



Health
Northern Sydney
Local Health District



RNSH DIVISION OF SURGERY & ANAESTHESIA

**SURGICAL RESEARCH ACTIVITY REPORT
2018 - 2020**

AUTHOR: THE RNSH SERT INSTITUTE

Acknowledgements:

A special thanks to all surgeons across RNSH departments who generously provided information and feedback during the development of this document. Their willingness to share this information has contributed greatly to the quality and richness of this publication.

Further information:

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<https://northernsydneyurgery.org.au>

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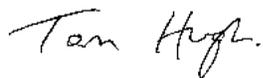
EXECUTIVE SUMMARY

This report provides an overview of the research activity conducted by surgeons within the Division of Surgery and Anaesthesia (DoSA) at Royal North Shore Hospital (RNSH) between 2018 and 2020.

For all surgeons, improving the surgical care they provide and achieving the best outcomes for patients is a high priority. Surgical research at RNSH includes investigations and assessments of new surgical approaches and techniques, collaborative translational research, and improving current practices through data analysis and clinical audit.

Initially, the SERT Institute collated the publications listed in this document after undertaking a systematic search of peer-reviewed publications authored by RNSH surgeons. The lists for each department were then distributed to the relevant Heads and Academic Leads for review to confirm accuracy and completeness. Each department was asked to provide further information about the range of other research activity undertaken by the surgeons including involvement with laboratory-based activities and or supervision of higher degree research.

This report highlights the large volume of research activity and peer-reviewed publications across the RNSH Division of Surgery and Anaesthesia from 2018-2020. Almost 450 published manuscripts were generated during this period equating to an average of 148 publications annually for DoSA. Several departments have a particularly strong focus on translational research with links to laboratories either in the Kolling Building or external to RNSH. The Surgical Research Activity Report 2018-2020 is a dynamic document that will be updated regularly as new research activity and publications occur.



Professor Thomas Hugh

Director, Surgical Education Research & Training Institute

In conjunction with NSLHD and on behalf of DOSA, the SERT Institute has collated all research conducted across surgical departments at Royal North Shore Hospital from January 2018 to December 2020. This was a major project of work to highlight the depth and breadth of research that is occurring across all departments. It is extremely impressive that our busy clinical departments consistently undertake a high volume of research and contribute to achievements within their speciality.

I would like to thank the staff of the SERT Institute for their hard work in producing this inaugural report. For information about the SERT Institute and opportunities to engage in research, education and training within surgery at RNSH please visit the SERT Website

<https://northernsydneyurgery.org.au>



Dr Michelle Mulligan

Clinical Director, Division of Surgery & Anaesthesia



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ACUTE SURGICAL UNIT

Head of Department: Shahrir Kabir



DEPARTMENTAL RESEARCH RESOURCES

CLINICAL DATABASES TO SUPPORT OUTCOMES RESEARCH

- Acute Surgical Unit Database
- Acute Surgical Unit QoR 15
- Acute Surgical Unit Impact Cohort
- Acute Surgical Unit Patient Management Work Instructions

CURRENT NSLHD HUMAN RESEARCH ETHICS APPLICATION (HREA) APPROVALS

- STE15169 – 2019 Evaluating the use of the American College of Surgeons National Surgical Quality Improvement Program- surgical risk calculator in predicting mortality in an Acute Surgical Unit and how it has assisted in the management of patients deemed to be at high risk of post-operative mortality
- STE16869 – 2020 American College of Surgeons National Surgical Quality Improvement Program. Comparison between NSQIP risk calculator and NSQIP adult with aim of determining accuracy of risk calculator in the Australian population in emergency surgery



CURRENT RESEARCH ACTIVITY

- Comparison between NSQIP risk calculator and NSQIP adult with aim of determining accuracy of risk calculator in the Australian population in emergency surgery
- Adhesional SBO management
- COVID-19 testing using antibody test kits
- ASU anti-microbial stewardship



