



Royal Brisbane and Women's Hospital

RBWH Research Report 2024

Surgical and Perioperative Services

Metro North
Health



Queensland
Government



Metro North Health acknowledges the Traditional Custodians of the Land upon which we live, work and walk, and pay our respects to Elders both past and present.

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Surgical and Perioperative Services



Dr Barry O'Loughlin
Executive Director
Surgical & Perioperative Services

Outstanding clinical service, teaching and training is based on a strong foundation of research in Surgical and Perioperative Services. Longstanding partnerships with the University of Queensland, Queensland University of Technology and James Cook University continue but have been enhanced by collaboration with research institutes on campus – in particular, the Jamieson Trauma Institute, Herston Biofabrication Institute, Metro North Breast Cancer Institute and the Herston Imaging and Research Facility.

All Departments have contributed to a strong culture of research with numerous grant applications, projects, publications and conference presentations across the span of surgical endeavour.

Highlights of 2024 include the following:

The Department of Anaesthesia and Perioperative Medicine was again at the forefront receiving over \$1.5 million in grant funding which enabled numerous research projects. This resulted in 41 journal publications and four book chapters. This year Dr Michelle Roets and Associate Professor Kersi Taraporewalla were awarded PhD degrees and Professor Andre van Zundert an MD in recognition of their research.

Staff of the Department of General Surgery were also active in clinical research with the publication of 27 peer-reviewed journal articles in 2024. Professor David Clark and Associate Professor David Cavallucci are part of a research collaboration which was awarded a \$3 million grant from the Medical Research Future Fund to investigate treatment strategies to improve outcomes for colorectal cancer. Dr Andrew Zammit, an advanced trainee in general surgery was awarded a PhD in 2024 for his work on the management of malignant polyps.

The Urology Department researchers were awarded grants worth \$1.3 million to support a number of studies and staff were responsible for 28 peer-reviewed journal articles. Associate Professor Matthew Roberts received the Rising Star Award at the 2024 Metro North Health Research Excellence Awards.

The culture of clinical research was evident in the Department of Orthopaedic Surgery in 2024 with a number of significant clinical trials and the publication of 22 peer-reviewed journal articles. Associate Professor Kevin Tetsworth received the Outstanding Achievement Award at the ASAMI-BA & ILLRS Congress in Beijing in September 2024. This society is dedicated to the sub-speciality of limb reconstruction surgery.

The Department of Ophthalmology maintained its strong research focus spanning a wide spectrum of clinical issues and medical student teaching. Professor Tim Sullivan was prominent in the international oculoplastic surgical field and was an invited speaker to 14 international conferences in eight countries in 2024.

Oral and Maxillofacial Surgery had another successful research year with grant applications and staff were responsible for 18 publications in peer-reviewed journals.

Department of Anaesthesia: Research Interest Group in Anaesthesia (RIGA)

Research Highlights

Our Research Interest Group in Anaesthesia (RIGA) chaired by Professor Victoria Eley, continues to facilitate a successful research culture with an increasing group of researchers achieving patient-centred outcomes from high quality research. Our research activities continue with collaborations at state, national, and international levels. We provide mentorship and group support for novice and continuing researchers.

We have been well supported with grant funding for our 2024 research output. The department has been awarded \$1,501,764 for 5 departmentally led and 19 collaborative research studies. Our research output has resulted in 42 journal publications and 4 book chapters. We have participated at national and international conferences with multiple presentations and coordination of sessions, as well as hosting the 2024 Australian and New Zealand College of Anaesthetists' (ANZCA) Annual Scientific Meeting (ASM).

Our higher degree students have been successful. We congratulate Michelle Roets and Kersi Taraporewalla for completing their PhD doctoral studies, and Professor André van Zundert for achieving his Doctorate in Medicine by Research. Additionally, Michelle Roets has been appointed as Associate Professor, Faculty of Medicine, University of Queensland.

We are proud to honour our research award recipients:

Professor André van Zundert has been the recipient of multiple awards. These include an ANZCA Medal that recognizes major contributions by fellows to the status of anaesthesia and pain medicine, and the 2024 Australian Medical Association (AMA) Excellence in Healthcare Award in recognition of his commitment to medicine, research, teaching, and volunteering. He has also been granted the Royal Distinction of Commander in the Order of the Royal Crown by King Philippe of Belgium. Additionally, he has been listed as one of the World's Top 2% most-cited scientists 2024 by Stanford University rankings.

Michael Steyn has also been awarded a 2024 ANZCA Medal.




Victoria Eley and her research team were recognized in the prestigious Metro North Excellence Awards 2024 with a Clinical Research Award for their study: Optimising the Perioperative Care of Patients with Obesity.

Michelle Roets and her research team received the Discovery Research Award at the Metro North Excellence Awards 2024 for her study: Technological Advances and Improved Patient Outcomes Following Intraoperative Cell Salvage. She also gained a 2024 University of Queensland Medical School Publication Award for her article: Intraoperative cell salvage: The impact on immune cell numbers.

Angela Tognolini won the 2024 Gilbert Brown Prize at the ANZCA ASM for the 'Best contribution to the free research paper session'. She also received the 2024 University of Queensland Mayne Academy of Critical Care Abstract Prize on the Critical Care Research Day, awarded to early, mid-career researchers, and higher degree research students.

Our comprehensive programme of research studies aims to optimise anaesthetic care and patient outcomes. This research involves diverse topics including cell salvage for intraoperative blood replacement, medications for optimal pain relief, the delivery of different anaesthesia types for effective patient outcomes, ultrasound techniques to improve practice, anaemia in chronic pain patients, drug actions, evaluation of blood pressure monitoring to determine accuracy in bariatric patients, and investigation of perioperative hypothermia to assess incidence and patient impact. Studies are performed in high-risk patient populations including those with cancer, pregnant women, and bariatric patients. We continue to carry out world class research supported by our strong research infrastructure that promotes best practice in anaesthesia.

Successful Research Higher Degree candidates in 2024

Name	PhD Title	Month Completed	Affiliated University	Summary
Michelle Roets (PhD)	Intraoperative cell salvage (ICS) as an alternative to allogeneic (donated) blood transfusion (ABT): An evaluation of immune related adverse outcomes	December 2024	University of Queensland	Transfusion related immune modulation (TRIM) and associated adverse outcomes (i.e., infection, myocardial infarction, stroke, renal failure etc.) hold serious implications for clinical patient care and the cost of healthcare services, internationally. Intraoperative cell salvage (ICS), as an alternative to allogeneic (donated) blood transfusion (ABT), may provide immunological benefits and improve patient outcomes. Discovered evidence within this thesis confirmed the opportunity to grow ICS services, improved immune competence when comparing ICS and ABT (in vitro), and the association between immune cell numbers and post-operative outcomes in transfused patients. Future advances in technology will improve patient outcomes during peri-operative transfusion.
				
Kersi Taraporewalla (PhD)	The Adaptation of Motor Learning Theory in Medical Procedural Tasks	December 2024	University of Queensland	The constraint-led approach (CLA), utilising non-linear pedagogy to teach the psychomotor skills of anaesthesia is a concept not previously considered by anaesthesia education. The aim of this study is to compare the efficiency and efficacy of CLA with present methods of teaching anaesthesia motor skills
				
André van Zundert (Doctorate in Medicine by Research)	The evolution of "blind inserted to vision" guided insertion of supraglottic airway devices	December 2024	University of Queensland	This thesis presents improvements in positioning, efficacy and safety of supraglottic airway devices.
				

Research Awards and Achievements

Recipient (RBWH staff in bold)	Award	Event
André van Zundert	2024 Australian and New Zealand College of Anaesthetists' (ANZCA) Medal	2024 ANZCA Annual Council Awards
André van Zundert	2024 Australian Medical Association (AMA) Excellence in Healthcare Award in recognition of his commitment to medicine, research, teaching, and volunteering	2024 AMA Annual Awards
Michael Steyn	2024 ANZCA Medal	2024 ANZCA Annual Council Awards
Victoria Eley	2024 Clinical Research Award: Optimising the Perioperative Care of Patients with Obesity	2024 Metro North Excellence Awards Ceremony
Michelle Roets	2024 Discovery Research Award: Technological Advances and Improved Patient Outcomes Following Intraoperative Cell Salvage (TAIPO-ICS)	2024 Metro North Excellence Awards Ceremony
Michelle Roets	2024 Medical School Publication Award: Intraoperative cell salvage: The impact on immune cell numbers. PLoS One 2023 18 (8): e0289177	University of Queensland Annual Medical School Awards, 15 November 2024
Angela Tognolini	2024 Gilbert Brown Prize	ANZCA ASM, Best contribution to the free research paper session, 6 May 2024
Angela Tognolini	2024 UQ Mayne Academy of Critical Care Abstract Prize	University of Queensland Mayne Academy of Critical Care Research Day Awards to early, mid-career researchers, and HDR students, 6 November 2024

Research Grants

Investigator Names (RBWH staff in bold)	RBWH Departments / Research Groups	Research Project Title	Granting Body	Total Awarded (whole all years)	Length of Awards in years and years active
Kerstin Wyssusek, Christine Woods, Liam Busuttin, Gerard Eames	Department of Anaesthesia & Perioperative Medicine	Implementation of a scenario-based simulated program for Pyxis™ Anesthesia Stations within a hospital setting to improve acceptability, usability, and operational training requirements: A mixed-methods observational study	Becton Dickson	\$123,000	4 years, 2021-2024
Victoria Eley	Department of Anaesthesia and Perioperative Medicine	Clinical Research Fellowship	Metro North Hospital and Health Services	\$450,000	4 years, 2021-2024
Kerstin Wyssusek, Paul Gray, Christine Woods, Anita Pelecanos, Julie Lee, Michelle Spanevello	Department of Anaesthesia and Perioperative Medicine	Intravenous iron infusion therapy in chronic pain patients with iron deficiency: VITAL, a randomised controlled trial	Pharmacosmos	\$79,860.24	4 years, 2021-2024
Anthony Hodge, Jason Roberts, Victoria Eley, Steven Wallis, Angela Tognolini	Department of Anaesthesia and Perioperative Medicine	Pharmacokinetic profile of sugammadex in the obstetric population	ANZCA Novice Investigator Grant	\$19,999	3 years, 2022-2024
Anthony Hodge, Jason Roberts, Victoria Eley, Steven Wallis, Angela Tognolini	Department of Anaesthesia and Perioperative Medicine	Pharmacokinetic profile and breastmilk excretion of sugammadex in pregnant women	RBWH and RBWH Foundation Research Project Grant	\$74,903.85	3 years, 2022-2024

Investigator Names (RBWH staff in bold)	RBWH Departments / Research Groups	Research Project Title	Granting Body	Total Awarded (whole all years)	Length of Awards in years and years active
Victoria Eley	Department of Anaesthesia and Perioperative Medicine	Optimising perioperative blood pressure measurement in obese patients: a program of research	ANZCA Academic Enhancement Grant	\$100,000	5 years, 2020-2024
Michelle Roets	Department of Anaesthesia and Perioperative Medicine	How effective is intraoperative cell salvage (ICS) and a leuco-depletion filter (LDF) in removing cancer cells and bacteria during pelvic exenteration surgery?	The Patricia Mackay Memorial ANZCA Research award	\$66,231	2 years, 2023-2024
Michael Boules	Department of Anaesthesia and Perioperative Medicine	PONI Study: Postoperative neural injury in non-neurosurgical procedures: A prospective observational study of elective vitrectomy in patients 60 years or older	UQ Mayne Academy of Critical Care Research	\$10,000	2 years, 2023-2024
Victoria Eley, Christoph Lehner, Elizabeth Martin, Nigel Lee, Tim Donovan, Jayesh Dhanani, Jason Roberts	Department of Anaesthesia and Perioperative Medicine	Nebulised fentanyl for labour pain – a pharmacokinetic and feasibility study	ANZCA Project Grant	\$63,483	2 years, 2023-2024
Lauren Kearney, Victoria Eley , Deanne August, Christoph Lehner, Bec Jenkinson, Amanda Ullman, Nicole Marsh , Rachel Nugent, Nigel Lee, Susan de Jersey, John Thompson, Jean Spinks	Department of Anaesthesia and Perioperative Medicine	Fluids in labour: Ensuring Maternal Euvolaemia (FLUME) study	RBWH SERTA Grant	\$70,000	2 years, 2023-2024
Fraser Morton, Michael Busser, Victoria Eley	Department of Anaesthesia and Perioperative Medicine	The relationship between hunger and gastric volumes assessed by ultrasound in patients with an acute abdomen	ANZCA Project Grant	\$17,808	2 years, 2023-2024
André van Zundert	Department of Anaesthesia and Perioperative Medicine	Anaesthesia reversal agents: Investigating a presynaptic target mechanism	ANZCA Project Grant	\$70,000	2 years, 2023-2024
Anthony Eidan, Gladness Nethathe, Christine Woods, John Riordan, Fraser Morton, Jessica Lim, Michael Toon	Department of Anaesthesia and Perioperative Medicine	Quality of Recovery Comparison between Opioid- Free Anaesthesia and Opioid-Containing Anaesthesia for Elective Laparoscopic Surgery	ANZCA Novice Investigator Grant	\$19,134	3 years, 2024-2026
Michael Boules	Department of Anaesthesia and Perioperative Medicine	Postoperative neural injury in non-neurosurgical procedures: prospective observational study in older adults	ANZCA Novice Investigator Grant	\$20,000	4 years, 2024-2027
André van Zundert	Department of Anaesthesia and Perioperative Medicine	Human brain organoid models to investigate anaesthesia induction and reversal agents	ANZCA Project Grant	\$69,952	3 years, 2024-2026

Investigator Names (RBWH staff in bold)	RBWH Departments / Research Groups	Research Project Title	Granting Body	Total Awarded (whole all years)	Length of Awards in years and years active
Eley VA	Department of Anaesthesia and Perioperative Medicine	International multicentre study: Inadequate neuraxial anaesthesia and post-natal mental health	ANZCA Clinical Trials Network Pilot Grant	\$10,000	4 years, 2024-2027
Judy Munday, Jed Duff , Fiona Wood, David Sturgess , Samantha Keogh, Nicholas Ralph, Lee Jones, Katharina Merollini, Ian Graham, Christine Woods , Kerstin Wyssusek , Elizabeth Strathdee	Department of Anaesthesia and Perioperative Medicine	The GLOW Trial: Implementing Guidelines for hypothermia prevention With Local adaptation to keep perioperative patients warm	NHMRC Partnership Grant	\$183,071	3 Years, 2023-2026
Paul Lant, Clement Chan, Bronwyn Laycock, Steven Pratt, Kerstin Wyssusek	Department of Anaesthesia and Perioperative Medicine	Biodegradable Plastic Composites for Healthcare in Queensland – Medication and Procedural Tray Clinical Evaluation Project	State of Qld, Dept of Environment, Science and Innovation Grant	\$21,822	2 Years, 2024-2025

RBWH Department / Research Group Led Research Activity

Lead Investigator Name (RBWH staff and consumers in bold)	Other Study Investigators (RBWH staff and consumers in bold)	Research Project Title	Consumer involvement	Number of RBWH Patients Recruited
Fraser Morton	Victoria Eley , Matthys Campher, Emma Ballard, David Cavallucci , Nathan Peters , Peter Van de Putte	GASTRIC ULTRASOUND STUDY: The relationship between hunger and gastric volumes assessed by ultrasound in patients with acute abdomens	3	24
Victoria Eley	Adrian Chin , Anita Pelecanos, George Hopkins , Moe Thuzar, Severine Navarro, Michael Stowasser	BEAM and BEAM Plus: BP error and Arm Morphology Studies	3	36
Anthony Hodge	Jason Roberts , Victoria Eley , Steven Wallis, Angela Tognolini	Pharmacokinetic profile of sugammadex in the obstetric population	3	4
Anthony Eidan	Geraldine Griffiths, Victoria Eley , Gladness Nathathe , Christine Woods , Fraser Morton , John Riordan, Adam Cowan, Anna Surla	OFA: Comparison of opioid versus opioid- free anaesthesia for elective laparoscopic abdominal surgery	3	8
Kerstin Wyssusek	Paul Gray , Christine Woods , Julie Lee , Anita Pelecanos , Greg Anderson	VITAL: The efficacy of IntraVenous Iron Therapy in persistent pAin patients with iron deficiency: a randomized controlled trial	3	16

Collaborative Research Activity Involving RBWH Department / Research Group

Lead Investigator Name (RBWH staff and consumers in bold)	Other Study Investigators (RBWH staff and consumers in bold)	Research Project Title	Consumer involvement	Number of RBWH Patients Recruited
Andrew Souness	Angela Tognolini , Dwane Jackson, Kerstin Wyssusek , David Taylor , Craig Harris , Rachel Esler , Nicholas Black	Near-infrared spectroscopy (NIRS) monitoring for early detection of Lower limb ischaemia in pelvic exenteration surgery	3	

Lead Investigator Name (RBWH staff and consumers in bold)	Other Study Investigators (RBWH staff and consumers in bold)	Research Project Title	Consumer involvement	Number of RBWH Patients Recruited
Angela Tognolini	Anthony Hodge, Victoria Eley, Adrian Chin, David Belavy, Elizabeth Martin, Christine Woods	Prospective observational study of the anaesthetic and perioperative management of patients with confirmed or suspected coronavirus disease 2019 (COVID-19)	3	
Nathan Peters	Frances Williamson, Michelle Bauer, Peter Snelling, Nicole Marsh, Stacey Llewellyn, Adam Stewart, Patrick Harris, Claire Rickard	ULTIMO: Non-inferiority of low-level versus high-level disinfection for elimination of bacteria on contaminated ultrasound transducers: A randomised controlled trial	3	
Victoria Eley	Rebecca Christensen, Helen Barrett, Michael Stowasser, Matthew Smith, Andre van Zundert	CLEARSITE IN PREGNANCY: A validation study of blood pressure readings from the Clearsite finger- cuff compared with invasive blood pressure readings in pregnant women undergoing elective Caesarean section, who have arms which don't suit regular arm cuffs	3	
Victoria Eley	Nathan Peters, Christine Woods, Anita Pelecanos, Teal Derboghossian, Tony Lightfoot, Murray Ogg, Claire Rickard, Adrian Chin	TARTAN: Thrombus after ARTeriAl liNes: Incidence of radial arterial thrombus following arterial line catheterization – an audit of clinical practice and the patient experience		
Victoria Eley	Severine Navarro, Elizabeth Martin, Gunter Hartel, Akwasi Amoako, Jeffrey Lipman, Jason Roberts, Leonie Callaway, Mimi Tang	ASCENT: Intravenous cefazolin vs placebo for pre-incision prophylaxis in very low risk women undergoing elective caesarean section: RCT Pilot Feasibility Study	3	
Victoria Eley	Nathan Peters, Adrian Chin, Christine Woods, A/Prof Ban Leong Sng	Automated spinal landmark identification with ultrasound scanning in patients with BMI >35kg/m ²	3	20
Adrian Chin	Victoria Eley, David Belavy, Angela Tognolini, Anita Pelecanos, Christine Woods, Gunjan Chawla, Sheridan Bell, Ivan Rapchuk	A prospective, observational study of anaesthesia healthcare workers' interactions with COVID-19 positive patients and the occupational risk factors associated with contracting COVID-19	3	
Julie Lee	Jayesh Dhanani, Victoria Eley, Jason Roberts, Steven Wallis, Mohammed Abdul-Aziz	Comparative pharmacokinetics of nebulised and intravenous ketamine and dexmedetomidine in ventilated patients	3	
Victoria Eley		ABS-Road Analysis of state-wide ABS data regarding obesity and anaesthesia technique	3	
Michael Boules	Alison Mudge, Jonathon Fanning, Stuart McDonald, Lisbeth Evered, David Sturgess, André van Zundert, Anita Pelecanos, Victoria Eley	PONI Study: Postoperative neural injury in non-neurosurgical procedures: A prospective observational study of elective vitrectomy in patients 60 years or older	3	42
Victoria Eley	Christoph Lehner, Elizabeth Martin, Nigel Lee, Tim Donovan, Jayesh Dhanani, Jason Roberts	The FUN Study: Nebulised fentanyl for labour pain – a pharmacokinetic and feasibility study	3	2
Paul Myles	Wendy Brown, Mark Shulman, Trisha Peel, Robert Medcalf, Jessica Kasza, Sophie Wallace, Julie Lee	TRIGS: Tranexamic acid to Reduce Infection after Gastrointestinal Surgery	3	63

