie Croisier | Alana Morrissy (UQ), Teresa Brown (Nutrition & Dietetics), Alice Grigg, Philip Chan, Jeffrey Goh (Cancer Care), Judy Bauer (UQ) | The nutritional and clinical implications of pelvic radiotherapy in the gynaecology oncology population – a retrospective observational study | 0 | |
| Emilie Croisier | Teresa Brown (Nutrition & Dietetics), Alice Grigg, Philip Chan, Jeffrey Goh (Cancer Care), Judy Bauer (UQ) | Role of dietary fibre for patients receiving pelvic radiotherapy in the gynaecology oncology population | 0 | |
| Joanne Hiatt | Teresa Brown, Merrilyn Banks, Adrienne Young (Nutrition & Dietetics), Judy Bauer (UQ) | Patient Experience of Nutrition Care across three treatment modalities for the management of head and neck cancer. | 0 | |

| Lead Investigator Name | Other Study Investigators (RBWH staff in bold) | Research Project Title | Number of Patients RBWH Recruited in 2020 | Total number of Patients Recruited (all sites) |
|------------------------------|---|--|---|--|
| Joanne Hiatt | Teresa Brown, Merrilyn Banks, Adrienne Young (Nutrition & Dietetics), Judy Bauer (UQ), Lizbeth Kenny, Carly Smith (Cancer Care), Gregory Lewis (Social Work), Maree Grier (Psychology), Clare Burns (Speech Pathology), Prof Jane Turner, UQ | Improving accessibility of nutrition care and peer support following head and neck cancer treatment using experience-based co-design online | 0 | |
| Joanne Hiatt | Teresa Brown, Merrilyn Banks, Adrienne Young (Nutrition & Dietetics), Judy Bauer (UQ), Bronwyn Segon (UQ) | Exploring differences in the carer experience of nutrition care between different treatment modalities for head and neck cancer | 0 | |
| Joanne Hiatt | Angela Byrnes (Nutrition & Dietetics) | Implementation of enteral feeding protocol for patients on 8AN | N/A | |
| Rebecca Fichera | Teresa Brown, Sarah Andersen (Nutrition & Dietetics), Glen Kennedy, David Williams (Cancer Care) | New Model of Care for autologous stem cell transplant patients (AutoCare): adherence and clinical outcomes | 18 | |
| Rebecca Fichera | Chin Chin Sarah Siow (QUT), Helen MacLaughlin, Claire Blake (Nutrition & Dietetics), | Outcomes of nutrition and physical activity- based cancer survivorship programs – a systematic review | N/A | |
| Sarah Andersen | Rebecca Fichera, Teresa Brown (Nutrition & Dietetics), Glen Kennedy, David Williams (Cancer Care) | Audit of new nutrition support protocol for allogeneic transplantation | N/A | |
| Sarah Andersen | Teresa Brown (Nutrition & Dietetics), Glen Kennedy (Cancer Care), Frederik Steyn (Neurology & UQ) | Energy expenditure in patients undergoing allogeneic stem cell transplantation | 0 | |
| Sarah Andersen | Madison Jefferis (UQ), Cameron Curley (Cancer Care), Teresa Brown (Nutrition & Dietetics), Judy Bauer (UQ) | Investigating the effect of malnutrition on clinical outcomes post allogeneic stem cell transplantation | N/A | |
| Teresa Brown, | Merrilyn Banks (Nutrition & Dietetics), Brett Hughes, Charles Lin, Liz Kenny (Cancer Care), Elizabeth Ahern (Monash), Louise Campbell (Qld PET Service), Judy Bauer (UQ) | Body composition and sarcopenia in patients with head and neck cancer | N/A | |