PUBLICATIONS

2020

Parkin et al. **2020** "Utility of the American College of Surgeons National Surgical Quality Improvement Program surgical risk calculator in predicting mortality in an Australian acute surgical unit." **ANZ J Surg** 90(5):746-751 PMID: 32348035. Surgical Staff: **Anthony Glover**

BREAST AND MELANOMA SURGERY

Head of Department: Andrew Spillane



RESEARCH SUPERVISION (2018-2020)

Andrew Spillane

- Master of Surgery x2

Education and Teaching Modules:

- Teaching and head of course, Advanced Surgery of the Breast - University of Sydney, Masters of Surgery

Samitri Sood

Education and Teaching Modules:

- Teaching and course coordinator, Advanced Surgery of the Breast - University of Sydney, Masters of Surgery



DEPARTMENTAL RESEARCH RESOURCES

CLINICAL DATABASES TO SUPPORT OUTCOMES RESEARCH

- Breast High Risk Database
- Breast Total Practice Audit
- BreastSurgANZ Quality Audit (BQA)
- Melanoma Institute Australia Melanoma Research (MRD) Database

CURRENT NSLHD HUMAN RESEARCH ETHICS APPLICATION (HREA) APPROVALS

- POSNOC Study
- EXPERT Study
- WinPRO Study
- iBREAST Study
- QoLID Study

LINKS TO TRANSLATIONAL RESEARCH PARTNERS OR UNIVERSITY DEPARTMENTS

- Melanoma Institute of Australia
- University of Sydney – Discipline of Surgery



CURRENT RESEARCH ACTIVITY

- Clinical and laboratory based research in melanoma and breast cancer
- Retrospective study on loco-regional recurrence and functional outcomes following axillary treatment in early node positive breast cancer
- Outcomes of targeted axillary clearance in early node positive breast cancer following neoadjuvant chemotherapy
- Development of a neoadjuvant treatment in breast cancer registry for Northern Sydney Area Health District