Lead Investigator Name (RBWH staff and consumers in bold)	Other Study Investigators (RBWH staff and consumers in bold)	Research Project Title	Consumer involvement	Number of RBWH Patients Recruited
Kate Leslie	David Story, Jai Darvall, Philip Peyton, Paul Myles, Tomás Corcoran, Timothy Short, Matthew Chan, Ben Olesnicky, Julie Lee	SNaPP Study: Sugammadex, Neostigmine and Postoperative Pulmonary Complications	3	61
Michelle Roets	Melinda Dean, Angela Tognolini, Craig Harris, Mahendra Singh, Peter Simpson, Andrew Dalley, David Sturgess, Vicki Swaine, Christine Woods, Rhys Morgan, Peter Steyn, Patrick Harris, Michael Thomas	How effective is intraoperative cell salvage (ICS) and a leuco-depletion filter (LDF) in removing cancer cells and bacteria during pelvic exenteration surgery? The C-I-ICS Study	2	
Michelle Roets	Melinda Dean, David Sturgess, Robert Flower, John-Paul Tung, Alexis Perros, Christine Woods, Andre van Zundert	GENetic profiling: Outcome Mechanism and Immunity , compare intraoperative Cell Salvage and allogeneic blood transfusion	3	20
Tomás Corcoran	Andrew Toner, Gillian Ormond, Natalie Hird, Julie Lee	LOLIPOP Trial: Long-term Outcomes of Lidocaine Infusions for Post-Operative Pain	3	4
Judy Munday	Jed Duff, Fiona Wood, David Sturgess, Kerstin Wyssusek, Elizabeth Strathdee, Samantha Keogh, Nicholas Ralph, Lee Jones, Katharina Merollini, Ian Graham, Christine Woods	The GLOW Trial: Implementing Guidelines for hypothermia prevention With Local adaptation to keep periOperative patients Warm	3	140
Claire Rickard	Nathan Peters, Joel Thomas, Adam Trebilco, Christine Woods, Christine Brown, Pauline Calleja, Claire Rickard	Virtual supervision of novice Ultrasound guided peripheral intravenous cannulation practitioners (USGPiVC) in rural hospitals. Enhancing transition into the workplace	3	

Research Publications

Authors

Investigator	ORCID ID	Investigator	ORCID ID
Andre van Zundert	https://orcid.org/0000-0002-1836-6831	Louis Guy	https://orcid.org/0000-0001-7954-4534
Victoria Eley	https://orcid.org/0000-0002-6715-9193	Angela Tognolini	https://orcid.org/0000-0002-8847-7422
Julie Lee	https://orcid.org/0000-0002-6896-5568	Michael Boules	https://orcid.org/0000-0001-5070-5402
Kerstin Wyssusek	https://orcid.org/0000-0003-1709-4958	Anthony Hodge	https://orcid.org/0000-0002-3969-1916
Christine Woods	https://orcid.org/0000-0003-4697-3855	Sue Lawrence	https://orcid.org/0000-0001-9798-631X
Heather Reynolds	https://orcid.org/0000-0002-1435-8260	Michelle Roets	https://orcid.org/0000-0002-0882-9636
Adrian Chin	https://orcid.org/0000-0002-6715-9913	Nathan Peters	https://orcid.org/0000-0002-3431-6815
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Publications in 2024

Journal Articles (RBWH staff or consumers in bold)

Schults JA, **Reynolds H**, Rickard CM, Culwick MD, Mihala G, Alexandrou E, Ullman AJ. Dressings and securement devices to prevent complications for peripheral arterial catheters. Cochrane Database of Systematic Reviews. 2024; Issue 5. Art. No: CD013023. DOI: 10.1002/14651858.CD013023.pub

Keogh S, Larsen E, Corley A, Takashima M, Marsh N, Edwards M, **Reynolds H**, et al. Arterial catheter outcomes in intensive care: An analysis of 1117 patients. Infection, Disease & Health. 2024. oi.org/10.1016/j.idh.2024.07.006

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Meeusen V, **Reynolds H**, Wiggins L. Waste Segregation Practice in Operating Theatres and Endoscopy Suites Survey in Australasian Hospitals: A Perspective from Anaesthesia and Gastrointestinal Endoscopy Nurses. *Int J Nurs Health Care Res*. 2024;7:1546. DOI: <https://doi.org/10.29011/2688-9501.101546>

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Wyssusek KH, Woods CA, Minard ET, Lee J, Pelecanos A, **Gray P**. A cross-sectional study of the relationship between iron deficiency anaemia and chronic pain. *Anaesthesia and Intensive Care*. 2024;52(6). doi:[10.1177/0310057X241263612](https://doi.org/10.1177/0310057X241263612)

Liu D, Hallt E, Platz A, Humblet A, Lassig-Smith M, **Stuart J**, Fourie C, Livermore A, McConnochie B-Y, **Starr T**, Herbst K, **Woods CA, Pincus JM**, Reade MC. Low-dose clonidine infusion to improve sleep in postoperative patients in the high-dependency unit. A randomised placebo-controlled single-centre trial. *Intensive Care Med*. 2024. <https://doi.org/10.1007/s00134-024-07619-w>

Wyssusek K, Chan KL, **Eames G**, et al. Greenhouse gas reduction in anaesthesia practice: a departmental environmental strategy *BMJ Open Quality* 2022;11:e001867. doi: 10.1136/bmjopen-2022-001867

Keul C, Spierling S, Vankatachalam V, Enders HJ, Barner L, **Wyssusek K**. Potential of Polyethylene Terephthalate (PET) in a circular economy from a life cycle assessment perspective -a case study for anaesthesia and surgical instrument packaging waste in Australia", *Front. Environ. Sci*. 2024 12:1415604. doi:10.3389/fenvs.2024.1415604

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Chin A, Woods C, Pelecanos AM, **Tognolini A**, Chawla G, Bell S, Rapchuk IL, Wang J, **Eley VA**. Anaesthesia healthcare workers' interactions with COVID-19-positive and -suspect patients: A multi-site observational study from Queensland, Australia. *Anaesth Intensive Care*. 2024 Oct 17:310057X241265723. doi: 10.1177/0310057X241265723. Epub ahead of print. PMID: 39415753

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- Watts R**, Jackson D, Harris C, **van Zundert A**. Anaesthesia for pelvic exenteration surgery. *BJA Educ*. 2024;24:57- 67. doi: 10.1016/j.bjae.2023.11.002. PMID: 38304069; PMCID: PMC10829085
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Book Chapters (RBWH staff or consumers in bold)

- Roets M**, et al. Paper maiche head, c. 1950. Anaesthetic equipment. 50 treasures: a collection of objects from the Marks-Hirschfeld Museum of Medical History (Library collection catalogue), Faculty of Medicine, The University of Queensland. 2024. ISBN 9781742724218
- Meeusen V, Barach P, **van Zundert A**. CH 10: Designing safe procedural sedation: adopting a resilient culture. In: *Handbook of Perioperative and Procedural Patient Safety*, Elsevier 2024. [10.1016/B978-0-323-66179-9.00012-9](https://doi.org/10.1016/B978-0-323-66179-9.00012-9)

Book Chapters (RBWH staff or consumers in bold)

Meeusen V, Gatt SP, Barach P, **van Zundert A**. CH 13: Occupational well-being, resilience, burnout, and job satisfaction of surgical teams. In: Handbook of Perioperative and Procedural Patient Safety, Elsevier, 2024. [10.1016/B978-0-323-66179-0.00016-6](#)

Van Zundert A. The Gastroscope. IN: C. Strelan (Ed.). 50 Treasures – Marks-Hirschfield Museum of Medical History. Faculty of Medicine, The University of Queensland. 2024: 86-87. ISBN: 978-1-74272-421-8.

Keynote or Plenary Lectures given in 2024

Date	Title
7 May 2024- Annual Scientific Meeting, Australian and New Zealand College of Anaesthetists, Brisbane	Julie Lee - Obstetric Anaesthesia Special Interest Group: Obstetric haemorrhage – multiple perspectives. Chair, Multidisciplinary Panel Discussion
November 2024 - Australian and New Zealand College of Anaesthetists, Australian Society of Anaesthetists, and Anaesthesia Continuing Education Lecture Series, Bunker Bay,	Victoria Eley - Shifting the goal posts - pain during Caesarean delivery
November 2024 - Australian and New Zealand College of Anaesthetists, Australian Society of Anaesthetists, and Anaesthesia Continuing Education Lecture Series, Bunker Bay,	Victoria Eley - Point of Care Testing and Obstetric Haemorrhage
October 2024 - Annual Scientific Meeting of the Royal Australian and New Zealand College of Obstetricians and Gynaecologists, Wellington	Victoria Eley - Cefazolin versus placebo for surgical antibiotic prophylaxis in low-risk Caesarean delivery: a feasibility blinded randomized controlled trial
May 2024 - World Congress of Anaesthesiologists, Singapore	Victoria Eley - Pharmacological Adjuvants for post-partum haemorrhage
May 2024 - World Congress of Anaesthesiologists, Singapore	Victoria Eley - Care of the Obese Parturient
November 2024 - 21 st Indo-Anaesthesia Meeting, Jakarta	André van Zundert - Supraglottic Airway Devices – Present State and Outlook for 2050
5 May 2024 - Annual Scientific Meeting, Australian and New Zealand College of Anaesthetists, Professor Leonard Travers Lecture, Brisbane	André van Zundert - Time to wake up – the search for anaesthetic reversal agents
5 May 2024 - Annual Scientific Meeting, Australian and New Zealand College of Anaesthetists, Brisbane	André van Zundert - Academic publishing - then and now
5 May 2024 - Annual Scientific Meeting, Australian and New Zealand College of Anaesthetists, Brisbane	Sandra Concha Blamey - Cardiovascular incidents leading to cardiac arrest including pulmonary hypertension, sepsis, and emboli
6 May 2024 - Annual Scientific Meeting, Australian and New Zealand College of Anaesthetists, Brisbane	André van Zundert - GA vs sedation for endovascular clot retrieval
6 May 2024 - Annual Scientific Meeting, Australian and New Zealand College of Anaesthetists, Brisbane	Anthony Hodge - A cost analysis of the anaesthetic management of patients with confirmed or suspected coronavirus disease 2019 (COVID-19) in a tertiary referral hospital in Queensland, Australia
7 May 2024 - Annual Scientific Meeting, Australian and New Zealand College of Anaesthetists, Brisbane	George Pang - Problem? Make your way out of it
7 May 2024 - Annual Scientific Meeting, Australian and New Zealand College of Anaesthetists, Brisbane	Adrian Chin - Neuraxial ultrasound: Why so enigmatic?
18-20 October 2024 - 8 th National Conference Australian Anaesthesia Allied Health Practitioners the Gold Coast	Kerstin Wyssusek - Sustainability tips from SWAPNET
6 May 2024 - Annual Scientific Meeting, Australian and New Zealand College of Anaesthetists, Brisbane	Angela Tognolini - Pharmacokinetic analysis of lidocaine infusions in patients with Class 1-111 obesity
6 November 2024 - University of Queensland Mayne Academy of Critical Care Research Day	Angela Tognolini - Optimised dosing regimens of intraoperative lidocaine infusions in patients with obesity

Ear Nose and Throat (ENT) Department

Research Highlights

Throughout 2024, the ENT research team continued to grow their impressive output of work through the commencement of an in-house pilot study looking at the effectiveness of using Botulinum Toxin Type A as a nasal spray for rhinitis patients under Principal Investigator Dr Abigail Walker. This study presents a unique opportunity for the department and puts them at the forefront of this potentially groundbreaking treatment.

Alongside the commencement of new research, the ENT research team continue to progress their current body of work with research being conducted across the subspecialties of Skull Base, Head and Neck and Rhinology. With an impressive number of department led studies being conducted alongside collaborations with the Herston Biofabrication Institute, University of Queensland and Griffith University, the team is making significant contributions to research within the field of ENT.

With a particular research interest in the area of salivary diagnostic techniques, the Head and Neck team continue to make significant strides in collaborative research projects with the Salivary Diagnostics and Liquid Biopsy Laboratory at Griffith University to establish methods for developing and validating novel diagnostic techniques leading to improved outcomes for Head and Neck cancer patients.

The Skull Base team have continued collaborations with the Herston Imaging Research Facility and University of Queensland Centre for Advanced Imaging in projects investigating the utility of high-resolution imaging in skull base disease processes. This work continues to build on previous research outputs in this area with a view to improving skull base cancer patient outcomes.

Together with the increase in investigator led research being conducted within the Rhinology subspecialty, the team is also involved in 5 sponsored trials and continues to be a highly sought-after research team for commercially led trials with an outstanding reputation in this area.

Research Grants

Investigator Names (RBWH staff in bold)	RBWH Departments / Research Groups	Research Project Title	Granting Body	Total Awarded (whole all years)	Length of Awards in years and years active
Dr Ryan Sommerville	ENT	Skull Base Patient Experience Initiative	RBWH Foundation	\$39,175	1 year, 2023/2024
Dr Ryan Sommerville	ENT	High Resolution Imaging for Head and Neck and Skull Base	Garnett Passe and Rodney Williams Foundation	\$362,896	3 years, 2023-2025
Dr Ryan Sommerville	ENT	The Use of Ultra High-Resolution MRI for the Assessment of Cranial Neuropathies in Base of Skull Tumours	Australian & New Zealand Head and Neck Cancer Society	\$10,000	2 years, 2023-2024

RBWH Department / Research Group Led Research Activity

Lead Investigator Name (RBWH staff and consumers in bold)	Other Study Investigators (RBWH staff and consumers in bold)	Research Project Title	Consumer involvement	Number of RBWH Patients Recruited
Dr Ryan Sommerville	Dr Charles Lin, Dr Jennifer Gillespie, Dr Jason Papacostas, Dr Richard Gan, Dr Ankit Patel, Dr Paul Thomas, Dr Brett Hughes, Dr Gishan Ratnayake, Dr Chris Oosthuizen, Dr Catherine Barnett, Touraj Taheri	Utility of high-resolution MRI in evaluating perineural spread in head and neck cancers	NA	19
Dr Ryan Sommerville, Dr Markus Barth (University of Queensland)	Dr Sarju Vasani, Dr Abigail Walker, Dr Stephanie Yau, Dr Craig Winter, Dr Jennifer Gillespie, Dr Hamis Alexander, Dr Jason Papacostas, Aiman Al Najjar	Evaluating the utility of high-resolution MRI in defining cranial nerves in the context of base of skull lesions	NA	1

Lead Investigator Name (RBWH staff and consumers in bold)	Other Study Investigators (RBWH staff and consumers in bold)	Research Project Title	Consumer involvement	Number of RBWH Patients Recruited
Dr Ryan Sommerville, Dr Craig Winter	Dr Wallace Walker, Dr Hamish Alexander, Dr Abigail Walker, Dr Timothy Sullivan, Dr Jennifer Gillespie, Dr Stephanie Yau	The use of ultra high-resolution MRI for the assessment of cranial neuropathies in base of skull tumours	NA	8
Dr Ryan Sommerville	Dr Abigail Walker, Dr Stephanie Yau, Dr Danilo Carluccio, Dr Ankit Patel, Rachel Chambers	Development of 3D printed hyper-realistic trans-sphenoidal training models	NA	NA
A/Prof Sarju Vasani, Professor Lizbeth Kenny, A/Prof Chamindie Punyadeera	Dr Martin Batsone, Dr Omar Breik, Dr Brett Hughes, Dr Zhen Liu, Dr Akila Wijeyesekera, Dr Linda Stewart, Dr Joshua Liaw	A Novel Assay for Early Detection of Minimal Residual Disease in Head and Neck Cancer Patients	NA	21
Dr Abigail Walker	Dr James Earnshaw, Dr James Bates, Kathryn Girling	A pilot study to evaluate the effectiveness of intranasal Botulinum Toxin Type A spray for patients with rhinitis		15

Collaborative Research Activity Involving RBWH Department / Research Group

Lead Investigator Name (RBWH staff and consumers in bold)	Other Study Investigators RBWH staff and consumers in bold)	Research Project Title	Consumer involvement	Number of RBWH Patients Recruited
Teresa Brown	Dr Ryan Sommerville, Joanne Hiatt, Rebecca Fichera, Dr Abigail Walker, Dr Stephanie Yau, Louise Campbell, Dr Brett Hughes, Judy Bauer, Dr Richard Gan, Dr Ankit Patel	Investigating the impact of skull base surgery on nutrition outcomes to optimise nutrition care pathways for patients undergoing surgical resection for head and neck cancer		
Professor Anders Cervin (University of Queensland)	Dr Abigail Walker, Dr James Bates, Dr Joshua Liaw, Dr Richard Gan, Kathryn Girling, Julia Donnan-Groth, Dr Dianne Pennisi	Testing a nasal microbiota transplant therapy in chronic rhinosinusitis patients without nasal polyps		21

Research Publications

Authors

Investigator	ORCID ID
Dr Sarju Vasani	https://orcid.org/0000-0003-1471-9692
Dr Zhen Yu Liu	https://orcid.org/0000-0003-4225-4116
Dr. Abigail Walker	https://orcid.org/0000-0001-6581-2788
Dr Ryan Sommerville	

Publications in 2024

Book Chapters (RBWH staff or consumers in bold)

Dr. Abigail Walker: Endoscopic Resection of Nasal and Paranasal Sinus Neoplasms pp 411–430.

General Surgery Unit 1: Breast and Endocrine

Research Highlights

In 2024, we successfully completed two significant projects: “Intraoperative Radiotherapy (IORT) for Early Breast Cancer - A Pilot Evaluation of Implementation, Feasibility, Safety, and Financial Analysis” and “Clinical Trial Evaluating Medical-Grade Polycaprolactone (PCL) Breast Scaffold Implantation with Autologous Fat Grafting for Breast Implant Revision and Congenital Defect Correction Surgery.” These achievements have paved the way for stimulating further research projects and grant applications.

Looking ahead to 2025, we are excited to announce that a successful funding grant from QTFF will support the innovative treatment of thyroid nodules using the new technology of Radio Frequency Ablation.