| Lead Investigator Name | Other Study Investigators (RBWH staff in bold) | Research Project Title | Number of Patients RBWH Recruited in 2020 | Total number of Patients Recruited (all sites) |
|------------------------------|---|---|---|--|
| Teresa Brown | Daniel Hwang (UQ), Elise Treleaven (Nutrition & Dietetics), Brett Hughes, Liz Kenny, Charles Lin (Cancer Care), Penny Webb, Anita Pelecanos (QIMR), Judy Bauer (UQ) | A feasibility study to investigate taste changes post treatment in patients with head and neck cancer and their association with genes and dietary behaviour | 0 | |
| Teresa Brown | Aaron Chan (UQ), Angela Byrnes, Kate Dwyer, Merrilyn Banks (Nutrition & Dietetics), Brett Hughes, Charles Lin, Liz Kenny (Cancer Care), Ann-Louise Spurgin, Jane Crombie (Speech Pathology), Judy Bauer (UQ) | Impact of helical IMRT on proactive PEG placement in patients with head and neck cancer – guideline revalidation | N/A | |
| Teresa Brown | Louise Cooney (PAH), Eliza Kern (PAH), Suzie Ahern (Nutrition & Dietetics), Brett Hughes, Liz Kenny (Cancer Care), David Smith (QIMR), Louise Elvin Walsh (PAH), Sandro Porceddu (PAH), Bena Brown (PAH), Ingrid Hickman (PAH) | Comparison of nutrition outcomes with proactive and reactive nutrition support approaches for high risk patients with head and neck cancer | N/A | |
| Clare Burns | Liz Ward (CFAHR, Metro South, UQ), Jasmine Foley (UQ), Rebecca Nund (UQ), Laurelie Wall (Metro South, UQ), Dr Maurice Stevens (ENT), Liz Kenny (Cancer Care) | Understanding the regional and remote head and neck cancer patient services journey | 93 | |
| Clare Burns | Elizabeth Ward (CFAHR, Metro South, UQ), Claire Blake (Nutrition & Dietetics), Liz Kenny (Cancer Care), Rachael Villiers, Mia Hemingbrough, Kerrie- Anne Frakes (CQHHS), Tracy Comans (UQ), Phil Greenup (QH) | Implementation of a telepractice service providing specialist swallowing, nutrition, and communication intervention for patients with head and neck cancer | 0 | |
| Clare Burns | Annie Hill (UQ), Liz Ward (CFAHR, MSHHS, UQ), Lynell Bassett; Kate Hacking, Michelle Slee, Brooke Cowie Wendy Luttrell (MNHHS) | Examining stakeholder perceptions of an asynchronous telepractice program for the delivery of dysphagia rehabilitation | 10 | |
| Clare Burns | Annie Hill (UQ), Liz Ward (CFAHR, MSHHS, UQ), Sanjeewa Kularatna (AusHSI QUT) | Pilot trial of an integrated speech pathology telepractice service for dysphagia rehabilitation. | 6 | |