RBWH Department / Research Group Led Research Activity

Lead Investigator Name (RBWH staff and consumers in bold)	Other Study Investigators (RBWH staff and consumers in bold)	Research Project Title	Consumer involvement	Number of RBWH Patients Recruited
Owen Ung	Michael Wagels, Clement Wong	Clinical trial evaluating medical-grade polycaprolactone-PCL breast scaffold implantation with autologous fat grafting for breast implant revision and congenital defect correction surgery		19
Diana Tam	Kristen Elstner, Robyn Cheuk, Owen Ung, Clement Wong, Liz Kenny, Michelle Grogan, Kowsi Murugappan, Charles Lin, Sunil Lakhani	Intraoperative radiotherapy (IORT) for early breast cancer- a pilot evaluation of implementation, feasibility, safety and financial analysis		20
Kowsi Murugappan	Paul Thomas; Owen Ung; Sunil Lakhani; Ben Green; Clement Wong; Liz Kenny; Karin Steinke; Louise Campbell; Natalie Bradford; Colleen Niland	Evaluating the accuracy of 18F-FDG PET-MRI scan in detecting regional lymph node disease in high-risk Breast cancer patients: PETAL Study	N/A	12
Elizabeth Wootton	David Pattison, Roslyn Francis, Muhammed Amjadeen, Louise Campbell, Don McLeod, Clement Wong, Anita Pelecanos, Louisa Collins	PARA-PET - a randomised diagnostic imaging trial of fluorocholine PET/CT vs conventional imaging in primary hyperparathyroidism	N/A	0
Kowsi Murugappan	Luyo Kuo, Keely Lynch, Bartholomew McKay	Importance of Axillary Lymph Node Dissection: 13-year Retrospective Analysis of a Tertiary Breast Surgical Unit	N/A	N/A
Diana Tam	Isobel Hymer, Nick Ormiston-Smith, Jane Brazier, Paul Vardon,	Current trends in incidence and histopathological upgrade rates of Ductal Carcinoma in Situ and Atypical Ductal Hyperplasia in Queensland	N/A	N/A

RBWH Department Quality Improvement Activity

Lead Investigator Name (RBWH staff in bold)	Other Study Investigators (RBWH staff in bold)	Project Title
Diana Tam	Ho Nam Choi	MRI Evaluation and Correlation with Histology in Breast Cancer: a Retrospective Audit
Benedict Kakala	Yao Huang	Enhancing Patient Flow: The Role of Chart Preparation in decreasing waiting times in Surgical outpatient clinics
Clement Wong	Justin Hunt, Madison Bowles	An audit of thyroidectomies for Bethesda III, IV or V nodules at Royal Brisbane and Women's Hospital
Diana Tam	Madeline Kelly, Marli Williams	A retrospective audit on the outcomes of younger breast cancer in Brisbane, Queensland

Lead Investigator Name (RBWH staff in bold)	Other Study Investigators (RBWH staff in bold)	Project Title
Kowski Murugappan	Isobel Hymer	Axillary procedures in Breast Cancer patients over the age of 70- does this change clinical management? A retrospective study of patients at a tertiary centre.
Kowski Murugappan	Jenyu Shaw	Determining the Accuracy of 18FDG-PET/CT in Assessing Axillary Disease in Lymph Node Positive Breast Cancer Patients Treated with Neoadjuvant Chemotherapy

Collaborative Research Activity Involving RBWH Department / Research Group

Lead Investigator Name (RBWH staff and consumers in bold)	Other Study Investigators (RBWH staff and consumers in bold)	Research Project Title	Consumer involvement	Number of RBWH Patients Recruited
Adam Ofri	Clement Wong, Basilie Teoh	The Australia and New Zealand TAD Registry	N/A	2

Research Publications

Authors

Investigator	ORCID ID
Owen Ung	https://orcid.org/0000-0002-5308-5605
Clement Wong	https://orcid.org/0000-0002-2945-8459
Kowsalya (Kowski) Murugappan	https://orcid.org/0000-0001-5639-9338
Diana Tam	https://orcid.org/0000-0002-7671-7011

Publications in 2024

Journal Articles (RBWH staff or consumers in bold)
Cheng M , Janzekovic J, Finze R, Mohseni M, Saifzadeh S, Savi FM, Ung O , Wagels M, Hutmacher DW. Conceptualizing Scaffold Guided Breast Tissue Regeneration in a Preclinical Large Animal Model. <i>Bioengineering</i> (Basel). 2024 Jun 10;11(6):593
Lee SYH, Wong C . Time to Flip the Approach: Retroperitoneoscopic Adrenalectomy. <i>J Surg Res</i> . 2024 Apr;296:189-195
Wootton E, Wong C, Love A, Pattison DA . Successful Localization of Recurrent MEN-1-Associated Hyperparathyroidism With 18F-Fluorocholine PET/CT. <i>JCEM Case Rep</i> . 2024 Dec 4;2(12): luae222.

General Surgery Unit 2: Hepatobiliary Surgical (HPB) Unit

Research Highlights

The Hepatobiliary Surgical (HPB) unit has progressed many projects in 2024; with the noteworthy completion of recruitment for the clinical trial investigating the efficacy of the novel PET tracer, fibroblast activation protein inhibitor (FAPI) for staging of early Pancreatic Cancer.

Research Grants

Investigator Names (RBWH staff in bold)	RBWH Departments / Research Groups	Research Project Title	Granting Body	Total Awarded (whole all years)	Length of Awards in years and years active
David Cavallucci	General Surgery/HPB unit	Lighting up the needle in the haystack: targeting malignant stroma to detect early pancreatic cancer on PET	PanKind Australian Pancreatic Cancer Foundation Limited	\$99,442	2 years, 2022-2024
Charles Pilgrim (Monash) et.al, David Cavallucci	General Surgery /HPB unit	SCANPatient: Synoptic reporting of CT scans assessing cancer of the pancreas	MRFF	\$297,301	5 years, 2022-2027
Vicki Whitehall, David Cavallucci , David Clark , Quan Nguyen, Sarah Hayes, Jeff Cuff, Cheri Ostroff, Jennifer Borowsky, Mark Bettington, Catharine Bond	General Surgery HPB unit and Colorectal unit	Personalising Treatment Strategies to Improve Outcomes for Colorectal Cancer	MRFF	\$2,999,022	6 years, 2024-2030

RBWH Department / Research Group Led Research Activity

Lead Investigator Name (RBWH staff and consumers in bold)	Other Study Investigators (RBWH staff and consumers in bold)	Research Project Title	Consumer involvement	Number of RBWH Patients Recruited
William McGahan	David Cavallucci , Euan Walpole, Kellee Slater, Thomas O'Rourke, Nicholas O'Rourke , Nicholas Butler , Richard Bryant , Melissa Latter, Peter Hodgkinson, Shinn Yeung, Matthew Burge , John Hooper, Fiona Simpson, Madeleine Gough, Caroline Cooper, John Liu, Alexa Chadwick , Joel Lewin , Daniel Kilburn	Applicability of Positron Emission Tomography using Gallium-68 labelled Fibroblast Activating Protein Inhibitor (FAPI) for the diagnosis, staging and treatment of pancreatic cancer	N/A	67
Nicholas O'Rourke	David Brough, David Cavallucci, Richard Bryant	The RBWH liver database – establishing and maintaining textbook outcomes in liver surgery	NA	NA

Collaborative Research Activity Involving RBWH Department / Research Group

Lead Investigator Name (RBWH staff and consumers in bold)	Other Study Investigators (RBWH staff and consumers in bold)	Research Project Title	Consumer involvement	Number of RBWH Patients Recruited
Charles Pilgrim	David Cavallucci John Zalcberg Liane Ioannou, Jessica Kasza, Samantha Ellis	SCANPatient: Synoptic reporting of CT scans assessing cancer of the pancreas		
Vicki Whitehall	David Clark, Matthew Burge, David Cavallucci, Kelly Olsen	The Development of Personalised Medicine Strategies for Colorectal Cancer - OPTIC Organoids to Predict Therapy response In Colorectal liver metastases	N/A	9
Derek Richard	Kenneth O'Byrne, Connor O'Leary, Warren Joubert, David Cavallucci , Didier Boucher, Rodney Cusack	Assessment of cancer screening in the Australian population using the nematode (worm) <i>Caenorhabditis elegans</i>	N/A	2
J. Samra	C. Nahm, C. Sandroussi, O. Fisher S. Gananadha, C. Lim, L. Webber, M. Smith, D. Croagh, S. Banting, R. Hodgson, O. Yoshino. B. Loveday, D. Cavallucci	Current anticoagulation practice following venous resection during pancreatectomy: an international multicentre service evaluation	N/A	N/A
Rachel Neal	PanKind, Queensland Collaboration for Cancer Survivorship, Queensland University of Technology inc. David Cavallucci	PRoCESS: Pancreatic cancer Relatives Counselling and Education Support Services	N/A	8

Research Publications

Authors

Investigator	ORCID ID
David Cavallucci	https://orcid.org/0000-0003-2112-6465
David Brough	https://orcid.org/0000-0002-3063-8983

Publications in 2024

Journal Articles (RBWH staff or consumers in bold)

McGahan W, Gough M, Liu C, Hoyte S, Gill AJ, **Cavallucci D**. Fibroblast Activation Protein Is Overexpressed on Both Stromal and Epithelial Cells Before Pancreatic Ductal Adenocarcinoma: Implications for Early Diagnosis on 68Ga-FAPI-PET/CT. *Gastroenterology*. 2024 Nov;167(6):1217-1220

McKay B, Brough D, Kilburn D, Cavallucci D. Safety and feasibility of instituting a robotic pancreas program in the Australian setting: a case series and narrative review. *ANZ J Surg*. 2024 Jul-Aug;94(7-8):1247-1253

Li L, Kasza J, Recasens A, Ioannou L, Greenhill E, Merrett N, **Cavallucci D**, Ellis S, Madgwick H, Ko HS, Chantrill L, Loveday B, Nikfarjam M, Croagh D, Yang J, Dwyer A, Zalcberg J, Pilgrim C; SCANPatient Authorship Group. SCANPatient: study protocol for a multi-centre, batched, stepped wedge, comparative effectiveness, randomised clinical trial of synoptic reporting of computerised tomography (CT) scans assessing cancers of the pancreas. *Trials*. 2024 Jun 17;25(1):388

Bell-Allen N, McNamara A, Bull N, Lewin J, O'Rourke N. Laparoscopic partial splenectomy in distal pancreatectomy may preserve splenic function. *ANZ J Surg*. 2024 May;94(5):876-880

Hunt JEM, Miller J, Brown J, O'Rourke N. Rigler sign and hepatic portal venous gas: classic surgical radiology. *BMJ Case Rep*. 2024 Jan 4;17(1):e258567

Lun T, Palamuthusingam P, O'Rourke N. Isolated abdominal wall recurrence of pancreatic ductal adenocarcinoma: a rare case report. *J Surg Case Rep*. 2024 Jun 21;2024(6)

Adam McNamara, Naduni Wijesekera, Nicholas O'Rourke. Primary mucinous cystic neoplasm of the retroperitoneum. *ANZ J Surg*. 2024 Jul-Aug;94(7-8):1419-1421.

General Surgery Unit 3: Colorectal Surgery

Research Highlights

Highlights for 2024 include the ongoing recruitment and support of patients involved in the Modified Kono S anastomosis RCT. A number of patients have been recruited and randomised and completed the key outcome measure of recurrence at 6 months.

The unit also continues to support the recruitment of patients to QIMR organoid studies.

We have gained approval to use the QCCAT research ready data set that encompasses over 50 000 patients over 20 years. A number of protocols have been developed posing various questions that offer insights into the colorectal patient cohort. Analysis of the dataset continues and papers have been published.

PhD candidate Andrew Zammit has completed and been awarded his PhD on the Management of malignant polyps. His PhD has been awarded through the University of Queensland in December 2024.

Successful Research Higher Degree candidates in 2024

Name	Title	Month Completed	Affiliated University	Summary
Dr Andrew Zammit (PhD)	Management of malignant polyps	Dec 2024	University of Queensland	There is uncertainty when determining the optimal management for malignant colorectal polyps. Whilst treatment with polypectomy alone avoids the associated morbidity of major surgery, patient selection for this conservative approach is paramount. To aid in this critical decision, a validated web-based prognostic nomogram was developed to predict the risk of an adverse outcome in endoscopically resected malignant polyps.

Research Grants

Investigator Names (RBWH staff in bold)	RBWH Departments / Research Groups	Research Project Title	Granting Body	Total Awarded (whole all years)	Length of Awards in years and years active
David Clark	Colorectal Research Unit	A multicentre randomised controlled trial of the modified Kono S anastomosis versus the stapled side to side anastomosis after ileocolic resection for Crohn's disease	CSSANZ	\$20,000	annual

RBWH Department / Research Group Led Research Activity

Lead Investigator Name (RBWH staff and consumers in bold)	Other Study Investigators (RBWH staff and consumers in bold)	Research Project Title	Consumer involvement	Number of RBWH Patients Recruited
David Clark	Damien Petersen, John Lumley, Tim Slack, Andrew Riddell, Craig Hacking, Jacobus Ungerer	Phase 2 study of efficacy: The validation of Gastrografin measurement in post-surgical samples following low anterior resection where the rectal tube is flushed with Gastrografin	N/A	65
David Clark	Jayson Moloney	A multicentre randomised controlled trial of the modified Kono S anastomosis versus the stapled side to side anastomosis after ileocolic resection for Crohn's disease	N/A	23
Jayson Moloney	David Clark, Aleksandra Edmundson	Long term functional outcomes after taTME in Australia and New Zealand	N/A	N/A
David Clark	Graham Radford-Smith, Lisa Simms (QIMRB), Martha Zakrzewski (QIMRB)	Ileal pouch microbiome: defining a pre-operative microbiological signature that predisposes to anastomotic leak	N/A	29

Lead Investigator Name (RBWH staff and consumers in bold)	Other Study Investigators (RBWH staff and consumers in bold)	Research Project Title	Consumer involvement	Number of RBWH Patients Recruited
David Clark	Victoria Lim	Delayed diagnosis of rectal cancer in young patients	N/A	N/A
David Clark	Kay Tai Choi, Michael Lonne , John Harrington	The incidence and risk factors for the development of metachronous colorectal cancer	N/A	N/A
David Clark	Aarthi Sritharan	A retrospective analysis of number of lymph nodes evaluated in patients with colorectal cancer and whether there is a benefit in increasing the number of lymph nodes for prognostication	N/A	N/A
Andrew Stevenson	Kar Yin Fok, Michael Lonne	Long term outcomes after laparoscopic and robotic ventral rectopexy for rectal prolapse using biologic graft prosthesis	N/A	N/A
David Clark	Andrew Zammit, Andrew Riddell , John Hooper, Ian Brown	Population based study of malignant polyps	N/A	N/A

RBWH Department Audit/Quality Improvement Activity

Lead Investigator Name (RBWH staff and consumers in bold)	Other Study Investigators (RBWH staff and consumers in bold)	Project Title
Carina Chow	Amy Cao, Andrew Stevenson, Craig Harris, Jayson Moloney	Retrospective audit of surgeon learning curve in robotic colorectal surgery
David Clark	Andrew Zammit, Andrew Riddell , John Hooper, Ian Brown	Population based study of malignant polyps
David Clark	Madeleine Kelly, Amy Cao, Michael Lonne , Kay Tai Choy, Shoni Philpot, Atefeh Taherian Fard	Longitudinal study of patterns of colorectal cancer in Queensland, Australia
David Clark	Amy Cao, Madeleine Kelly	Midgut Vs hindgut-stratifying colonic tumours by embryological origin
David Clark	Shahab Valizadehzare	A population-based analysis of survival by decade after colorectal surgery for cancer
David Clark	Michael Lonne	Effect of socio-economic disadvantage and remote location on survival after colorectal surgery for cancer
David Clark	Josh Teo	Effect of time to surgery on survival after colorectal surgery for cancer
David Clark	Amy Cao	Effect of hospital volume on survival after colorectal surgery for cancer
David Clark	Elisa Tran, Amy Cao	Identifying predictors of reduced length of stay in minimally invasive colectomy

Collaborative Research Activity Involving RBWH Department / Research Group

Lead Investigator Name (RBWH staff and consumers in bold)	Other Study Investigators (RBWH staff and consumers in bold)	Research Project Title	Consumer involvement	Number of RBWH Patients Recruited
Vicki Whitehall	David Clark , Matthew Burge, Catherine Bond, Kelly Olsen	The Development of Personalised Medicine Strategies for Colorectal Cancer		
Peter Gillies	David Clark, Jason Brown	Conditional reprogramming of colorectal cancer cells		

Lead Investigator Name (RBWH staff and consumers in bold)	Other Study Investigators (RBWH staff and consumers in bold)	Research Project Title	Consumer involvement	Number of RBWH Patients Recruited
Vicki Whitehall	David Clark , Kelly Olsen	The Development of Personalised Treatment for Locally Advanced Rectal Cancer (LARC)		
Nicholas Lyon	John Hooper, Andrew Riddell, Simon Puttick, David Clark	The search for new theranostic targets for colorectal cancer		
Andrew Maurice	Jason Brown , Mark Smithers, David Clark , Donald Cameron	Multi-centre study: Laparoscopic appendectomy versus antibiotics for radiologically confirmed acute uncomplicated appendicitis		
Alexander Heriot	David Clark , Chris Gillespie, Mikhail Mikhail, Raphael Vergese, Mark Doudle	Bi-National Colorectal Cancer Audit (BCCA)		
Kate Wilson	Jayson Moloney	National Assessment of Management of LARS post- colorectal cancer surgery		

Research Publications

Authors

Investigator	ORCID ID	Investigator	ORCID ID
Andrew Stevenson	https://orcid.org/0000-0001-5639-3526	Craig Harris	https://orcid.org/0000-0002-9581-9750
David Clark	https://orcid.org/0000-0002-2065-3012	Amy Cao	https://orcid.org/0000-0001-9339-6355
Andrew Warwick	https://orcid.org/0000-0003-3937-5638	Andrew Riddell	https://orcid.org/0000-0002-8648-0919

Publications in 2024

Journal Articles (RBWH staff or consumers in bold)

Vu J, Koh C, Solomon M, Brown K, Karunaratne S, Cole R, Smith P, Raichurkar P, Denehy L, Riedel B; **Prehabilitation Expert Collaborative**; Steffens D. Patients' and carers' views on research priorities in prehabilitation for cancer surgery. Support Care Cancer. 2024 May 24;32(6):378. doi: 10.1007/s00520-024- 08585-1. PMID: 38787478; PMCID: PMC11126464

Jenkin A, Cole K and **Harris CA**. (2024), Serving Queensland: reflecting on geographical access to the pelvic exenteration service in Queensland. ANZ Journal of Surgery, 94: 2047-2052. <https://doi.org/10.1111/ans.19253>

Watts R, Jackson D, **Harris C**, and van Zundert A. Anaesthesia for pelvic exenteration surgery. Watts, R. et al. BJA Education, Volume 24, Issue 2, 57 – 67

Madeleine Kelly, Alexandra Fullerton, **Amy Cao**, Rebecca Kimble and **David Clark** Pregnancy and stomas: A 8-year retrospective series at a Major Metropolitan hospital in Brisbane Queensland 2024 accepted ANZ J Surgery

Ashley Jenkins, Aleksandra Edmundson David Clark Surgical outcomes in ileal Crohn’s disease complicated by ileosigmoid fistula 2024 accepted by ANZ J Surgery

David A Clark Ileocolic resection for Crohn's disease and the Kono S anastomosis - all that is gold does not glitter 2024 accepted ANZ J Surg

Madeline Kelly, Amy Cao, Ruben Rajan, **David Clark** Feasibility of triple assessment of the anastomosis using an anastomotic checklist 2024 accepted ANZ J Surg

Shahab Valizadehzare, Kar Yin Fok, David A Clark. Splenic Flexure Volvulus Managed via Laparoscopic Colopexy in An Adult Patient. 2024 Accepted Colorectal Disease

Heuvelings, Danique J.I. M.D.; Mollema, Omar B.Sc.; van Kuijk, Sander M.J. Ph.D.; Kimman, Merel L. Ph.D.; Boutros, Marylise M.D.; Francis, Nader M.D., Ph.D.; Bouvy, Nicole D. M.D., Ph.D.; Sylla, Patricia M.D.; **On behalf of the CoReAL Collaborative***. Quality of Reporting on Anastomotic Leaks in Colorectal Cancer Trials: A Systematic Review. Diseases of the Colon & Rectum ():10.1097/DCR.0000000000003475, August 07, 2024. | DOI: 10.1097/DCR.0000000000003475

Gary Sharp, **David Clark** 2024 Systematic review of the management options available for Low Anterior Resection Syndrome (LARS) accepted TCOL (2024)

Keogh C, Moore J, Cossio D, Smith N, Clark DA. Obstructing colorectal cancer: a population-based review of colonic stenting in Queensland, Australia. Ann Coloproctol. 2024 Jun;40(3):268-275.

Keynote or Plenary Lectures given in 2024

Date	Title
May 2024	Carina Chow , How to train as a robotic surgeon. Invited speaker. ASC 2024. Christchurch, Aotearoa
May 2024	Carina Chow , Anorectal malformations – an adult perspective. Invited speaker. Anorectal malformation symposium. QCH, Brisbane
May 2024	Craig Harris , Pelvic exenteration masterclass. Royal Australasian College of Surgeons ACS, Christchurch NZ
Nov 2024	Craig Harris , The hostile abdomen and the difficult pelvis: Tips & tricks. Australasian Gastro-Intestinal Trials Group ASM, Brisbane
Jan 2024	David Clark , APAC Expert Forum at MTEC, Kachioji, Japan Faculty
March 2024	David Clark , St Vincent's Surgical IBD Meeting, Melbourne "Kono S"
May 2024	David Clark , RACS ASC Christchurch NZ. "Should we all do the Kono S?"
Oct 2024	David Clark , Pre-fellowship Workshop Melbourne "History of Laparoscopic surgery"
Nov 2024	David Clark , Sydney Colorectal Meeting, Hilton, Sydney "New and novel techniques to prevent or allow early detection of anastomotic leaks"
Nov 2024	David Clark , Australian Gastrointestinal Trials Group AGM, Brisbane Convention Centre. "Neo-adjuvant chemotherapy / Stents – Rules and tips / Changing practice and utility"
Nov 2024	David Clark , Takeda IBD Meeting. W Hotel Brisbane. "Evolution of surgical resection in Crohn's disease"

General Surgery Unit 4: Upper Gastrointestinal Surgery

Research Highlights

The Upper Gastro-intestinal (GI) surgical unit has had a notable year, establishing itself as one of the largest bariatric public services in the country. The unit has developed a comprehensive database for bariatric surgery, representing the Royal Brisbane and Women's Hospital (RBWH) and surrounding private sites. This database, along with others that include oesophageal cancers, provides a robust foundation for future research, safety reporting, and quality improvement.

The upper GI team has made significant contributions to numerous international research collaboratives and are key stakeholders in national research initiatives. Significant achievements include:

- Presentation of findings from the project "Double-Tract Reversal of Roux-en-Y Gastric Bypass" at various conferences.
- Establishing a collaboration with the Department of Gastroenterology and Griffith University on a project titled "Biomarkers for Barrett's Oesophagus and Neoplastic Progression: Finding the Proteomic Spitting Image."

These efforts underscore the unit's commitment to advancing medical research and improving patient outcomes.

RBWH Department / Research Group Led Research Activity

Lead Investigator Name (RBWH staff and consumers in bold)	Other Study Investigators (RBWH staff and consumers in bold)	Research Project Title	Consumer Involvement	Number of RBWH Patients Recruited
George Hopkins	Georgia Taylor, Leila Sheike	Weight outcomes in primary bariatric patients complicated by severe intra-abdominal sepsis	N/A	N/A
George Hopkins	David Mitchell, Melanie Lauti, Daniell Cahn, Rayana Abou-Sleiman	Double-Tract Reversal of Roux-en-Y Gastric Bypass	N/A	N/A

Collaborative Research Activity Involving RBWH Department / Research Group

Lead Investigator Name (RBWH staff and consumers in bold)	Other Study Investigators (RBWH staff and consumers in bold)	Research Project Title	Consumer Involvement	Number of RBWH Patients Recruited
Isobel Hyman	Melanie Lauti, Siobhan Wallin, George Hopkins, David Mitchell, Benjamin Dodd, Patrick Walsh, Helen MacLaughlin	Gastrojejunal anastomosis resizing with Argon Plasma Coagulation (APC) and Overstitch procedures to manage weight regain after weight loss surgery	N/A	N/A
International Collaborative; NIHR Global Health Research Unit	Member of the collaborative; David Mitchell	GECKO (Global Evaluation of Cholecystectomy Knowledge and Outcomes) study	N/A	N/A
International Collaborative: NIHR Global Health Research Unit	Member of the collaborative: David Mitchell, Harish Iswariah, Madeline Kelly	Global Cohort Study: Hernias, Pathway and Planetary Outcomes for Inguinal Hernia Surgery	N/A	N/A
David Liu	Cuong Duong, Margaret Lee, Ahmad Aly, Tim Bright, David Watson, Geraldine Ooi, Enoch Wong, Sean Stevens, James Tan, Kevin Chan	Survival and Patterns of Care in the Era of FLOT-based Chemotherapy for Gastric and Gastroesophageal Adenocarcinoma (SPACE-FLOT) An international multicentre cohort study	N/A	N/A
Florin Grimpen	Chamindie Punyadeera, Jonathon Schubert, David Mitchell, Kimberly Ryan, Lucas Franca de Lima, Mark Appleyard	Biomarkers for Barrett's Oesophagus and neoplastic progression: Finding the proteomic spitting image	N/A	0

Lead Investigator Name (RBWH staff and consumers in bold)	Other Study Investigators (RBWH staff and consumers in bold)	Research Project Title	Consumer Involvement	Number of RBWH Patients Recruited
Nicolas Anning	Peter Donovan, George Hopkins, Christine Staatz, Meng-Wong Taning, Brett McWhinney	Analysis of Antidepressant Serum Concentration Changes in Patients Undergoing Bariatric Surgery – A Pilot Study	N/A	0
Clare Peking	George Hopkins, Gerald Byrne, Matthew Seymour	The Role of Psychological Risk Factors on Outcomes for People Undergoing Bariatric Surgery for the Management of Type 2 Diabetes	N/A	N/A

Current RBWH Department Quality Improvement Activity

Lead Investigator Name (RBWH staff in bold)	Other Study Investigators (RBWH staff in bold)	Project Title
David Mitchell	Chiara Chadwick, David Brough, Lyndon Knofz, Zoe Jarrott	Weight loss outcomes following conversion gastric bypass: Roux-en-Y vs One-anastomosis
David Mitchell	George Hopkins, Robert Finch, Simon Warry	Outcomes in RYGB with varying limb lengths

Research Publications

Authors

Investigator	ORCID ID	Investigator	ORCID ID
David Mitchell	https://orcid.org/0000-0003-2578-3729	Ben Dodd	https://orcid.org/0000-0002-2948-4390
Kevin Chan	https://orcid.org/0000-0002-3370-5563		

Publications in 2024

Journal Articles (RBWH staff or consumers in bold)

NIHR Global Health Research Unit on Global Surgery (**David Mitchell**). Access to and quality of elective care: a prospective cohort study using hernia surgery as a tracer condition in 83 countries. *Lancet Glob Health*. 2024 Jul;12(7):e1094-e1103

Bhimani N, **Mitchell D**, Law C, Leibman S, Smith G. Perioperative outcomes in patients who undergo neoadjuvant chemoradiotherapy versus chemotherapy versus up-front surgery in patients with oesophageal cancer. *ANZ J Surg*. 2024 Oct;94(10):1715-1722

Scuffham P, Cross M, Teppala S, **Hopkins G**, Chikani V, **Wykes K**, **Paxton J**. Prioritising patients for publicly funded bariatric surgery in Queensland, Australia. *Int J Obes (Lond)*. 2024 Dec;48(12):1748-1757

Clyde DR, Adib R, Baig S, Bhasker AG, Byrne J, Cameron D, Catalain C, Clare K, de Beaux A, Drummond G, Fawal H, Fried M, Ghanem O, Graham Y, Goel R, **Hopkins G**, Husain F, Joyce B, Kermansaravi M, Kothari S, Kow L, Leite S, Madhok B, Mahon D, Miller K, Miras A, Moussa O, Neto MG, Nimeri A, O'Kane M, Parmar C, Peterli R, Poggi L, Salminen P, Sarkar R, Shenfine J, Sogg S, Stenberg E, Suter M, Taha S, Tahrani A, Vilallonga R, Voon K, Welbourn R, Zerrweck C, Lamb P, Mahawar KK, Yang W, Robertson AGN. An international Delphi consensus on patient preparation for metabolic and bariatric surgery. *Clin Obes*. 2024 Dec 14:e12722

Cross M, Paxton J, Wykes K, Chikani V, **Hopkins G**, Teppala S, Scuffham P. Improving equitable access to publicly funded bariatric surgery in Queensland, Australia. *Aust Health Rev*. 2024 Jun 18

Brosda S, Aoude LG, Bonazzi VF, Patel K, Lonie JM, Belle CJ, Newell F, Koufariotis LT, Addala V, Naeini MM; **AGITG DOCTOR Investigators**; Pearson JV, Krause L, Waddell N, Barbour AP. Spatial intra-tumour heterogeneity and treatment-induced genomic evolution in oesophageal adenocarcinoma: implications for prognosis and therapy. *Genome Med*. 2024 Jul 17;16(1):90.

Keynote or Plenary Lectures given in 2024

Date	Title
Sept 2024	The "dilemma" of limited resources in Public Bariatrics presented by George Hopkins at IFSO Melbourne 2024

General Surgery Unit 5: Acute Surgical Unit

Research Highlights

The Acute Surgical Unit (ASU) is a consultant led multidisciplinary surgical service optimised to provide pre and post operative care for patients presenting to the emergency department at RBWH. In 2024, ASU collaborated with The University of QLD to support the prospective research study titled “Dietary patterns and molecular mechanisms associated with the pathogenicity of appendicitis”; an exploration of factors that contribute to appendicitis.

Collaborative Research Activity Involving RBWH Department / Research Group

Lead Investigator Name (RBWH staff and consumers in bold)	Other Study Investigators (RBWH staff and consumers in bold)	Research Project Title	Consumer involvement	Number of RBWH Patients Recruited
Eugeni Roura	Jason Brown , Daniel Hwang, Olivia Wright, Michael Ryoo	Dietary patterns and molecular mechanisms associated with the pathogenicity of appendicitis in humans.	N/A	100
Carl Lisec	Michael Rudd	Australia and New Zealand Emergency Laparotomy Audit - Quality Improvement (ANZELA-QI)	NA	N/A

Research Publications

Authors

Investigator	ORCID ID
Jason Brown	https://orcid.org/0000-0002-8386-1118

Kenneth G. Jamieson Department of Neurosurgery

Research Highlights

2024 has been a successful and productive year for research in Kenneth G. Jamison Neurosurgical Department. Our surgeons currently have several research projects underway across a broad spectrum of areas within neurosurgery. We also continue to support collaborative projects with partners from other RBWH departments, the Queensland Institute of Medical Research Berghofer (QIMR Berghofer), The University of Queensland (UQ), Queensland University of Technology (QUT), The Queensland Brain Institute (QBI), the Jamieson Trauma Institute (JTI) and the Herston Bio fabrication Institute (HBI) along with nursing and allied health lead projects.

The partnership between RBWH's Neurosurgical Department and HBI has been integrating cutting-edge biofabrication technologies into neurosurgical practice. In 2024, this collaboration led to the development of patient-specific anatomical models and surgical guides, enhancing preoperative planning and precision in neurosurgical procedures. Additionally, HBI's expertise in creating realistic neurotrauma training models was showcased at the Rural Doctors Association of Queensland (RDAQ) 2024 conference.

The Neurosurgical Department's collaboration with the Tumour Tissue Bank at QIMR continued in 2024. The availability of well-preserved tumour samples enabled the application of advanced genomic and proteomic analyses, leading to a better understanding of tumour heterogeneity and the mechanisms driving resistance to conventional treatments. In the future, the integration of clinical data with tissue samples will allow for comprehensive translational research, bridging the gap between laboratory findings and clinical applications.

Cerebrovascular Engineering Research Group (CERG), which consolidates research collaborations between the RBWH departments of Neurosurgery and Interventional Neuro Radiology, QUT's School of Mechanical, Medical and Process Engineering and UQ's School of Chemical Engineering continues to pursue projects to enable better predictions of aneurysm rupture risk.

In summarising our year in research, we would like to express our deep gratitude to all our collaborators, the organisations that support what we do and, importantly, our patients. Thank you.

Successful Research Higher Degree candidates in 2024

Name	PhD Title	Month Completed	Affiliated University	Summary
Nalinda Dissanayaka (PhD)	Advancing multi-material additive manufacturing capabilities for hyper-realistic neurosurgical training models	November 2024	The University of Queensland	The development of neurosurgical skills through simulation is crucial due to the challenges of traditional training methods. 3D printing offers a cost-effective and accessible solution, creating realistic models for neurosurgical training. This thesis evaluated various materials and 3D printing technologies, finding PETG and White Resin to be the most effective for simulating skulls. Workshops using 3D-printed models significantly improved confidence and skills among non-neurosurgeons. The findings have been published and are now used in workshops, enhancing neurosurgical training and saving lives in regional hospitals.

Research Grants

Investigator Names (RBWH staff in bold)	RBWH Departments / Research Groups	Research Project Title	Granting Body	Total Awarded (whole all years)	Length of Awards in years and years active
Craig Winter	Neurosurgery	Informed Choices: A Software Solution for Brain Aneurysm Treatment Planning	RBWH Foundation 2024	\$25,000	2 years, 2024-2025
Craig Winter	Neurosurgery	Proteomic Analysis in Subarachnoid Haemorrhage Patients	SWIFT Grant RBWH	\$25,000	2 years, 2024-2025

RBWH Department / Research Group Led Research Activity

Lead Investigator Name (RBWH staff and consumers in bold)	Other Study Investigators (RBWH staff and consumers in bold)	Research Project Title	Consumer involvement	Number of RBWH Patients Recruited
Danilo Carluccio	Hamish Alexander, David Forrestal, Jared Donovan, Marianella Chamorro-Koc	Multimodal Neurosurgical Training Models	N/A	N/A
Craig Winter	Mark Allenby, Danilo Carluccio, Petra Mela, Kilian Müller, Chloe De Nys	Advanced manufacturing of an intracranial aneurysm medical device for rupture risk prediction	N/A	N/A
Danilo Carluccio	Hamish Alexander, Craig Winter, Luigi Vandl, James Novak	Development of multi-colour neurosurgical training models with realistic haptic qualities through additive manufacturing	N/A	N/A
Craig Winter	Mark Allenby, Danilo Carluccio	Engineering cerebrovascular aneurysm models for surgical decision-making	N/A	N/A
Danilo Carluccio	Hamish Alexander, David Forrestal,	Evaluation of 3D Printed Neurosurgical Patient-Specific Anatomical Models for Surgical Planning	N/A	N/A
Hamish Alexander	Jurgen Gotz, Matthew Pelekanos	Ultrasound Blood-Brain Barrier Opening via Sono-lucent cranioplasty implants	N/A	N/A

Collaborative Research Activity Involving RBWH Department / Research Group

Lead Investigator Name (RBWH staff and consumers in bold)	Other Study Investigators (RBWH staff and consumers in bold)	Research Project Title	Consumer involvement	Number of RBWH Patients Recruited
Ryan Sommerville	Danilo Carluccio, Abigail Walker, Kate Stockley	Development of 3D printed hyper-realistic trans-sphenoidal training models	N/A	N/A
Alex Murray-Douglas	Richard Harris, Martin Batstone, Danilo Carluccio, Craig Winter	3D printing versus traditional management for orbital reconstructive surgery: a retrospective cohort study and cost-effectiveness analysis	N/A	N/A
Yun Phua	Martin Batstone, Danilo Carluccio, Hamish Alexander, Michael Wagels	Assessment of 3D-printed patient specific scaffolds for nasoalveolar augmentation in patients with cleft lip-related paranasal maxillary deformities	N/A	N/A
Brian Day	Zarnie Lwin, Po Inglis, Benjamin Chua, Catherine Bettington Hamish Alexander, Michael Colditz	Novel therapies in brain cancer: Glioma Tumour bank	N/A	N/A

Research Publications

Authors

Investigator	ORCID ID
Danilo Carluccio	0000-0001-5041-5712
Hamish Alexander	https://orcid.org/0000-0001-5528-8214

Publications in 2024

Journal Articles (RBWH staff or consumers in bold)

Dissanayaka N, Alexander H, Carluccio D, Redmond M, Vandl L-J, Novak JI. How safe are 3D-printed skull models for neurosurgical simulation? Measurement of airborne particles and VOCs while burr hole drilling. Rapid Prototyping Journal. 2024;30(5):1046-54

Journal Articles (RBWH staff or consumers in bold)

Badar F, Vandi L-J, **Carluccio D**, Redmond M, Novak JI. Preliminary colour characterisation of a Stratasys J750 digital anatomy printer with different fillings and face orientations. *Progress in Additive Manufacturing*. 2024;9(4):1277-87

Dissanayaka N, **Alexander H**, Redmond M, **Pearce P**, Hobbins-King A, Lee K, **Carluccio D**, Fakhr R, Vandi L-J, Novak JI. Evaluation of a pilot regional neurotrauma workshop using 3D printed simulation models. *Annals of 3D Printed Medicine*. 2024;15:100169

Dissanayaka N, Novak JI, **Alexander H**, **Carluccio D**, Vandi L-J. Advancing 3-Dimensional Printed Burr Hole and Craniotomy Models for Neurosurgical Simulation Through Multimaterial Methods. *World Neurosurgery*. 2024

Dissanayaka N, Novak JI, **Carluccio D**, Vandi L-J. Comparative analysis of mechanical and drilling properties: Human skull vs. 3D-printed replicas for neurosurgical training. *Materials Today Communications*. 2024;41:110776

de Nys C.M, Liang E.S., Prior M, Woodruff M, Novak J, Murphy A, Li Z, **Winter C**, Allenby A. Time-of-Flight MRA of Intracranial Aneurysms with Interval Surveillance, Clinical Segmentation and Annotations. *Sci Data* 11, 555 (2024)

Xie H, Yu H, Wang J, Wu S, Zhang J, Zhao H, Yuan M, Mendieta JB, Anbananthan H, **Winter C**, Zhu C, Li Z. Quantifying Irregular Pulsation of Intracranial Aneurysms Using 4D-CTA *Journal of Biomechanics*. 2024

Yang AZ, Boutet A, Pai V, **Colditz MJ**, Vetkas A, Santyr B, Samuel N, Germann J, Breitbart S, Elkam L, Ertl-Wagner B, Fasano A, Lozano AM, Ibrahim GM, Gorodetsky C. Imaging Findings of Intracerebral Infection after Deep Brain Stimulation: Pediatric Case Series and Literature Review. *Mov Disord Clin Pract*. 2024 Nov 9. doi: 10.1002/mdc3.14251. Epub ahead of print. PMID: 39520314

Colditz M, Heard T, Silburn P, Coyne T. Do Antibiotic-Impregnated Envelopes Prevent Deep Brain Stimulation Implantable Pulse Generator Infections? A Prospective Cohort Study. *Stereotact Funct Neurosurg*. 2024;102(3):137-140. doi: 10.1159/000536478. Epub 2024 Mar 8. PMID: 38461818; PMCID: PMC11152020

Carroll MA, **Sommerville R**, Hay K, Walker A, Grigg S, Kenny L, et al. Survival and Patterns of Relapse of Cutaneous Squamous Cell Carcinoma With Large Nerve Perineural Spread After Skull Base Surgery and/or Radiation Therapy. *Practical Radiation Oncology*. 2024.

Keynote or Plenary Lectures given in 2024

Date	Title
January 2024	Burr-hole Surgery in Non-Neurosurgical Centers, Hokkaido International Trauma Conference, Rustutu, Japan. Hamish Alexander
June 2024	Burr-hole workshop. Rural Doctors Association of Queensland (RDAQ) 2024 conference. Hamish Alexander, Norman Ma, Patrick Pearce
August 2024	The Use of Ultra High-Resolution MRI for the Assessment of Optic Neuropathies in Base of Skull Tumours. Oral presentation. Australian and New Zealand Head and Neck Society Meeting (ANZHNCs) 2024, Melbourne, Australia. Walker DM, Winter C, Sommerville R
August 2024	Neurosurgical Society Annual Scientific Meeting, Darwin: Session Chair, Neuro-oncology. Hamish Alexander
October 2024	Vessel Wall Imaging in Ruptured Intracranial Aneurysms – Interim Results. Royal Australian and New Zealand College of Radiologists (RANZCR) 2024, Perth, Australia Settupalli P, Liang E, Sharma P, Ajjikuttira A, Winter C, Coulthard A.

Oral and Maxillofacial Surgery

Research Highlights

The Oral and Maxillofacial Surgery department has had another successful 12 month period. The ANZAOMS annual scientific meeting was held in Queensland this year and RBWH staff were integral in its organisation and gave multiple presentations. We were successful in grant applications and publications and have ongoing collaborations with external Universities and research groups nationally and internationally. We are also collaborating in multi-site randomised controlled trials.

A steady pipeline of research post graduate students is helping us publish our outcome and gaining higher degrees and valuable experience at the same time.