Collaborative Research Activity Involving RBWH Department / Research Group

| Lead Investigator Name | Other Study Investigators (RBWH staff in bold) | Research Project Title | Number of RBWH Patients Recruited in 2020 |
|---|---|---|--|
| Mathilde Desselle (QUT), Lucy Holland (QUT) | Dr Roger Altizer (QUT), Dr Natalie Bradford (QUT), Dr Jason Brown (Burns), Dr Ross Brown (QUT), Prof Raymond Chan (QUT/PAH), Christine Cotter (Social Work) , A/Prof Leila Cuttle (QUT), A/Prof Paul Gray (Pain), Rosyln Henney (QYCS), Prof Glen Kennedy (Cancer Care), Kaylah Moore, Stephen Payser (RBWH), Andrea McKittrick (Occupational Therapy), Dr Selen Turkay (QUT), Gavin Winter (QUT), Prof Patsy Yates (QUT) | PARM-VR: Co-design of an Innovative Virtual Reality (VR) Environment as a Pain and Anxiety Augmented Relief Method in Burns Survivors and Adolescents and Young Adults (AYAs) with Cancer | |
| Elise Gane (PAH) | Shaun O'Leary (Physiotherapy), Caroline Speksnijder | Neck rehabilitation after neck dissection for head and neck cancer: a pilot intervention study | N/A |
| Alex Molassiotis (Hong Kong) | Teresa Brown, Angela Byrnes, Rebecca Fichera (Nutrition & Dietetics), Ray Chan (PAH), Patsy Yates (QUT), Andrea Marshall (Griffith University), Liz Isenring (Bond University), David Wyld, Melissa Eastgate (Cancer Care) | A patient-family-centred intervention to promote nutrition in advanced cancer patients: a pilot randomised controlled trial | 46 |
| Alice Pashley (UQ) | Teresa Brown (Nutrition & Dietetics), Belinda Lehn (Speech Pathology), Rob Hodge (ENT), Judy Bauer (UQ) | Nutritional status and head and neck cancer surgical complications | N/A |
| Anna Edwards (UQ) | Teresa Brown (Nutrition & Dietetics), Brett Hughes (Cancer Care), Judy Bauer (UQ) | Investigating the incidence, prevalence and impact of sarcopenia for patients with HPV+ head and neck cancer | 0 |
| Anna Edwards (UQ) | Teresa Brown (Nutrition & Dietetics), Brett Hughes (Cancer Care), Judy Bauer (UQ) | Exploring the relationship between nutrition and sarcopenia development on outcomes for patients with HPV+ head and neck cancer | 0 |
| Elizabeth Ahern (Monash) | Teresa Brown, Merrilyn Banks, (Nutrition & Dietetics), Brett Hughes, Charles Lin, Liz Kenny, (Cancer Care), Louise Campbell (PET), Judy Bauer (UQ) | Impact of sarcopenia and low muscle attenuation with survival outcomes at 1,3-,and 5-years post treatment for head and neck cancer | N/A |
| Elizabeth Ahern (Monash) | Teresa Brown, Merrilyn Banks, (Nutrition & Dietetics), L ouise Campbell (PET), Brett Hughes, Charles Lin, Liz Kenny (Cancer Care), Judy Bauer (UQ) | Impact of early proactive nutrition intervention on survival outcomes at 1,3,and 5 years post treatment for head and neck cancer | N/A |
| Irene Deftereos (Western Health Melbourne) | Nicole Kiss, Justin Yenug (University of Melbourne), Vanessa Carter (Western Health), Teresa Brown (Nutrition & Dietetics) , Sharon Carey (RPA) | Awareness and perceptions of nutrition support in upper gastrointestinal cancer surgery: A national survey of multidisciplinary clinicians | |

| Lead Investigator Name | Other Study Investigators (RBWH staff in bold) | Research Project Title | Number of RBWH Patients Recruited in 2020 |
|--|--|---|--|
| Kate Mellors (UQ) | Xiaodan Ye, Johnathon van den Brande, Tsz Wai Ray Mak (UQ), Merran Findlay (RPA), Teresa Brown (Nutrition & Dietetics) , Judy Bauer (UQ) | The impact of prophylactic percutaneous endoscopic gastrostomy (PEG) tube placement versus reactive tube feeding (nasogastric or gastrostomy) in aptients with head and neck cancer undergoing radiotherapy or chemoradiotherapy: A systematic review. | N/A |
| Kimberley Anakapu (UQ) | Michael Wilson (UQ), Merran Findlay (RPA), Teresa Brown (Nutrition & Dietetics) , Judy Bauer (UQ) | Does transoral robotic surgery of head and neck cancers lead to improved nutritional outcomes compared to conventional open surgery? A systematic review | N/A |
| Nicole Gavin (Cancer Care) | Glen Kennedy (Cancer Care), David Patterson (Infectious Diseases), Claire Rickard (Griffith Uni), Sarah Andersen (Nutrition & Dietetics), Elise Button, Rebecca Lippiatt (Cancer Care) | Exploring changes in gastrointestinal tract microbiome and their influence on mucosal barrier injury laboratory confirmed bloodstream infection in patients diagnosed with high risk features of acute myeloid leukaemia | 20 |
| Nicole Gavin (Cancer Care) | Glen Kennedy (Cancer Care), Claire Rickard (Griffith University), Patrick Harris (UQ), Sarah Andersen (Nutrition & Dietetics), Elise Button, Rebecca Lippiatt (Cancer Care) | Improving central-line associated bloodstream infection diagnosis in malignant haematology patients with parenteral nutrition (Improving CLABSI Trial) | N/A |
| Oliver Ritchie (UQ) | Teresa Brown, Merrilyn Banks (Nutrition & Dietetics), Brett Hughes, Charles Lin, Liz Kenny (Cancer Care), Louise Campbell (Qld PET Service), Judy Bauer (UQ) | Comparison of body composition methods in head and neck cancer patients undergoing chemoradiotherapy – PET-CT vs BIA | 0 |
| Shu Fen Lee (Cancer Care) | Melissa Eastgate, David Wyld (Cancer Care), Teresa Brown (Nutrition & Dietetics) | Patient perceptions of diet and cancer – survey of cancer care patients | 0 |
| Haryana Dhilllon (University of Sydney), Joanne Shaw (University of Sydney), David Kissane (Monash University), Danette Langbecker (UQ), Kim Hobbs (Westmead Hospital), Laura Kirsten (Nepean Cancer Care Centre), Lisa Beatty (Flinders Centre for Innovation in Cancer), Lisa Vaccaro (University of Sydney) Carrie Lethborg (St | Maree Grier | Adjustment Working Group for the PoCoG -Transforming psychosocial care of patients in Australia: Implementation of a comprehensive training and service delivery program | |
| Carrie Lethborg (St Vincent's Hospital, Melbourne) | | | |