Successful Research Higher Degree candidates in 2024

Name	Title	Month Competed	Affiliated University	Summary
Dr Michael Wong (PhD) (Supervisors Dr Omar Breik, Dr Sarj Vasani, Chamindie Punyadeera)	Quantitative and Qualitative Characterisation of Head and Neck Tumour Cultures With and Without Extracellular Matrix	February 2024	Griffith University QLD	Head and neck malignancy, and in particular squamous cell carcinoma (SCC) is responsible for a significant disease burden globally. Head and neck SCC (HNSCC) epidemiology has change over the past 40 years, with human papillomavirus infection now demonstrated to be a major causative factor in rising rates of oral cavity and oropharyngeal mucosal SCC. The lack of an optimal <i>in vitro</i> model system to accurately recapitulate <i>in vivo</i> responses to therapy in HNSCC remains a challenge. This thesis evaluated the success of tumouroid culture using hydrogels or not using hydrogels, and demonstrated improved culture growth without hydrogels. This will help improve tumouroid culture growth, and enhance the ability to better characterize the nature of the tumour and the potential responses to treatment.

Research Awards and Achievements

Recipient (RBWH staff in bold)	Award	Event
Dr Martin Batstone	UQ Fast mover for research impact – leaders in their field	

Research Grants

Investigator Names (RBWH staff in bold)	RBWH Departments / Research Groups	Research Project Title	Granting Body	Total Awarded (whole all years)	Length of Awards in years and years active
Martin Batstone, Danilo Carluccio, Omar Breik, Cedryck Vaquette, Ali Gokhan Demir, Saso Ivanovski	Oral and Maxillofacial Surgery	3D-Printed Bioresorbable Metal Mesh for Complex Alveolar Bone Defects	ITI	\$75,655	2 years, 2024-2026
Martin Batstone, Danilo Carluccio, Omar Breik, Cedryck Vaquette, Jeffrey Venezuela, Matthew Dargusch	Oral and Maxillofacial Surgery	Bioresorbable Metals as an Alternative to titanium for Mandible Fixation Plates	SORG	\$ 16,200	2 years, 2024-2026

RBWH Department / Research Group Led Research Activity

Lead Investigator Name (RBWH staff and consumers in bold)	Other Study Investigators (RBWH staff and consumers in bold)	Research Project Title	Consumer involvement	Number of RBWH Patients Recruited
Omar Breik	Martin Batstone, Danilo Carluccio , Cedryck Vaquette, Saso Ivanovski, Jeffrey Venezuela, Matthew Dargusch	Bioresorbable Metals as an Alternative to Titanium for Intraoperative Vessel Ligation (rat model)	N/A	N/A
Omar Breik	Martin Batstone, Danilo Carluccio, Myles Bennel, Luke Mayze , Seongwon Choi, Daniel Oh, Hyunwook Ham, Micheal Burgess	Evaluation of a Cost-effective Virtual Reality Training System in Oral Maxillofacial Surgery: A Pilot Study	N/A	N/A
Danilo Carluccio	Martin Batstone, Omar Breik , Cedryck Vaquette, Saso Ivanovski	Evaluation of a TPMS bone scaffold for vertical bone augmentation	N/A	N/A
Martin Batstone	Danilo Carluccio, Maria Herrera Villalva	Development of a novel Magnetic retention system for facial and oral prosthetics	N/A	N/A

Collaborative Research Activity Involving RBWH Department / Research Group

Lead Investigator Name (RBWH staff and consumers in bold)	Other Study Investigators (RBWH staff and consumers in bold)	Research Project Title	Consumer involvement	Number of RBWH Patients Recruited
Ryan Goh	Martin Batstone, Omar Breik, Danilo Carluccio , Cedryck Vaquette, Saso Ivanovski	Assessment of mandibular bone deposition over a subperiosteal implant: conversion of a subperiosteal implant into an endosteal implant – in vivo experiments	N/A	N/A
Alex Murray-Douglas	Richard Harris, Martin Batstone, Danilo Carluccio, Craig Winter	3D printing versus traditional management for orbital reconstructive surgery: a retrospective cohort study and cost-effectiveness analysis	N/A	N/A
Yun Phua	Martin Batstone, Danilo Carluccio, Hamish Alexander , Michael Wagels	Assessment of 3D-printed patient specific scaffolds for nasoalveolar augmentation in patients with cleft lip-related paranasal maxillary deformities.	N/A	N/A
Sarj Vasani (ENT)	O Breik , Chamindie Punyadeera	Minimal Residual Disease in Head and neck cancer	N/A	70

Research Publications

Authors

Investigator	ORCID ID	Investigator	ORCID ID
Martin Batstone	https://orcid.org/0000-0002-9058-9976	Omar Breik	https://orcid.org/0000-0001-7996-9268
Elizabeth Zhixin Goh	https://orcid.org/0000-0002-3091-6920	Danilo Carluccio	https://orcid.org/0000-0001-5041-5712

Publications in 2024

Journal Articles (RBWH staff or consumers in bold)
Corvino D, Batstone M, Hughes BGM , Kempchen T, Ng SS, Salim N, Schneppenheim F, Rommel D, Kumar A, Pearson S, Madore J, Koufariotis LT, Steinheuer LM, Pathirana D, Thurley K, Hölzel M, Borchering N, Braun M, Bald T. Type I Interferon Drives a Cellular State Inert to TCR-Stimulation and Could Impede Effective T-Cell Differentiation in Cancer. Eur J Immunol. 2024 Nov 12:e202451371. doi: 10.1002/eji.202451371. Epub ahead of print. PMID: 39529512

Journal Articles (RBWH staff or consumers in bold)

- NIHR Global Health Research Unit on Global Surgery; STARSurg Collaborative. A prognostic model for use before elective surgery to estimate the risk of postoperative pulmonary complications (GSU-Pulmonary Score): a development and validation study in three international cohorts. *Lancet Digit Health*. 2024 Jul;6(7):e507-e519. doi: 10.1016/S2589-7500(24)00065-7. PMID: 38906616
- Chen C, Batstone M, Taheri T**, Johnson N. Surgical Resection and Reconstruction of Ameloblastoma: A 13-Year Retrospective Review. *J Oral Maxillofac Surg*. 2024 Jul;82(7):862-868. doi: 10.1016/j.joms.2024.03.030. Epub 2024 Apr 1. PMID: 38636548
- Balakittnen J, Ekanayake Weeramange C, Wallace DF, Duijff PHG, Cristino AS, Hartel G, Barrero RA, Taheri **Vasani S, Batstone M, Breik O T, Kenny L**, Punyadeera C. A novel saliva-based miRNA profile to diagnose and predict oral cancer. *Int J Oral Sci*. 2024 Feb 18;16(1):14. doi: 10.1038/s41368-023-00273-w. PMID: 38368395; PMCID: PMC10874410
- Chang VKO, See L, Griffin A, **Breik O, Batstone MD**, Liu TPJ. Impact of dental state and surgical factors on postoperative neck infection in oral cancer patients. *Br J Oral Maxillofac Surg*. 2024 Jan;62(1):51-57. doi: 10.1016/j.bjoms.2023.10.013. Epub 2023 Oct 26. PMID: 38044253
- Dissanayaka N, **Alexander H, Carluccio D**, Redmond M, Vandi L-J, Novak JI. How safe are 3D-printed skull models for neurosurgical simulation? Measurement of airborne particles and VOCs while burr hole drilling. *Rapid Prototyping Journal*. 2024;30(5):1046-54
- Badar F, Vandi L-J, **Carluccio D**, Redmond M, Novak JI. Preliminary colour characterisation of a Stratasys J750 digital anatomy printer with different fillings and face orientations. *Progress in Additive Manufacturing*. 2024;9(4):1277-87
- Dissanayaka N, **Alexander H**, Redmond M, **Pearce P**, Hobbins-King A, Lee K, **Carluccio D**, Fakhr R, Vandi L-J, Novak JI. Evaluation of a pilot regional neurotrauma workshop using 3D printed simulation models. *Annals of 3D Printed Medicine*. 2024;15:100169
- Dissanayaka N, Novak JI, **Alexander H, Carluccio D**, Vandi L-J. Advancing 3-Dimensional Printed Burr Hole and Craniotomy Models for Neurosurgical Simulation Through Multimaterial Methods. *World Neurosurgery*. 2024
- Dissanayaka N, Novak JI, **Carluccio D**, Vandi L-J. Comparative analysis of mechanical and drilling properties: Human skull vs. 3D-printed replicas for neurosurgical training. *Materials Today Communications*. 2024;41:110776
- Goh EZ**, Beech N, Johnson NR. Surgical management of frontal bone and naso-orbitoethmoidal fractures: a seven-year multi-centre retrospective review. *Oral Surgery, Oral Medicine, Oral Pathology and Oral Radiology*. 2024;138:602-607. DOI: 10.1016/j.oooo.2024.06.006
- Goh EZ**, Bullis S, Beech N, Johnson NR. Surgical management of naso-orbito-ethmoidal fractures: a systematic review. *Oral Surgery, Oral Medicine, Oral Pathology and Oral Radiology*. 2024;138:9-20. DOI: 10.1016/j.oooo.2024.02.021
- Goh EZ**, Bullis S, Beech N, Johnson NR. Intraoperative computed tomography for orbital reconstruction: a systematic review. *International Journal of Oral and Maxillofacial Surgery*. 2024;53:127-132. DOI: 10.1016/j.ijom.2023.05.002
- Zhang X, Weeramange CE, Hughes BGM, Vasani S, Liu ZY, Warkiani M, Hartel G, Ladwa R, Thiery JP, Kenny L, **Breik O**, Punyadeera C. Circulating tumour cells predict recurrences and survival in head and neck squamous cell carcinoma patients. *Cell Mol Life Sci*. 2024 May 23;81(1):233. doi: 10.1007/s00018-024-05269-1. PMID: 38780775; PMCID: PMC11116312
- Wong M, Vasani S, **Breik O**, Zhang X, Kenny L, Punyadeera C. The potential of hydrogel-free tumoroids in head and neck squamous cell carcinoma. *Cancer Med*. 2024 Aug;13(16):e70129. doi: 10.1002/cam4.70129. PMID: 39169896; PMCID: PMC11339536
- Shukla K, Taheri T, Baghaie H, **Breik O**. Primary Intranodal Epithelioid Haemangioendothelioma in the Submandibular Region: A Case Report. *Indian J Otolaryngol Head Neck Surg*. 2024 Oct;76(5):3956-3961. doi: 10.1007/s12070-024-04752-2. Epub 2024 Jun 6. PMID: 39376453; PMCID: PMC11455700
- Tsai HH, Ali M, Mohindra A, Parmar S, **Breik O**. Outcomes of incidental pulmonary nodules detected in oral and oropharyngeal cancer patients. *Br J Oral Maxillofac Surg*. 2024 Dec;62(10):956-961. doi: 10.1016/j.bjoms.2024.09.011. Epub 2024 Sep 30. PMID: 39414403
- Uppal N, **Breik O**, Higginson J, Goodrum H, Korla H, Edmondson S, Idle M, Praveen P, Martin T, Parmar S. Prosthetic Condyle with Concurrent Microvascular Reconstruction for Mandibular Disarticulation Defects: A Retrospective Series. *J Maxillofac Oral Surg*. 2024 Dec;23(6):1379-1390. doi: 10.1007/s12663-023-02065-5. Epub 2023 Dec 7. PMID: 39618432; PMCID: PMC11607239.

Keynote or Plenary Lectures given in 2024

Date	Title
Aug 2024	Retention of Facial Prosthetics. Time for a more attractive option. M Batstone
Sept 2024	Rust Magnets and Plastic Skeletons. What could they have in common? M Batstone
Sept 2024	Conference convener and multiple presentations. ANZAOMS 2024. M Batstone

Ophthalmology

Research Highlights

Ophthalmology Department at RBWH includes multiple subspecialties represented by consultants with diverse research focus with both national and international presence, as evidenced by the numerous publications noted in the Research Report. Studies span across a wide spectrum of issues, including oculoplastics pathologies as well as effectiveness of treatment for Age Related Macular Degeneration. From academic stand point, research projects include the assessment of medical student ophthalmology teaching at University of Queensland and the survey of Intern readiness for the management of red flag ocular conditions. The outcome of these various studies will contribute to improved patient outcome overall and facilitate effective medical student teaching and intern preparedness in the management of ocular emergencies.

Collaborative Research Activity Involving RBWH Department / Research Group

Lead Investigator Name (RBWH staff and consumers in bold)	Other Study Investigators (RBWH staff and consumers in bold)	Research Project Title	Consumer involvement	Number of RBWH Patients Recruited
Sonia Yuen	Jenny Song	Intern preparedness in the management of ophthalmic conditions: 5-year longitudinal study based at RBWH, PAH and Mater	175	N/A
Sonia Yuen	Jenny Song	Effectiveness of Ophthalmology curriculum at UQ Faculty of Medicine: 5-year longitudinal study based at UQ Faculty of Medicine	150	N/A
Timothy Beckman	William Glasson, Lindsay McGrath, Sunil Warriar	A Phase 3 randomized, masked, controlled trial to evaluate efficacy and safety of belzupacap sarotalocan (AU-011) treatment compared to sham control in subjects with primary indeterminate lesions or small choroidal melanoma	N/A	N/A
Timothy Beckman		Secondary extraocular extension of choroidal melanoma following primary photodynamic therapy	N/A	N/A

Research Publications

Authors

Investigator	ORCID ID	Investigator	ORCID ID
Timothy Sullivan	https://orcid.org/0000-0002-7380-4339	Timothy Beckman	https://orcid.org/0000-0002-8364-9643
Sonia Yuen	https://orcid.org/0000-0001-8306-8067		

Publications in 2024

Journal Articles (RBWH staff or consumers in bold)
Amelia Bai, Abhishek Sharma , Mark Chiang , and Lawrence Lee . Clin Exp Ophthal 2024 Nov;52(8):861-869. doi: 10.1111/ceo.14413. Epub 2024 Jun 27. Aetiology and epidemiology of surgical vitreoretinal presentations in an Australian paediatric population: A seven-year retrospective study. PMID: 38937978 DOI: 10.1111/ceo.14413
An unusual case of Medial Canthal Angioleiomyoma Kothari A , Wang DD, Menon VA, Sullivan TJ . Ophthalmic Plastic and Reconstructive Surgery in Press 2024 DOI:10.1097/IOP.0000000000002905
Orbital Myeloma and Plasmacytoma: An Australian Study Xiong J, Tong JY, Hyer J, O'Donnell B, Selva D, Hardy T, McNab A, Sullivan TJ , Taylor S, Figueira E, Allende A, Tumuluri K. Ophthalmic Plast Reconstr Surg. 2024 Sep 10. doi: 10.1097/IOP.0000000000002777
Orbital Apex Syndrome in a child with a Dentigerous Cyst: Case Report Lamprell L, Tynan T, Sullivan TJ , Marinos E , Kalas T, Slee N, Bowman J. Otolaryngology Case Reports https://doi.org/10.1016/j.xocr.2024.100614
Two-Year Outcomes of Ultra-Low Dose Radiotherapy in the Treatment of Ocular Adnexal B-cell Lymphoma. Manta AI, Schlect DJ, Wang DD, Sullivan TJ Ophthalmic Plastic and Reconstructive Surgery 2024 Aug 19. doi: 10.1097/IOP.0000000000002747

Journal Articles (RBWH staff or consumers in bold)

Percutaneous Triamcinolone Injection for Upper Eyelid Retraction in Thyroid Eye Disease. Parsons SR, Wilson-Pogmore A, **Sullivan TJ** *Frontiers of Ophthalmology* 2024 4:1388197. doi: 10.3389/fopht.2024.1388197.

Keynote or Plenary Lectures given in 2024

Date	Title
January 2024	TJ Sullivan - Advances in Pathology as applied to Orbital Disease. Invited paper as part of the WSOPRS Symposium Advances in Oculoplastic around the World in the All India Ophthalmological Society 4th International Ophthalmic Conclave
January 2024	TJ Sullivan - Thyroid Eye Disease: Frontline management Steroids v Targeted Therapies. Invited paper as part of the "Thyroid Eye Disease, New Understanding and Novel Approaches to Treatment" in the All India Ophthalmological Society 4th International Ophthalmic Conclave
January 2024	TJ Sullivan - Tips and Tricks on Bony Orbital decompression. Invited presentation as part of the "Tips and Tricks on Thyroid Eye Disease Instruction Course at the 39th Asia-Pacific Academy of Ophthalmology Congress, Bali, Indonesia
February 2024	TJ Sullivan - Chair, Moderator and Panel discussant for the Updates in the management of Eyelid Disorders Symposium at the 39th Asia-Pacific Academy of Ophthalmology Congress, Bali, Indonesia
February 2024	TJ Sullivan - Tips and Tricks on Bony Orbital decompression. Invited presentation as part of the "Tips and Tricks on Thyroid Eye Disease Instruction Course at the 39th Asia-Pacific Academy of Ophthalmology Congress, Bali, Indonesia
April 2024	TJ Sullivan - Lymphoma involving the lacrimal Drainage apparatus - presented as a free paper at the 47th Orbital Society Meeting, Houston, Texas
April 2024	TJ Sullivan - Surgical Advances in Thyroid Eye Disease - presented as an Invited Paper at the Innovate Thyroid Eye Disease 2024 Multidisciplinary Symposium, Napa, California, USA
June 2024	TJ Sullivan - Thyroid Eye Disease: ITEDS role in disease management under recent Scientific advancements - presented as an invited paper at the 6th international meeting of ITEDS, Florianopolis, Brazil
October 2024	TJ Sullivan - Diagnosis and Assessment of TED - invited paper as part of the combined APSOPRS/ITEDS AAO Instruction Course Controversies in Thyroid Eye Disease- East meets West, AAO Annual Meeting, Chicago
October 2024	TJ Sullivan - Orbital and Intracranial retinoblastoma secondary to late presentation - Case Presentation at the 31st Apogean Society Meeting, Chicago
October 2024	TJ Sullivan - Cytokine related orbital inflammation following CAR-T therapy for Systemic Lymphoma - Presented as a Case Presentation at the 31st Apogean Society Meeting, Chicago
November 2024	TJ Sullivan - Managing Paediatric Orbital Tumour - To the Orbit and Beyond Symposium at Asia Pacific Society of Oculoplastic Surgery Biennial Meeting, Seoul Korea
November 2024	TJ Sullivan - Lymphoid tumours of the lacrimal drainage apparatus - presented as a free paper at the 55th AMS of RANZCO, Adelaide
November 2024	TJ Sullivan - Paediatric Orbital Tumours - Invited paper in the Low-Cost management in a Global Eye Health Symposium, RANZCO, ASM, Adelaide
December 2024	Tim Beckman - Orbital biopsy in the United Kingdom - International Society of Ocular Oncology (Goa, India)

Orthopaedic Surgery

Research Highlights

2024 was another productive year for the Department of Orthopaedic Surgery at the Royal Brisbane and Women's Hospital, with a number of our staff contributing clinically relevant research publications. As a result of our collective efforts the Department again achieved a total of more than 20 publications, our annual benchmark. The most notable of these was the successful completion of a randomised controlled trial to evaluate anterior knee pain after either infrapatellar or suprapatellar nailing of fractures of the tibia. Led by **Drs Gerrit Van de Pol, Daniel Axelrod**, Chris Conyard, and **Kevin Tetsworth**, the study convincingly demonstrated the benefit of the alternative suprapatellar approach. In addition, **Dr Andrew Foster**, in conjunction with the Jamieson Trauma Institute (JTI) and under the guidance of **Prof Michael Schuetz**, published a comprehensive analysis of the epidemiology of fracture-related infection in Queensland. Conducting a meticulous health economic analysis regarding the impact of infection on over 111,000 fractures treated operatively across Queensland, this was truly monumental in scope and depth. Furthermore, **Dennis Erbulut** and **Nicholas Green** from the Herston Biofabrication Institute (HBI), in conjunction with our Department and together with **A/Prof Tetsworth**, completed an interesting biomechanical study using finite element analysis to investigate the stability of comminuted distal femoral fractures stabilised with a lateral plate and using different screw configurations. **Dr Van de Pol**, together with the Herston Imaging Research Facility (HIRF), is actively investigating the influence of anterior cruciate ligament reconstruction surgical techniques on the development of tunnel-widening post-operatively. One of our senior registrars, **Dr Conor Gouk** received the award for the Best Trauma Paper at the Australian Orthopaedic Registrar Association Meeting in Brisbane in October.

In addition, **A/Prof Tetsworth** received the Outstanding Achievement Award at the ASAMI-BR & ILLRS Congress (the international society dedicated to limb reconstruction surgery) in Beijing in September. He and **Prof Andrej Trampuz** have also both been listed on Stanford's Top 2% Scientists, an international ranking that identifies the world's leading researchers, for each of the past 3 years.

The Department remains very committed to providing an environment that stimulates intellectual curiosity and facilitates academic rigour for our junior doctors and trainees, encouraging active participation in high quality research for those who express an interest. Through **Prof Schuetz**, the Department maintains very close ties with the JTI and access to additional high-quality resources to support further research. Our unit is also a very active leader within the orthopaedic infection community, and the Multi-Disciplinary Device Related Infection Team (mDRIFT) has been an important addition to our clinical activity with a number of related research initiatives underway. Together with QUT, the Department and mDRIFT were able to successfully recruit the services of **Prof Trampuz** from the Charité Hospital in Berlin; he is one of the most recognised Infectious Disease specialists in the world dedicated to musculoskeletal infection. He approaches research in this area with a rare combination of insight and clarity, and will undoubtedly significantly enhance our research capabilities regarding this extremely important clinical condition.

Research Awards and Achievements

Recipient (RBWH staff in bold)	Award	Event
Dr Conor Gouk	2024 Best Trauma Paper	Australian Orthopaedic Registrar Association (AORA) Annual Meeting
A/Prof Kevin Tetsworth	2024 Stanford's Top 2% Scientists	
Prof A Trampuz	2024 Stanford's Top 2% Scientists	

Research Grants

Investigator Names (RBWH staff in bold)	RBWH Departments / Research Groups	Research Project Title	Granting Body	Total Awarded (whole all years)	Length of Awards in years and years active
Prof M Schuetz , M Verhofstad, M Raschke, I Civil, T Miclau, B Gabbe	Jamieson Trauma Institute	Development of a global outcome measure for trauma	AO innovation funding	\$75,000 CHF	2 years, 2024-2026

Investigator Names (RBWH staff in bold)	RBWH Departments / Research Groups	Research Project Title	Granting Body	Total Awarded (whole all years)	Length of Awards in years and years active
Prof M Schuetz , D Epari, S Gregory, P Little	Jamieson Trauma Institute	Future Medical Devices Incubator - Proposal for MRFF 2024 BioMed Tech Incubator Grant Opportunity	QUT Centre for Biomedical Technologies Research Program Accelerator Fund 2024	\$50,000 AUD	1 year, 2024

Research Publications

Authors

Investigator	ORCID ID	Investigator	ORCID ID
Dr Andrew Mayo	0000-0002-7995-6237	Dennis Erbulut	0000-0002-5700-3515
A/Prof Kevin Tetsworth	0000-0002-3069-4141	Nicholas Green	0000-0003-2841-3141
Dr Gerrit Van de Pol	0009-0000-6109-2381	Prof Michael Schuetz	0000-0003-2808-0631
Dr Seung-Min Youn	0000-0002-3474-2040	Prof Andrej Trampuz	0000-0002-5219-2521
Dr Andrew Foster	0000-0003-1191-3916		

Publications in 2024

Journal Articles (RBWH staff or consumers in bold)

Foster AL, Warren J, Jaiprakash A, Crawford R, **Tetsworth K, Schuetz MA**. A population-based epidemiological and health economic analysis of fracture-related infection. The Bone & Joint Journal. 2024 Jan 1; 106(1): 77-85

Holscher C, **Manzanero S**, Hume A, **Foster AL, Tetsworth K, Chapman PR**. Non-tuberculous mycobacterial bone and joint infections - a case series from a tertiary referral centre in Australia. ANZ J Surg. 2024 Oct 20. doi: 10.1111/ans.19268. Epub ahead of print. PMID: 39428673

Aebischer AS, **Gouk CJC**, Steer R. Early weight-bearing following distal femur fracture fixation - a systematic review and meta-analysis. ANZ J Surg. 2024 Oct 28. doi: 10.1111/ans.19288. Epub ahead of print. PMID: 39465540

Italia K, Launay M, Gilliland L, Lane A, Nielsen J, Stalin KA, **Green N**, Maharaj J, Whitehouse S, Cutbush K, Gupta A. Improving glenoid guidewire placement in shoulder arthroplasty: a comparative study of mixed reality holographic overlay technique with freehand technique and conventional navigation. JSES International. 2024 Aug 14

Walker J, Wang Y, **Green N, Erbulut D**, Alttahir M, **Tetsworth K**. Contemporary use of 3D printed jigs and guides for osteotomies around the knee: a systematic review. Traumatology and Orthopaedics of Russia. 2024. Vol. 30 (3): 132-147. doi: 10.17816/2311-2905-17524

Tetsworth KD, Welyczko ZH, Quinnan SM. Indications for nonbiological reconstruction of posttraumatic bone defects about the knee. Journal of Orthopaedic Trauma. 2024 Apr 1; 38(4S): S23-

van de Pol GJ, Axelrod DE, Conyard C, **Tetsworth KD**. A suprapatellar approach, when compared to an infrapatellar approach, yields less anterior knee pain and better patellofemoral joint function, for intramedullary nailing of diaphyseal tibial fractures. Results of a randomised controlled trial. Journal of Orthopaedic Trauma. 2024 Feb 12. doi: 10.1097/BOT.0000000000002783. Epub ahead of print. PMID: 3834535

Al Muderis M, Tan YC, Lu W, **Tetsworth K, Axelrod D**, Haque R, Akhtar MA, Roberts C, Doshi K, Al-Jawazneh S, Hoellwarth JS. Transtibial Osseointegration following Unilateral Traumatic Amputation: an observational study of patients with at least two years follow-up. Injury. 2024 Apr 22:111568

MacKechnie MC, Shearer DW, Verhofstad MH, Martin C, Graham SM, **Schuetz M**, Pesantez R, Hüttl T, Kojima K, Bernstein BP, Miclau T. Establishing consensus on essential resources for musculoskeletal trauma care worldwide: a modified Delphi study. Journal of Bone & Joint Surgery. 2024 Jan 3; 106(1): 47-55

Gurung R, Terrill A, White G, Windolf M, Hofmann-Fliri L, Dlaska C, **Schuetz M**, Epari DR. Severity of complications after locking plate osteosynthesis in distal femur fractures. Journal of Clinical Medicine. 2024 Mar 5; 13(5): 1492

Hohmann E, Paschos N, Keough N, **Erbulut D**, Oberholster A, Glatt V, Molepo M, **Tetsworth K**. Cadaveric biomechanical and laboratory research can be quantitatively scored for quality with the Biomechanics Objective Basic science Quality Assessment Tool: The BOBQAT score. Arthroscopy 2024. 2024 Jan 5: S0749-8063

Erbulut D, Green N, Grant C, **Tetsworth K**. Plate fixation optimization for distal femoral fractures with segmental bone loss: Defining the preferred screw distribution using finite element analysis. Injury. 2023 Sep 1;55(2):111079

Journal Articles (RBWH staff or consumers in bold)

Alam SH, Hoellwarth JS, **Tetsworth K**, Oomatia A, Taylor TN, Al Muderis M. Development of an evidence-based diagnostic algorithm for infection in patients with transcutaneous osseointegration following amputation. *Journal of Bone and Joint Infection*. 2024 Feb 6; 9(1): 49-57

Low J, Hoellwarth JS, Akhtar MA, **Tetsworth K**, Al-Muderis M. Transfemoral amputation versus knee arthrodesis for failed total knee replacement: A systematic review of outcomes. *The Knee*. 2024 Mar 1; 47: 63-80

Evans AR, **Tetsworth K**, Quinnan S, Wixted JJ. Transcutaneous osseointegration for amputees. *OTA International*. 2024 Mar 11; 7(2 Suppl): e326

Ong G, Hoellwarth J, **Tetsworth K**, Al Muderis M. Techniques to remove press-fit osseointegration implants. *JBJS Essential Surgical Techniques*. 2024 Jan 1;14(1)

Hoellwarth JS, **Tetsworth K**, Al Muderis M. Single-Stage Press-Fit Osseointegration of the Radius and Ulna for Rehabilitation After Trans-Forearm Amputation. *JBJS Essential Surgical Techniques*. 2024 Jul 1;14(3): e23

Hoellwarth JS, Haidary A, **Tetsworth K**, Oomatia A, Al Muderis M. Transfemoral Osseointegration in Association with Total Hip Replacement: Observational Cohort Study of Patients with Follow-Up Exceeding 2 Years. *Arthroplasty Today*. 2024 Aug 1; 28:101463

Cherkaoui M, Onsea J, Thielman L, Verhofstad MH, Obremskey WT, Fragomen AT, Bernstein M, **Tetsworth K**, Metsemakers WJ. Management of rotational malalignment following operative treatment of fractures of the lower extremities. A scoping review. *Injury*. 2024 Sep 17:111903

Bozkurt M, Pulatkan A, Randelli P, **Tetsworth K**, Manzary M, Seon JK, Salzmänn G, Haghpānah B, Kim KI, Petersen W, Walker J. What are the indications for tibial and femoral osteotomies around the knee? *The Journal of Arthroplasty*. 2024 Oct 22: S0883-5403

Dzhavadov AA, Huang W, Li H, Noor SS, Parvizi J, Shahi A, Sheth NP, **Tetsworth K**, Tikhilov RM, Villafuerte JA, Zagra L. In which patients should a custom-made acetabular implant (triflange cup) be used? *The Journal of Arthroplasty*. 2024 Oct 19: S0883-540

Rajgopal A, Tripathi S, Komnos G, Sousa R, Krebs V, Morgan-Jones R, Hermoso JH, **Tetsworth K**, Zolmanis M. What is the preferred option for reconstruction of a failed extensor mechanism during revision total knee arthroplasty? *The Journal of Arthroplasty*. 2024 Oct 18: S0883-5403(24)01055-6.

Plastic and Reconstructive Surgery

Research Highlights

The Plastic and Reconstructive Surgery Research Group at the Royal Brisbane and Women’s Hospital (RBWH) was founded in late 2024 as part of a service model transformation under the leadership of Dr. Cameron McKay. While the service has a longstanding history of research involvement, with numerous activities previously overseen by the Plastic and Reconstructive Surgery service line, the group, led by Andrew Lewandowski and Research Coordinator Kylie Jacobs, is committed to advancing research excellence. This is achieved by fostering a culture of innovation, collaboration, and knowledge translation. The Group’s primary focus is to enhance patient outcomes, drive the advancement of plastic and reconstructive surgery, and further elevate RBWH's reputation as a leading research institution.

The Group's research covers a wide range of topics within the service, including Head and Neck microsurgery, skin cancer, breast reconstruction, and graft and flap management.

The Department of Plastic and Reconstructive Surgery at RBWH plays a crucial role in a broad spectrum of areas, performing over 8,000 outpatient encounters and more than 3,000 procedures annually, the majority of which involve malignancy. The department provides both local elective surgeries and treatments for patients referred from across Queensland. Its diverse responsibilities also include offering specialized treatment and/or reconstruction for complex surgical cases, often collaborating with other specialties for critical care.

With its team’s diverse expertise, the Group continues to expand its research profile through collaborative, groundbreaking projects in partnership with organizations such as the Herston Bio fabrication Institute, Jamieson Trauma Institute, the University of Queensland, and various other departments.

Research Awards and Achievements

Recipient (RBWH staff in bold)	Award	Event
Matthew Cheng	Best Abstract Presentation	Plastic Surgery Meeting 2024, San Diego

Research Grants

Investigator Names (RBWH staff in bold)	RBWH Departments / Research Groups	Research Project Title	Granting Body	Total Awarded (whole all years)	Length of Awards in years and years active
Shiv Chopra	Plastic and Reconstructive Surgery	Towards next generation bioresorbable implants for breast cancer reconstruction: using glycosaminoglycans to drive vascularisation.		\$20,000	2 Years 2024-2026

RBWH Department / Research Group Led Research Activity

Lead Investigator Name (RBWH staff and consumers in bold)	Other Study Investigators (RBWH staff and consumers in bold)	Research Project Title	Consumer Involvement	Number of RBWH Patients Recruited
Shiv Chopra	Michael Wagels	Next generation bioresorbable implants for breast reconstruction after cancer treatment: using glycosaminoglycans to drive vascularisation.		21
Andrew Lewandowski	Lachlan Stephens, Alexander Murray-Douglass	Level II neck dissection at time of Parotidectomy, a retrospective cohort study		
Gabrielle Fox	Andrew Lewandowski, Shireen Senewiratne	What is the rate of subsequent amputation in patients requiring latissimus dorsi free tissue coverage after lower limb trauma?		

Lead Investigator Name (RBWH staff and consumers in bold)	Other Study Investigators (RBWH staff and consumers in bold)	Research Project Title	Consumer involvement	Number of RBWH Patients Recruited
Shireen Senewiratne	Noah Betar, Henry Beem	Chest closure series - 450 sternotomy closures		0 (450 TPCH)
Milap Rughani	Noah Betar, Elena Blyth, Kieran Rowe, Darryl Dunn	Free flap reconstruction of the scalp: Royal Brisbane Experience		
Milap Rughani	Nicola Zelow, Tia Kemp	Skin Cancer in the Sunshine State: A single-centre approach to the management of Non-Melanoma Skin Cancer in the wake of COVID-19		
Darryl Dunn	Caitlin O'Hare, Robert Calvisi, Richard Ross, Pascalino Romeo, Michael Wagels, Darryl Dunn	Lymph node metastasis in squamous cell carcinoma of the lip		250
Jason Brown	Lisa Davenport, Jason Brown, Amanda Kijas, Darryl Dunn, Andrew Dalley, Peter Gilies	Prospective tissue collection of dermal donations for exploratory wound healing experimentation in vitro		100

Collaborative Research Activity Involving RBWH Department / Research Group

Lead Investigator Name (RBWH staff and consumers in bold)	Other Study Investigators (RBWH staff and consumers in bold)	Research Project Title	Consumer involvement	Number of RBWH Patients Recruited
Prof Andrej Trampuz	Andrew Foster, Andrew Lewandowski, Cliff Afoakwah, Kevin Tetsworth, Michael Schuetz, Luke Watson	Optimising Management of Open Tibia Fractures to Prevent Fracture-Related Infection		Approx. 250
Peter Watson-Brown	Milap Rughani, Caitlyn Withers, Sarju Vasani, Alexa McNaught	Impact of Age on Post-discharge Care Requirements in Older Adults Undergoing Head and Neck Cancer Resection with Free Flap Reconstruction: A Retrospective Cohort Study		

Research Publications

Authors

Investigator	ORCID ID	Investigator	ORCID ID
Andrew Lewandowski	https://orcid.org/0000-0001-8626-7037	Caitlin O'Hare	https://orcid.org/0000-0003-1120-7931
Darryl Dunn	https://orcid.org/0009-0005-6343-9496	Kylie Jacobs	https://orcid.org/0009-0005-9244-303X
Kieran Rowe	https://orcid.org/0000-0002-6332-8375	Shiv Chopra	https://orcid.org/0000-0002-4733-8020
Milap Rughani	https://orcid.org/0000-0002-0008-2291	Noah Betar	https://orcid.org/0000-0002-5949-9411
Lisa Davenport	https://orcid.org/0000-0001-8118-7572		

Publications in 2024

Journal Articles (RBWH staff or consumers in bold)
Blyth E, Vujcich E, Dunn D. High-Voltage Electrical Burn Requiring Urgent Scalp Reconstruction after Developing a Brain Abscess. Eur Burn J. 2024;5(3):288-95.

Keynote or Plenary Lectures given in 2024

Date	Title
6 Feb 2024	Microsurgery sutures – Milap Rughani, Australasian Plastic and Reconstructive Surgery Australasian SET Registrars Induction Conference
10-14 Mar 2024	Scalp reconstruction – Milap Rughani, Australasian SET Conference, Australian Society of Plastic Surgeons
10-14 Mar 2024	Parotid Tumours & Neck Dissection – Milap Rughani, Australasian SET Conference, Australian Society of Plastic Surgeons
10-14 Mar 2024	Merkel Cell Cancers – Milap Rughani, Australasian SET Conference, Australian Society of Plastic Surgeons
26-27 July 2024	Reconstruction for Lower Limb Trauma. – Milap Rughani, Australasian Bone and Joint Infection (BJI) Conference, Gold Coast
6 Aug 2024	Life as a microsurgeon. – Milap Rughani, Stoke Mandeville Plastics Series.
7 Aug 2024	Complex skin cancer in the head and Neck. – Milap Rughani, Stoke Mandeville Plastics Series.
October 2024	Reconstruction for Head and Neck Cancers – Milap Rughani, Otorhinolaryngology Head & Neck Nurses Group Princess Alexandra Hospital
17 Sept 2024	Squamous cell carcinoma & scalp reconstruction – Milap Rughani, Australian Society of Plastic Surgeons



Professor Stuart Pegg Burns Centre

Research Highlights

The Professor Stuart Pegg (PSP) Burns Centre provides all adult burn care for the state of Queensland, presenting an excellent opportunity for innovative translational research. Co-located with the Queensland Skin Culture Centre and the Herston Biofabrication Institute and in strong partnership with The Jamieson Trauma Institute, STARS, UQ, QUT and Fiona Wood Burns Research Centre, positioning the Burns unit in a unique position for world-class research.

Our multidisciplinary team's recognition was highlighted by winning the Best Poster award for "Does 3D Scanning and Printing of Face Masks for Burn Scarring Improve Individuals' Experiences" at the Australian & New Zealand Trauma Society (ANZTS) Annual Scientific Meeting, Trauma 2024 Conference, in addition securing funding to further advance this project in 2025.

Burns research was marked by a diverse array of multidisciplinary projects focused on enhancing patient outcomes. With numerous projects reaching completion in 2024, we eagerly anticipate the resulting publications in 2025.