| Lead Investigator Name | Other Study Investigators (RBWH staff in bold) | Research Project Title | Number of RBWH Patients Recruited in 2020 |
|-------------------------------|--|---|--|
| Marissa Ryan (PAH) | Christine Carrington (PAH), Liz Ward CFAHR MSHHS, UQ), Clare Burns (Speech Pathology), Centaine Snoswell (UQ), Mhairi Mackinnon (PAH) | Development, implementation and evaluation of a cancer pharmacy service for adult patients at the Princess Alexandra Hospital | 91 |
| Laurie Wennerholm (USA) | JK Rasamny (USA), Craig Berzofsky, USA), Gina Palma (USA), Liz Ward (CFAHR, UQ), Clare Burns (Speech Pathology), Jasmine Foley (UQ) | Laryngectomy care pathways: Examining patient and clinician perspectives | 27 |
| Liz Ward (CFAHR MSHHS, UQ) | Laurie Wennerholm (USA), Clare Burns (Speech Pathology) | Examining international laryngectomy care during the COVID-19 pandemic: Informing a consensus-driven pathway for speech language pathology management. | N/A |

Research Publications

Journal Articles

- 1. Fox S, Lewis G. Life after head and neck cancer: Navigating the years ahead. Australian Social Work. Published online: 20 Jan 2020. DOI: <u>10.1080/0312407X.2019.1696847</u>
- Kiss N, Bauer J, Boltong A, Brown T, Isenring L, Loeliger J, Steer B, Findlay M. Awareness, perceptions and practices regarding cancer-related malnutrition and sarcopenia: a survey of cancer clinicians. Supportive care in cancer. 2020 DOI 10.1007/s00520-020-05371-7
- 3. Andersen S, Banks M, Brown T, Weber N, Kennedy G, Bauer J. Nutrition support during allogeneic stem cell transplantation: evidence versus practice. Supportive Care in Cancer. 2020 DOI 10.1007/s00520-020-05397-x
- 4. Andersen S, Banks M, Bauer J. Nutrition support and the gastrointestinal microbiota: A systematic review. Journal of the Academy of Nutrition and Dietetics, 2020, Vol 120, p1498-1516. <u>https://doi.org/10.1016/j.jand.2020.04.024</u>
- Hiatt J, Brown T, Banks M, Lewis CA, Bauer J. Patient and carer experience of nutrition care throughout treatment for head and neck cancer: a systematic qualitative review and thematic synthesis. Supportive Care in Cancer 2020. DOI 10.1007/s00520-020-05576-w
- Croisier E, Brown T, Bauer J. The efficacy of dietary fiber in managing gastrointestinal toxicity symptoms in patients with gynaecological cancers undergoing pelvic radiotherapy: A systematic review. Journal of the Academy of Nutrition and Dietetics. 2020 <u>https://doi.org/10.1016/i.jand.2020.08.077</u>
- Burns, C., Wishart, L., Kularatna, S. & Ward, E. (2020). Knowing the costs of change: an introduction to health economic analyses and considerations for their use in implementation research, *Speech, Language and Hearing, 23:1*, 30-36, DOI: 10.1080/2050571X.2019.1693750