Research Awards and Achievements

Recipient (RBWH staff in bold)	Award	Event
Andrea McKittrick	Best Poster for Does 3D scanning and printing of face masks for burn scarring improve individuals' experiences	Australian & New Zealand Trauma Society (ANZTS) Annual Scientific Meeting, Trauma 2024 Conference. 24 Oct 2024. Brisbane

Research Grants

Investigator Names (RBWH staff in bold)	RBWH Departments / Research Groups	Research Project Title	Granting Body	Total Awarded (whole all years)	Length of Awards in years and years active
Andrea McKittrick	Burns Occupational Therapy	A feasibility study comparing 3D scanning technology and current standard of care when measuring limbs	ANZBA SEED Grant	\$5000.00	1 year 2024

RBWH Department / Research Group Led Research Activity

Lead Investigator Name (RBWH staff and consumers in bold)	Other Study Investigators (RBWH staff and consumers in bold)	Research Project Title	Consumer involvement	Number of RBWH Patients Recruited
Jason Brown	Peter Gillies, Andrew Dally	Collection of skin tissue from burn wounds in adults. The Queensland Skin Culture Centre (QSCC) Biobank	N/A	15
Teresa Matthews	Jason Miller, Michael Rudd, Michael Muller, Jason Brown, Carl Lisec, Keith Townsey	Professor Stuart Pegg Adult Burn Centre (PSPABC), Royal Brisbane & Women's Hospital (RBWH) submitting data to the Burns Registry of Australia and New Zealand (BRANZ)	N/A	N/A
Liz Vujcich	Jason Brown, Michelle Donovan, Noah Betar	ELATE - Early versus late ablative CO2 fractional laser treatment evaluation	N/A	11
Andrea McKittrick	Michelle Donovan, Amber Jones, Jason Brown, Liz Vujcich, Sue Laracy, Jennifer Strong	ELEVate - Feasibility, Acceptability and Safety of Vacuum Therapy on Burn Scar outcomes	N/A	20
Jason Brown	Andrea McKittrick, Mathilde Desselle, David Forrestal, Roozbeh Fakhr, Danielle Herbert, Aleksandra Edmundson	A pilot study to implement technology (3D Scanning and Printing) to improve long term burn facial scarring outcomes across the spectrum of care	N/A	15

Lead Investigator Name (RBWH staff and consumers in bold)	Other Study Investigators (RBWH staff and consumers in bold)	Research Project Title	Consumer involvement	Number of RBWH Patients Recruited
Andrea McKittrick	Jason Brown, Aleksandra Edmundson, Mathilde Desselle, Marita Prior	A feasibility study comparing 3D scanning technology and current standard of care when measuring limbs	6	7

Current RBWH Department Quality Improvement Activity

Lead Investigator Name (RBWH staff in bold)	Other Study Investigators (RBWH staff in bold)	Project Title
Michael Muller	Jenyu Shaw	Indigenous Outcomes in Major Burns ($\geq 20\%$ TBSA)
Elizabeth Vujcich	Jenyu Shaw	Assessment of morbidity and mortality in Burns utilising the ITRAQI compared to the remoteness in Australia (ARIA+)
Jason Brown	Justin Hunt	An audit of burns epidemiology in Queensland 2003 to 2023
Andrea McKittrick	Brown J, Cooper Parker E, Meland H	Exploration of devices used in clinical practice to prevent burn scar contractures of the nose.
Andrea McKittrick	Brown J, Fitchenmayer E, Smith E	Review of Surgical and Non-Surgical Interventions for management of Burn Scar Contractures to the Mouth

Collaborative Research Activity Involving RBWH Department / Research Group

Lead Investigator Name (RBWH staff and consumers in bold)	Other Study Investigators (RBWH staff and consumers in bold)	Research Project Title	Consumer involvement	Number of RBWH Patients Recruited
Jayesh Dhanani	Carl Lisec, Michael Reade, Paul Gray, Jason Roberts, Andrew Claus, Amelia Perri, Cheryl Fourie, Jason Pincus, Amelia Livermore, Anita Plaza	Evaluating whether nebulized dexmedetomidine can be used for pain management in burn injury dressing changes.: A phase III pilot feasibility, randomized controlled crossover trial	N/A	20
Mark Fear	Fiona Wood, Natalie Jason Brown, Andrea McKittrick	TargEting Lysyl oxidase to ameliorate scarring in burn Trauma	N/A	1
Nichole Foster	Dale Edgar, Fiona Wood, Mark Fear, Nathan Pavlos, Edward Raby, Elizabeth Capell, Frank Li, Jason Brown, Aaron Tay, Leila Cuttle	Traumatic Heterotopic Ossification: Exploring Prevalence, Risk Factors, Prevention and Treatment	N/A	1
Alan Rowan (UQ)	Amanda Kijas (UQ), Jason Brown, Peter Gillies, Andrew Dalley, Michaela George (UQ)	Guiding immune regulation using smart biomaterials to promote scarless wound healing. HBI Skin & Wounds sub-program	N/A	QSCC Biobank
Merrilyn Banks (N&D)	Christian Redd (CSIRO), David Silvera-Tawil (CISRO), Dr Jason Brown (RBWH) Judy Bauer (N&D), Anita Plaza (PT), Andrea Mc Kittrick (OT), Dr Elizabeth Vujcich (RBWH), Claire Dux (N&D), Dr Qing Zhang (CISRO), Marlien Varnfield (CISRO), Dale Trevor (Consumer)	Feasibility of using wearable technology in patients with burn injury, to measure energy expenditure, and other observations, that can directly influence clinical care	Yes	4

Research Publications

Authors

Investigator	ORCID ID
Jason Brown	https://orcid.org/0000-0002-8386-1118

Publications in 2024

Journal Articles (RBWH staff or consumers in bold)
Shafiee A, Sun J, Ahmed IA, Phua F, Rossi GR, Lin CY, Souza-Fonseca-Guimaraes F, Wolvetang EJ, Brown J , Khosrotehrani K. Development of Physiologically Relevant Skin Organoids from Human Induced Pluripotent Stem Cells. <i>Small</i> . 2024 Apr;20(16):e2304879
Ahmed I, Sun J, Brown J , Khosrotehrani K, Shafiee A . An optimized protocol for generating appendage-bearing skin organoids from human-induced pluripotent stem cells. <i>Biol Methods Protoc</i> . 2024 Mar 22;9(1)
Blyth E, Vujcich E, Dunn D . High-Voltage Electrical Burn Requiring Urgent Scalp Reconstruction after Developing a Brain Abscess. <i>Eur Burn J</i> . 2024 Sep 3;5(3):288-295
Duff M , Manzanero S, Barker R, Barlas P, Westacott G, Lisec C . Lithium-ion battery related burns and emerging trends: a retrospective case series and data analysis of emergency presentations. <i>ANZ J Surg</i> . 2024;94(11):1983-1989.

Keynote or Plenary Lectures given in 2024

Date	Title
1/11/2024	Mc Kittrick, A. Brown , J., Edmundson , A, Desselle, M. & Prior, M. A feasibility study comparing 3D scanning technology and current standard of care when measuring limbs. ANZBA 2024, Auckland NZ

Trauma Service

Research Highlights

The Trauma Service has had a successful year demonstrated by their achievements in research. The team have had 7 papers accepted for publication across a range of high-ranking journals. In addition, the team has collectively received more than 3 in grant funding to support their research endeavours, with future projects exploring a range of topics focussed on direct patient care, education and training of trauma clinicians and the trauma burden across Queensland.

Multiple Trauma Service team members have promoted the service as invited speakers, through their abstract presentations, conference session chairs and in a recent international podcast highlighting their important research outputs.

Dr Williamson has been awarded two research prizes for her work in chest wall trauma in collaboration with the Jamieson Trauma Institute.

Research Awards and Achievements

Recipient (RBWH staff in bold)	Award	Event
Dr Fran Williamson	Best Oral Paper	ANZTS
Dr Fran Williamson	Best Oral Paper	UQ Research Symposium

Research Grants

Investigator Names (RBWH staff in bold)	RBWH Departments / Research Groups	Research Project Title	Granting Body	Total Awarded (whole all years)	Length of Awards in years and years active
Muller M, Williamson F, Pearce S , Weber D, Manzanero S	Trauma Service	STOP THE BLEED education – can gamification improve skill retention in laypersons?	MAIC Funded Grant	\$100,432	2 years, 2024 – 2026
Gosper I, Vallmuur K, Williamson F , Cramb S, Das A, Banu S, Morrey C, Schuetz M	Trauma Service	Pelvic trauma improvement program phase 1: mapping the trends, risk factors and cost of pelvic trauma hospitalisations	MAIC Funded Grant	\$87,256	2 years, 2024 – 2026
Williamson F , Thompson K, Parker C, Candusso D, Lockyer L, Winter G, Saunders T, Owens L, Dodds M, Muller M	Trauma Service	Can interactive online learning using enhanced technology adequately teach trauma-based procedural skills to emergency nursing clinicians?	EMF Leading Edge Grant	\$97,469	2 years, 2024 - 2026

RBWH Department / Research Group Lead Research Activity

Lead Investigator Name (RBWH staff and consumers in bold)	Other Study Investigators (RBWH staff and consumers in bold)	Research Project Title	Consumer involvement	Number of RBWH Patients Recruited
Fran Williamson	Michael Muller, Laura Owens , Kate Thompson, Michelle Dodds, Thom Saunders, Christina Parker, Damian Candusso, Lori Lokyer, Graham Winter	Can interactive online learning enhance technology adequately teach trauma based procedural skills to emergency nursing clinicians	20	0
Fran Williamson	Zeph Tyack, Victoria McCreanor, Jacelle Warren, Michael Handy , Stephen McPhail, Martin Wullschleger	Value based trauma care: understanding the cost affect and implantation of an innovative specialist lead multi-disciplinary trauma admitting service	12	6

Lead Investigator Name (RBWH staff and consumers in bold)	Other Study Investigators (RBWH staff and consumers in bold)	Research Project Title	Consumer involvement	Number of RBWH Patients Recruited
Carl Lisec	Amelia Perri, Kate McCrossin, Allison Hill, Anita Plaza, Andrea McKittrick	A pilot trial of Nexobrid at the RBWH Burns Unit. E-Poster		

Collaborative Research Activity Involving RBWH Department / Research Group

Lead Investigator Name (RBWH staff and consumers in bold)	Other Study Investigators (RBWH staff and consumers in bold)	Research Project Title	Consumer involvement	Number of RBWH Patients Recruited
Fran Williamson	Elissa Milford, Michael Reade	FEISTY 2		23

Research Publications

Authors

Investigator	ORCID ID	Investigator	ORCID ID
Fran Williamson	0000-0002-5476-1791	Michael Handy	0000-0003-1236-0460
Carl Lisec	0000-0002-1664-0462		

Publications in 2024

Journal Articles (RBWH staff or consumers in bold)

Williamson F, Heng PJ, Okubo M, Martinez Mejias A, Chang W-T, Douma M, Carlson J, Raitt J, Djarv T. Does delivering chest compressions to patients who are not in cardiac arrest cause unintentional injury? A systematic review. Resus Plus, in press Nov 2024. Article 100829

Williamson F, Proper M, Shibl R, Cramb S, McCreanor V, Warren J, Cameron C. Community Opioid Dispensing after Rib Fracture Injuries: CODI. Brit J Pain, online Nov 2024, doi.org/10.1177/20494637241300264

Peters N, **Williamson F**, Eley V. Ultrasound transducer disinfection for percutaneous procedures: A review of the evidence supporting guideline recommendations. AJUM. 2024; 27(4):197-264. doi.10.1002/ajum.12408

Williamson F, Cole E. Trauma team activation for older patient with pelvic fractures: Are current criteria adequate? EMA. 2024; 36(6): 907-914. doi.org/10.1111/1742-6723.14472

McLeod K, Owens L, **Williamson F**, Faulkner B, McLanders M. Queensland Trauma Education (QTE): an innovative simulation program that addresses the needs and barriers of interprofessional trauma care education across a complex landscape. Rural and Rem Health 2024; 24: 8851. doi.org/10.22605/RRH8851

Duff, M., Manzanero, S., Barker, R., Barlas, P., Westacott, G. and **Lisec, C.** (2024), Lithium-ion battery related burns and emerging trends: a retrospective case series and data analysis of emergency presentations. ANZ Journal of Surgery. <https://doi.org/10.1111/ans.19218>

Ranse J, Mackie B, Crilly J, Heslop D, Wilson B, Mitchell M, Weber S, Watkins N, Sharpe J, **Handy M**, Hertelendy A, Currie J, Hammad K. [in-press]. Strengthening Emergency Department response to chemical, biological, radiological, and nuclear disasters: A scoping review. Australasian Emergency Care. [https://authors.elsevier.com/sd/article/S2588-994X\(24\)00056-3](https://authors.elsevier.com/sd/article/S2588-994X(24)00056-3).

Keynote or Plenary Lectures given in 2024

Date	Title
24 – 26 October 2024	Fran Williamson chaired ANZTS concurrent sessions: Ed Critical care / Pre-hospital
3 October 2024	Fran Williamson chaired ASUM national conference
28 October 2024	Fran Williamson invited speaker, prehospital transfusion, ANZSBT/THANZ combined symposium
October 2024	Duff, M., Lisec, C. Burns caused by exploding e-scooter lithium-ion batteries: a worrying new trend. Verbal presentation , Australian and New Zealand Burn Association Annual Scientific Meeting, Auckland, 2024

Urology Clinical Research Unit (URO CRU)

Research Highlights

In 2024, the Urology Department research continued to grow with a focus on department led and collaborative research projects. Our Urology Research Nurse increased her hours to provide wider research support to the department and enable our participation in more national trials.

The department continued to contribute to the broader urology profession with 28 peer reviewed journal articles and 5 conference papers. Urology supported 2 investigator led research projects and contributed to 2 national trials.

We continue to expand our focus with collaborative projects alongside Nuclear Medicine, Radiation and Medical Oncology as well as the University of Queensland, Herston Imaging and Research Facility, The Peter MacCallum Cancer Centre, The Garvan Institute of Medical Research and St Vincent’s Private Hospital, Sydney.

A/Prof Matthew Roberts was selected as Co-Convenor of ANZUP Annual Scientific Meeting 2024 and A/Prof John Yaxley served on the Convening Committee of 24th Asia Pacific Prostate Cancer Conference 2024. RBWH Urology Department members including A/Prof Matthew Roberts, A/Prof John Yaxley, Dr Harry Collin, Dr Adam Pearce, Dr Benjamin Martin and Dr Anojan Navaratnam were invited speakers at national and international conferences showcasing the clinical and research expertise present in the unit.

Matthew Roberts received the Rising Star Award at the 2024 Metro North Health, Research Excellence Awards and was named in the top 2 per cent of the most-cited scientists in the world in a Stanford University study. A/Prof John Yaxley was appointed to the Editorial Board of Prostate Cancer and Prostatic Diseases and Matthew Roberts continued this role for BJU International, in addition to significant peer review contributions.

RBWH urology team members were investigators in successful grants awarded \$1,315,500 in funding, including a \$330,000 grant from the RBWH Foundation to continue the prostate cancer early detection biomarker program in collaboration with UQ and The Wesley Hospital.

Research Awards and Achievements

Recipient (RBWH staff in bold)	Award	Event
Matthew Roberts	Rising Star Award	2024, Metro North Health, Research Excellence Awards

Research Grants

Investigator Names (RBWH staff in bold)	RBWH Departments / Research Groups	Research Project Title	Granting Body	Total Awarded (whole all years)	Length of Awards in years and years active
Kulasinghe A, Roberts M	Department of Urology	Prostate Cancer – FDG – Spatial Imaging	PA Research Foundation	\$25,000	2 years, 2024-2025
Koo M, Roberts M	Department of Urology	Developing and trialing new personalised companion diagnostics for different prostate cancer treatments. Precision Prostate Cancer Program	RBWH Foundation (Project Grant)	\$330,000	4 years, 2024-2027
Hooper J, Thomas P, Roberts M , Oliveira N, Matsika M, Vela I	Department of Urology	Targeting bladder cancer with anti-CDCP1 radioconjugates	CUREator	\$950,500	2 years, 2024-2025
Roberts M	Department of Urology	Metro North Health Stimulus Grant	Metro North Health	\$10,000	1 year, 2024

RBWH Department / Research Group Led Research Activity

Lead Investigator Name (RBWH staff and consumers in bold)	Other Study Investigators (RBWH staff and consumers in bold)	Research Project Title	Consumer involvement	Number of RBWH Patients Recruited
Roberts M	Cullen K, Dhiantravan N, Harley S, Kuchel A, Pattison D, Pelecanos A, Roberts N, Thomas P, Vela I, Yaxley J	Initial diagnostic accuracy of FDG-PET compared to PSMA-PET for newly diagnosed high risk prostate cancer prior to treatment: FIND Trial		0 in 2024 / 19 from RBWH in total
Pearce A	Bowes W, Dhiantravan N, Gan CL, Gordon Brown DJ, Jones L, Pattison D, Roberts M	ProspEctive comparison of PSMA PET CT vs FDG PET CT in staging of Renal Tumours (PEPPER): a pilot trial		11 from RBWH in 2024 / 14 from RBWH in total

Collaborative Research Activity Involving RBWH Department / Research Group

Lead Investigator Name (RBWH staff and consumers in bold)	Other Study Investigators (RBWH staff and consumers in bold)	Research Project Title	Consumer involvement	Number of RBWH Patients Recruited
Buteau JP	Moon D, Fahey MT, Roberts MJ, Thompson J, Murphy DG, Papa N, Mitchell C, De Abreu Lourenco R, Dhillon HM, Kasivisvanathan V, Francis RJ, Stricker P, Agrawal S, O'Brien J, McVey A, Sharma G, Levy S, Ayati N, Nguyen A, Lee SF, Pattison DA, Sivaratnam D, Frydenberg M, Du Y, Titus J, Lee ST, Ischia J, Jack G, Hofman MS, Emmett L	PRIMARY2: A Multicentre, Phase 3, Randomised Controlled Trial Investigating the Additive Diagnostic Value of [⁶⁸ Ga] Ga-PSMA-11 Positron Emission Tomography/Computed Tomography in Men with Negative or Equivocal Multiparametric Magnetic Resonance Imaging for the Diagnosis of Clinically Significant Prostate Cancer		15 from RBWH in 2024 / 54 from RBWH in total
Roberts M	Conduit C, Davis ID, Effenev RM, Williams S, Martin JM, Hofman MS, Hruby G, Eapen R, Gianacas C, Papa N, Lourenço RA, Dhillon HM, Allen R, Fontela A, Kaur B, Emmett L	The Dedicated Imaging Post-Prostatectomy for Enhanced Radiotherapy outcomes (DIPPER): a multicentre, randomised trial of salvage radiotherapy versus surveillance for low-risk biochemical recurrence after radical prostatectomy		0

Research Publications

Authors

Investigator	ORCID ID	Investigator	ORCID ID
Matthew Roberts	https://orcid.org/0000-0003-0552-7402	Anthony Franklin	https://orcid.org/0000-0002-1954-4820
Rachel Esler	https://orcid.org/0000-0001-7743-4841	Harry Collin	https://orcid.org/0000-0002-5630-6047
Anojan Navaratnam	https://orcid.org/0000-0003-4684-0235	Nigel Dunglison	N/A
Adam Pearce	https://orcid.org/0000-0001-9438-1008	John Yaxley	https://orcid.org/0000-0001-6566-9037
Kandice Keogh	https://orcid.org/0000-0001-7424-6976	Marnique Basto	https://orcid.org/0000-0003-12863869

Publications in 2024

Journal Articles (RBWH staff or consumers in bold)
Collin H, Keogh K, Basto M, Loeb S, Roberts MJ. ChatGPT can help guide and empower patients after prostate cancer diagnosis. Prostate Cancer Prostatic Dis. 2024 Jun 26. doi: 10.1038/s41391-024-00864-6. Epub ahead of print. PMID: 38926606

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Journal Articles (RBWH staff or consumers in bold)

Collin H, Roberts MJ, Keogh K, Siriwardana A, **Basto M**. Improving clinical efficiency using retrieval-augmented generation in urologic oncology: A guideline-enhanced artificial intelligence approach. BJUI Compass. 2024 Dec 10

Cornford P, van den Bergh RCN, Briers E, Van den Broeck T, Brunnkhorst O, Darraugh J, Eberli D, De Meerleer G, De Santis M, Farolfi A, Gandaglia G, Gillessen S, Grivas N, Henry AM, Lardas M, van Leenders GJLH, Liew M, Linares Espinos E, Oldenburg J, van Oort IM, Oprea-Lager DE, Ploussard G, **Roberts MJ**, Rouvière O, Schoots IG, Schouten N, Smith EJ, Stranne J, Wiegel T, Willemse PM, Tilki D. EAU-EANM-ESTRO-ESUR-SIOG Guidelines on Prostate Cancer-2024 Update. Part I: Screening, Diagnosis, and Local Treatment with Curative Intent. Eur Urol. 2024 Aug;86(2):148-163. doi: 10.1016/j.eururo.2024.03.027. Epub 2024 Apr 13. PMID: 38614820

Dey S, Kinoshita M, Puttick S, Rose S, Trau M, **Roberts MJ**, and Koo KM..Cancer-on-chip and integrative tumor microenvironment sensor technologies for progressing precision radiotherapy. Advanced Sensor Research. 2024;3(7):2300193. doi: 10.1002/adsr.202300193

Emmett L, Papa N, Hope TA, Fendler W, Calais J, Burger I, Eiber M, Barbato F, Moon D, Counter W, John N, Xue A, **Franklin A**, Thompson J, Rasiah K, Frydenberg M, **Yaxley J**, Buteau J, Agrawal S, Ho B, Nguyen A, Liu V, Lee J, Woo H, Hsiao E, Sutherland T, Perry E, Stricker P, Hofman MS, Kasivisvanathan V, **Roberts M**, Murphy D. Beyond Prostate Imaging Reporting and Data System: Combining Magnetic Resonance Imaging Prostate Imaging Reporting and Data System and Prostate-Specific Membrane Antigen-Positron Emission Tomography/Computed Tomography PRIMARY Score in a Composite (P) Score for More Accurate Diagnosis of Clinically Significant Prostate Cancer. J Urol. 2024 Aug;212(2):299-309. doi: 10.1097/JU.0000000000004010. Epub 2024 May 17. PMID: 38758680

Franklin A, Gianduzzo T, Kua B, Wong D, McEwan L, Walters J, **Esler R, Roberts MJ**, Coughlin G, **Yaxley JW**. The risk of prostate cancer on incidental finding of an avid prostate uptake on 2-deoxy-2-[¹⁸F]fluoro-d-glucose positron emission tomography/computed tomography for non-prostate cancer-related pathology: A single centre retrospective study. Asian J Urol. 2024 Jan;11(1):33-41. doi: 10.1016/j.ajur.2023.01.007. Epub 2023 Mar 25. PMID: 38312828; PMCID: PMC10837664

Hofman MS, Kasivisvanathan V, Link E, Buteau J, **Roberts MJ**, Francis RJ, Tang C, Vela I, Thomas P, Rutherford N, Martin JM, Frydenberg M, Shakher R, Wong LM, Taubman K, Ting Lee S, Hsiao E, Roach P, Nottage M, Kirkwood I, Hayne D, Iravani A, Williams S, O'Brien J, Lawrentschuk N, Murphy DG. Baseline Nodal Status on 68Ga-PSMA-11 Positron Emission Tomography/Computed Tomography in Men with Intermediate- to High-risk Prostate Cancer Is Prognostic for Treatment Failure: Follow-up of the proPSMA Trial. Eur Urol Oncol. 2024 Nov 28:S2588-9311(24)00251-7. doi: 10.1016/j.euo.2024.11.006. Epub ahead of print. PMID: 39613566

Koo KM, Lim M, Simpson P, Lakhani S, **Roberts M**, Masud M, Puttick S, Rose S. Clinically boosting cancer molecular targeted radioligand therapies with innovative nanomaterials. ChemNanoMat. 2024 Sep 26. doi.org/10.1002/cnma.202400449

Lindsay D, Schofield P, Nabukalu D, **Roberts MJ, Yaxley J**, Quinn S, Richards N, Frydenberg M, Gardiner R, Lawrentschuk N, Juraskova I, Murphy DG, Gordon LG. The impact of management option on out-of-pocket costs and perceived financial burden among men with localised prostate cancer in Australia within 6 months of diagnosis. Aust Health Rev. 2024 Feb;48:172-181. doi: 10.1071/AH23231. PMID: 38342484

Lindsay D, Schofield P, **Roberts MJ, Yaxley J**, Quinn S, Richards N, Frydenberg M, Gardiner R, Lawrentschuk N, Juraskova I, Murphy DG, Collins LG. Cost-utility Analysis of Navigate, a Treatment Decision Aid for Men with Prostate Cancer and Their Partners, in Comparison to Usual Care. Eur Urol Oncol. 2024 Aug 23:S2588-9311(24)00189-5. doi: 10.1016/j.euo.2024.08.005. Epub ahead of print. PMID: 39181775

Mehawed G, Murray R, Rukin NJ, **Roberts MJ**. Prostate tumour visualisation with PET: is image fusion with MRI the answer? BJU Int. 2024 Apr;133 Suppl 4:4-6. doi: 10.1111/bju.16335. Epub 2024 Mar 13. PMID: 38477216

Mehawed G, Murray R, Wang K, **Roberts MJ**, Rukin NJ. Determining the optimal fill volume for fluid-filled testicular prostheses - less is more. BJU Int. 2024 May 20. doi: 10.1111/bju.16374. Epub ahead of print. PMID: 38769755

Mehawed G, **Roberts MJ**, Bugeja J, Dowling J, Stewart K, Gunasena R, Malczewski F, Rukin NJ, Murray R. A Pilot Study of PSMA PET/CT and MRI Fusion for Prostate Cancer: Software to Replace PET/MRI Hardware. J Clin Med. 2024 Dec 4;13(23):7384. doi: 10.3390/jcm13237384. PMID: 39685842; PMCID: PMC11642359

Morton A, Tariq A, **Dunglison N, Esler R, Roberts MJ**. Etiology and management of urethral calculi: A systematic review of contemporary series. Asian J Urol. 2024 Jan;11(1):10-18. doi: 10.1016/j.ajur.2021.12.011. Epub 2022 Oct 22. PMID: 38312816; PMCID: PMC10837653

Patel N, Roe A, Stanton D, **Roberts J**, Kothari A. SLAP Trial: Shock Wave Lithotripsy and Mechanical Percussion Therapy Post ESWL for Renal Calculi. Adv Urol. 2024 Mar 26;2024:7870425. doi: 10.1155/2024/7870425. PMID: 38566931; PMCID: PMC10987243

Patel N, Stephenson-Smith B, **Roberts J**, Kothari A. Extracorporeal shock wave lithotripsy: Prematurely falling out of favour? A 7 year retrospective study from an Australian high-volume centre. BJUI Compass. 2023 Dec 2;5(4):460-465. doi: 10.1002/bco2.314. PMID: 38633834; PMCID: PMC11019251

Roberts MJ, Cornford P, Tilki D. Oncological Benefits of Extended Pelvic Lymph Node Dissection: More Fog or Clarity to the Debate? Eur Urol. 2024 Dec 24:S0302-2838(24)02743-X. doi: 10.1016/j.eururo.2024.12.001. Epub ahead of print. PMID: 39721848

Journal Articles (RBWH staff or consumers in bold)

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Conference Papers

Conference Papers

Emmett L, Papa N, Hope T, Fendler W, Calais J, Burger I, Eiber M, Barbato F, Moon D, Xue A, **Franklin A**, Thompson J, Rasiah K, Frydenberg M, **Yaxley J**, Buteau J, Liu V, Nguyen A, Hsiao E, Stricker P, Hofman M, Kasivisvanathan V, **Roberts M**, Murphy D. Combining MRI PI-RADS and PSMA-PET/CT PRIMARY score in a composite (P) score for more accurate diagnosis of clinically significant prostate cancer. EAU24 - 39th Annual EAU Congress, Paris, France; April 5-8, 2024; Amsterdam, Netherlands: Elsevier. doi: 10.1016/s0302-2838(24)00417-2

Teppala, Srinivas, Scuffham, Paul, Edmunds, Kim, **Roberts, Matthew**, Fairbairn, David, Smith, David, Horvath, Lisa and Tuffaha, Haitham (2024). The cost-effectiveness of targeted germline BRCA testing in localised prostate cancer followed by cascade testing of first-degree relatives of mutation carriers. COSA's 51st Annual Scientific Meeting Bridging gaps, building progress, breaking down disparities, Gold Coast, QLD Australia, 13–15 November 2024. Richmond, VIC Australia: John Wiley & Sons

Van Leeuwen PJ, Berrens A-C, Vis A, Yaxley J, Meijer D, Siriwardana A, Wit E, Van Der Noort V, Morton A, **Franklin A**, **Yaxley J**, Wong D, Goughlin G, Gianduzzo T, Kua B, Emmett L, Zuur L, Van Der Poel H, **Roberts M**. The early oncological effect of extended pelvic lymph node dissection in men with at PSMA PET/CT N0M0 intermediate/high-risk prostate cancer - an international cohort study. EAU24 - 39th Annual EAU Congress, Paris, France; April 5-8, 2024; Amsterdam, Netherlands: Elsevier. doi: 10.1016/s0302-2838(24)01002-9

Conference Papers

Vis A, Meijer D, **Roberts MJ**, Siriwardana AR, Morton A, **Yaxley JW**, Samaratunga H, Emmett L, Van Der Ven PM, Heymans MW, Nieuwenhuijzen JA, Van Der Poel HG, Van Donswijk ML, Boellaard TN, Schoots IG, Stricker P, Haynes A-M, Oprea-Lager DE, Coughlin GD, Van Leeuwen PJ. Development and external validation of a novel nomogram to predict the probability of pelvic lymph-node metastases in prostate cancer patients using magnetic resonance imaging and molecular imaging with prostate-specific membrane antigen positron emission. EAU24 - 39th Annual EAU Congress, Paris, France; April 5-8, 2024; Amsterdam, Netherlands: Elsevier. doi: 10.1016/s0302-2838(24)00422-6

Zuur LG, de Bie K, Vis AN, Van Der Poel HG, Donswijk ML, Oprea-Lager DE, **Roberts M**, Van Leeuwen PJ. Early oncological outcomes following radical prostatectomy of patients with pelvic lymph node-positive prostate cancer at preoperative PSMA PET/CT. EAU24 - 39th Annual EAU Congress, Paris, France; April 5-8, 2024; Amsterdam, Netherlands: Elsevier. doi: 10.1016/s0302-2838(24)01187-4.

Keynote or Plenary Lectures given in 2024

Date	Title
ANZUP Annual Scientific Meeting, 2024	Roberts, Matthew. Co-convenor and Chair, opening session, ANZUP AWARDS and ASM close. Pearce, Adam. Panel. RC Masterclass
24 th Asia Pacific Prostate Cancer Conference, 2024	Yaxley, John. Australian Approach to Nodal Disease – Surgery/Radiation. Roberts, Matthew. Treating the primary in metastatic disease. Roberts, Matthew. Speaker. Clinical Urology: Exploring salvage radiotherapy options in recurrent prostate cancer - A case-based discussion Roberts, Matthew. Chair. Clinical Urology Staging and diagnostics. Roberts, Matthew. Genetics testing in prostate cancer – who, what and when. Roberts, Matthew. Focal IRE for radiation failure
Urological Society of Australia and New Zealand, ASM 2024	Collin, Harry. Beyond the Clinic Walls: Unveiling the Challenges of Aboriginal & Torres Strait Islander Patient Attendance in Outpatient Urology Care Collin, Harry. Simultaneous Robot-Assisted Prostatectomy with Rectal Resection – A Systematic Review Collin, Harry. Single institution retrospective audit of simultaneous robotic-assisted prostatectomy and rectal resection cases at Royal Brisbane & Women's Hospital Roberts, Matthew. Plenary Session. The role of FDG-PET for prostate cancer in the PSMA PET era Roberts, MJ, Roberts N, Harley S, Cullen K, Pelecanos A, Vela I, Yaxley J, Kuchel A, Dhiantravan N, Thomas P, Pattison D. A prospective trial to assess the initial diagnostic accuracy of FDG-PET compared to PSMA-PET for newly diagnosed high risk prostate cancer prior to treatment
Urological Society of Australia and New Zealand Trainee Week 2024	Martin, Benjamin. Chair. Male lower urinary tract function Navaratnam, Anojan. Male lower urinary tract function - Summary of non TURP options for BPH Martin, Benjamin. Male lower urinary tract function - How I handle the massive middle lobe. Yaxley, John. Chair. Prostate Cancer Screening and Biopsy Yaxley, John. Prostate Cancer Screening and Biopsy - Define contemporary Australian prostate cancer screening Pearce, Adam. Chair. Renal Cell Carcinoma. Roberts, Matthew. Chair. Prostate Cancer: Staging and Active Surveillance Roberts, Matthew. Prostate Cancer: Staging and Active Surveillance - How I practice Active Surveillance now Roberts, Matthew. Prostate Cancer: Staging and Active Surveillance - Panel Discussion re: AS for complex cases
Theranostics 2024: AANMS Theranostics Course, Brisbane, August 2024 (National presentation)	Roberts, Matthew. Clinical overview & early treatment options of prostate cancer. Roberts, Matthew. Invited Panel Member, PROSTATE Cancer Imaging MDT session
2024 Korean Urological Association Annual Meeting (International Presentation)	Roberts, Matthew. "USANZ Lecture: Making sense of Advanced Metastatic Prostate Cancer Management for Urologists"

Vascular Surgery Outpatient Research Department

Research Highlights

Herston Biofabrication Institute (HBI) and the Vascular Biofabrication Research Group (VBRG) continue to progress modern manufacturing techniques centred towards safer, individualised and robust surgery. The key research programs include:

- Establishment of an advanced surgical training suite incorporating perfused 3D-printed vasculature in a clinically relevant surgical environment.
- The development of soft robotic catheters for endovascular surgery.
- The development of 3D printed resorbable endovascular devices incorporating biodegradable polymers and graphene.
- The development of off-the-shelf tissue engineered vascular grafts.

The Vascular Surgery Outpatient Research Department at RBWH has continued to collaborate with the Queensland Research Centre for Peripheral Vascular Disease (QRCPVD) at James Cook University led by Distinguished Professor Jonathan Golledge. The Vascular Surgery OPD at RBWH is the study site for four investigator-initiated trials sponsored by James Cook University, with Dr Murray Ogg and Dr Jenkins leading the site as principal investigators of the trials. The collaboration between the QRCPVD and RBWH will lead to the employment of a Metro North clinical research nurse in 2025.

Research Grants

Investigator Names (RBWH staff in bold)	RBWH Departments / Research Groups	Research Project Title	Granting Body	Total Awarded (whole all years)	Length of Awards in years and years active
Dr Jason Jenkins, Dr Danella Favot, Dr Murray Ogg, Dr Nigel Pinto , Professor Jonathan Golledge	Vascular Outpatients	The Metformin Aneurysm Trial (MAT)	NHMRC	\$4,998,679.50	5 years, 2020-2024
Dr Jason Jenkins, Dr Danella Favot, Dr Murray Ogg, Dr Nigel Pinto , Professor Jonathan Golledge	Vascular Outpatients	Metformin for Treating Peripheral Artery Disease-Related Walking Impairment (MERIT)	SERTA Grant – Townsville University Hospital	\$50,000	3 years, 2021-2024
Dr Murray Ogg , Professor Jonathan Golledge	Vascular Outpatients	The Holistic Peripheral Artery Disease Management Trial (OPTIMAL)	Heart Foundation Strategic Funding	\$1,000,000	3 years, 2021-2024
Dr Jason Jenkins, Dr Nigel Pinto	Vascular Biofabrication Research Group at Herston Biofabrication Institute	Advanced manufacturing and simulation of vascular anatomy, novel endovascular devices, medical applications of graphene	Herston Biofabrication Institute	\$1,600,000	6 years, 2018-2024
Dr Murray Ogg , Professor Jonathan Golledge	Vascular Outpatients	The Supervised Home-based exercise program for Peripheral artery disease trial (SHAPE)	Medical Research Future Fund	\$999,999.71	4 years, 2023-2026
Dr Murray Ogg , Professor Jonathan Golledge	Vascular Outpatients	The Tele-Artery Trial	Medical Research Future Funds	\$2,862,084	4 years, 2022-2025
Dr Jason Jenkins, Dr Nigel Pinto	Vascular Biofabrication Research Group at Herston Biofabrication Institute	Advanced manufacturing and simulation of vascular anatomy, novel endovascular devices, medical applications of graphene	Herston Biofabrication Institute	\$1,600,000	6 years, 2018-2024

RBWH Department / Research Group Led Research Activity

Lead Investigator Name (RBWH staff and consumers in bold)	Other Study Investigators (RBWH staff and consumers in bold)	Research Project Title	Consumer involvement	Number of RBWH Patients Recruited
Dr Lucy Guazzo	Dr Jason Jenkins	Establishment of an advanced surgical training suite incorporating perfused 3D-printed vasculature in a clinically relevant surgical environment	N/A	
Dr Lucy Guazzo	Dr Jason Jenkins	The development of 3D printed resorbable endovascular devices incorporating biodegradable polymers and graphene	N/A	
Dr Jason Jenkins	Dr Lucy Guazzo	The development of off-the-shelf tissue engineered vascular grafts	N/A	

Collaborative Research Activity Involving RBWH Department / Research Group

Lead Investigator Name (RBWH staff and consumers in bold)	Other Study Investigators (RBWH staff and consumers in bold)	Research Project Title	Consumer involvement	Number of RBWH Patients Recruited
Dr Murray Ogg (Principal Investigator) , Prof Jonathan Golledge (Chief Investigator)	Dr Jason Jenkins, Dr Danella Favot, Dr Nigel Pinto, Julie Jenkins, Dr Annabelle Kavanagh	Metformin Aneurysm Trial	1-3	0 in 2024 (study recruitment on hold)
Dr Murray Ogg (Principal Investigator) , Prof Jonathan Golledge (Chief Investigator)	Dr Jason Jenkins, Dr Annabelle Kavanagh	The Holistic Peripheral Artery Disease Management Trial	1-3	0 in 2024 study recruitment on hold)
Dr Murray Ogg (Principal Investigator) , Prof Jonathan Golledge (Chief Investigator)	Dr Jason Jenkins, Dr Annabelle Kavanagh	The Tele-Artery Trial	1-3	0 in 2024 (study recruitment on hold)
Dr Jason Jenkins, Prof Christopher Askew	Dr Nicholas Boyne, Dr Allan Kruger, Dr Murray Ogg, Dr Danella Favot, Dr Nigel Pinto, Dr Samantha Peden, Dr Lucy Guazzo, Julie Jenkins, Michelle McGrath	Foot-PAD Trial	1-3	30

Research Publications

Authors

Investigator	ORCID ID	Investigator	ORCID ID
Dr Jason Jenkins		Dr Nigel Pinto	https://orcid.org/0000-0003-1012-1060
Dr Samantha Peden	https://orcid.org/0000-0002-8470-4990	Teal Derbogossian	https://orcid.org/0000-0002-2999-5190
Samantha Hill	https://orcid.org/0000-0001-8869-4235	Dr Vidushi Lal	https://orcid.org/0000-0001-5147-7560
Dr Murray Ogg		Dr Nicholas Boyne	
Dr Allan Kruger		Dr Danella Favot	
Dr Lucy Guazzo			

Publications in 2024

Journal Articles (RBWH staff or consumers in bold)

Lal V, Osman K, **Boyne N**. Management of a primary extracranial vertebral artery aneurysm (V1). ANZ Journal of Surgery. 2024 Jun 3

Derboghossian T, **Hill S**, **Peden S**, **Lightfoot T**. Intravascular lobular capillary haemangioma of the external jugular vein. Sonography. 2024 Mar;11(1):26-9

Lal V, **Guazzo L**. Median arcuate ligament syndrome: When to consider the diagnosis and management options. Australian Journal of General Practice. 2024 Dec 1;53(12)

Golledge J, Venn A, Yip L, Leicht AS, **Jenkins JS**, Singh MA, Reid CM, Parmenter BJ, Burton NW, Moxon JV, Walsh J. Counseling intervention and cardiovascular events in people with peripheral artery disease: a post hoc analysis of the BIP randomized clinical trial. JAMA surgery. 2024 Nov 1;159(11):1262-70

Weekes A, Wasielewska JM, **Pinto N**, **Jenkins J**, et al. Harnessing the Regenerative Potential of Fetal Mesenchymal Stem Cells and Endothelial Colony-Forming Cells in the Biofabrication of Tissue-Engineered Vascular Grafts (TEVGs). *Journal of tissue engineering and regenerative medicine*. 2024;2024. doi:10.1155/2024/8707377

Thanigaimani S, Neale RE, Waterhouse M, Moxon JV, Yeap BB, Norman PE, Flicker L, Hankey GJ, **Jenkins J**, Quigley F, Clarke MW. Association of serum vitamin D with diagnosis and growth of abdominal aortic aneurysm. JVS-Vascular Science. 2024 Jun 19:100208

Eley V, Peters N, Woods C, Llewellyn S, **Derboghossian T**, **Ogg M**, Rickard CM, Chin A. Perioperative arterial catheterization: A prospective evaluation of ultrasound, infection, and patient-focused outcomes. The Journal of Vascular Access. 2024 Apr 24:11297298241246300

Golledge J, Venn A, Yip L, Leicht AS, **Jenkins JS**, Singh MA, Reid CM, Parmenter BJ, Burton NW, Moxon JV, Walsh J. Counseling intervention and cardiovascular events in people with peripheral artery disease: a post hoc analysis of the BIP randomized clinical trial. JAMA surgery. 2024 Nov 1;159(11):1262-70

Thanigaimani S, Neale RE, Waterhouse M, Moxon JV, Yeap BB, Norman PE, Flicker L, Hankey GJ, **Jenkins J**, Quigley F, Clarke MW. Association of serum vitamin D with diagnosis and growth of abdominal aortic aneurysm. JVS-Vascular Science. 2024 Jun 19:100208.

Keynote or Plenary Lectures given in 2024

Date	Title
03/09/2024	Derboghossian T , Hill S . Protocol for the selection + pre-operative planning of patients for endovascular arteriovenous fistula (eAVF) creation. Herston Health Symposium 2024. Brisbane, QLD AU
03/09/2024	Redhead A, Derboghossian T , Douglas L, Abel R, Smith J, Ogg M & Jenkins J (2024). Deadly feet: a co-design process for the implementation of a multi-disciplinary outreach service. <i>Herston Health Symposium e-poster</i>