Book Chapters / Letters

1. Messing, B.P., **Burns C.**, Wishart, L., Brown B., Swallowing function and implications in head and neck cancer. In Editors P Flint Eds. *Cummings Otolaryngology Head and Neck Surgery* pp. 1466-1474. Elsevier.

Invited Speaker

1. **Burns C.L.** I just called to say... All about telehealth. Swallowing Training and Education Portal: Swallowing Symposium, December 2020

Oral Presentations

- 1. **Quince K.** Incidence of lymphoedema following lymph node removal in the surgical treatment of breast cancer: a retrospective audit. ALA Conference, May 2020
- 2. **Reul-Hirche H, Naumann L.** Evaluation of a new approach to delivering advanced lymphoedema training for 2020 and beyond. ALA Conference, May 2020.
- Croisier E, Brown T, Bauer J. The clinical and nutritional implications of pelvic radiotherapy in gynaeoncology patients; a retrospective observational study. ANZ Gynae-Oncological Group Conference, Melbourne, Feb 2020 – cancelled due to COVID – Re-scheduled to Feb 2021
- Anakapu K, Wilson M, Brown T, Findlay M, Bauer J. Does transoral robotic surgery (TORS) for head and neck cancer lead to improved nutritional outcomes compared to open surgery? A systematic review. ESPEN, Virtual, September 2020
- 5. Tunzi L, Funk T, **Brown T**, Findlay M, Bauer J. Optimal frequency of individualised nutrition counselling in patients with head and neck cancer receiving treatment. ESPEN, Virtual, September 2020
- 6. Ye X, Chang Y, Findlay M, **Brown T**, Bauer J. Effect of Route and Timing of Enteral Nutrition Support on Tube Feeding Duration, Tube-related Complications and Dysphagia in Patients with Head and Neck Cancer Undergoing Treatment: A Systematic Review. ESPEN, Virtual, September 2020
- 7. **Croisier E,** D'Cunha K, **Brown T**, Bauer J. Exploration of current dietetic practices for patients with gynaecological cancers undergoing radiotherapy in Australia: a cross sectional survey. ESPEN, Virtual, September 2020
- Croisier E, D'Cunha K, Brown T, Bauer J. Exploration of current dietetic practices for patients with gynaecological cancers undergoing radiotherapy in Australia: a cross sectional survey. COSA, Brisbane/Virtual, November 2020
- Croisier E, Morrissy A, Brown T Croisier E, Morrissy A, Brown T, Grigg A, Chan P, Goh J, Bauer J. The clinical and nutritional implications of pelvic radiotherapy in patients with gynaecological cancers – a retrospective study. COSA, Brisbane/Virtual, November 2020
- Hiatt J, Brown T, Lewis CA, Young A, Banks M, Bauer J. Patient and carer experience of nutrition care throughout and beyond treatment for head and neck cancer: a qualitative longitudinal study. COSA, Brisbane/Virtual, November 2020
- **11. Brown T, Pacheco E,** Frederiksen P, Kennedy G. Implementation of Structured Interdisciplinary Bedside Rounds in cancer care: evaluation from an allied health perspective. COSA, Brisbane/Virtual, November 2020
- Foley J., Ward, E.C., Burns, C.L. Nund, R., Wishart, L. Graham, N., Patterson, C., Ashley, A., Fink, J., Tiavaasue, E., Comben, W. Speech pathology service enhancement for people with head and neck cancer living in rural areas: Using a concept mapping approach to inform service change. Brisbane Cancer Conference, December 2020

Poster Presentations

1. Naumann L. The establishment of a physiotherapy telehealth service for education and lymphoedema monitoring of patients after breast cancer surgery, ALA Conference, May 2020