PUBLICATIONS

2020

- Brennan et al. **2020** "General practitioners are key to increasing Australia's low rate of breast reconstruction." *Australian Journal of General Practice* 49 452-454 PMID: 32600003 Surgical Staff: **Andrew Spillane**
- Diefenbach et al. **2020** "Design and Testing of a Custom Melanoma Next Generation Sequencing Panel for Analysis of Circulating Tumor DNA." *Cancers* 12 2228 PMID: 32785074 Surgical Staff: **Andrew Spillane**
- Harris et al. **2020** "Primary dermal melanoma: clinical behaviour, prognosis and treatment." *European Journal of Surgical Oncology* S0748-7983: 30440-6 PMID:32417156 Surgical staff: **Andrew Spillane**
- Haydu et al. **2020** "Cumulative Incidence and Predictors of CNS Metastasis for Patients With American Joint Committee on Cancer 8th Edition Stage III Melanoma." *Journal of Clinical Oncology* 38: 1429-1441 PMID:31990608 Surgical staff: **Andrew Spillane**
- Hublely et al. **2020** "Sentinel node occult lesion localization technique for impalpable breast cancer." *ANZ Journal of Surgery* 90 2510-2515 PMID: 33124171 Surgical Staff: **Kylie Snook, Andrew Spillane**
- Kashani-Sabet et al. **2020** "Reappraisal of the prognostic significance of mitotic rate supports its reincorporation into the melanoma staging system." *Cancer* 126 4717-4725 PMID: 32780467 Surgical Staff: **Andrew Spillane**
- Law et al. **2020** "Multiplex melanoma families are enriched for polygenic risk." *Human Molecular Genetics* 29 2976-2985 PMID: 32716505 Surgical Staff: **Andrew Spillane**
- Lo et al. **2020** "Improved Risk Prediction Calculator for Sentinel Node Positivity in Patients With Melanoma: The Melanoma Institute Australia Nomogram." *Journal of Clinical Oncology* *In press*: JCO1902362 PMID:32530761 Surgical staff: **Andrew Spillane**
- Maw et al. **2020** "Case Report of 18F-FDG PET/CT Features of Polyacrylamide Hydrogel Mammoplasty." *Clinical Nuclear Medicine* *In press*: doi: 10.1097/RLU.0000000000003403 PMID: 33208622 Surgical Staff: **Samriti Sood**
- Newell et al. **2020** "Whole-genome sequencing of acral melanoma reveals genomic complexity and diversity." *Nature Communications* 11 5259 PMID: 33067454 Surgical Staff: **Andrew Spillane**
- Nickel et al. **2020** "Views of healthcare professionals about the role of active monitoring in the management of ductal carcinoma in situ (DCIS): Qualitative interview study." *Breast* 54 99-105 PMID: 32971350 Surgical Staff: **Andrew Spillane**
- Ofri et al. **2020** "Occult breast cancer: Where are we at?" *Breast* 54 211-215 PMID: 33130487 Surgical Staff: **Katrina Moore**
- Olofsson Bagge et al. **2020** "Comment on "Factors Affecting Sentinel Node Metastasis in Thin (T1) Cutaneous Melanomas: Development and External Validation of a Predictive Nomogram" *Journal of Clinical Oncology* 38 3233-3234 PMID: 32701414 Surgical Staff: **Andrew Spillane**
- Rapport et al. **2020** "Identifying challenges to implementation of clinical practice guidelines for sentinel lymph node biopsy in patients with melanoma in Australia: protocol paper for a mixed methods study." *BMJ open* 10: e032636 PMID:32111612 Surgical staff: **Ariella Smith, Andrew Spillane**
- Salindera et al. **2020** "What are the appropriate thresholds for High Quality Performance Indicators for breast surgery in Australia and New Zealand?" *Breast* 51: 94-101 PMID:32252005 Surgical staff: **Andrew Spillane**
- Spillane et al. **2020** "The Landmark Series: Neoadjuvant Systemic Therapy (NAST) for Stage 3 Melanoma Patients - A Potential Paradigm Shift in Management." *Annals of Surgical Oncology* *In press*: doi: 10.1245/s10434-020-08566-8 PMID:32409966 Surgical staff: **Andrew Spillane**
- Tetzlaff et al. **2020** "Histopathological features of complete pathological response predict recurrence-free survival following neoadjuvant targeted therapy for metastatic melanoma." *Annals of Oncology* 31 1569-1579 PMID: 32739408 Surgical Staff: **Andrew Spillane**
- van Akkooi et al. **2020** "ASO Author Reflections: The Landmark Series: Neoadjuvant Systemic Therapy (NAST) for Stage 3 Melanoma Patients: A Potential Paradigm Shift in Management." *Annals of Surgical Oncology* *In press*: doi: 10.1245/s10434-020-08570-y. PMID:32382889 Surgical staff: **Andrew Spillane**
- Watts et al. **2020** "Australian general practitioners' attitudes and knowledge of sentinel lymph node biopsy in melanoma management." *Australian Journal of General Practice* 49: 355-362 PMID:32464734 Surgical staff: **Ariella Smith, Andrew Spillane**

- Amaria et al. **2019** "Neoadjuvant systemic therapy in melanoma: recommendations of the International Neoadjuvant Melanoma Consortium." **The Lancet. Oncology** 20: e378-e389 PMID:31267972 Surgical staff: **Andrew Spillane**
- Brennan et al. **2019** "Breast symptoms in adolescents and young adults presenting to a specialist breast clinic." **Australian Journal of General Practice** 48: 146-151 PMID:31256478 Surgical staff: **Andrew Spillane**
- Chen et al. **2019** "Window of opportunity treatment in breast cancer." **ANZ Journal of Surgery** 90: 34-40 PMID:31770829 Surgical staff: **Ji Chen, Kylie Snook, Andrew Spillane**
- Diefenbach et al. **2019** "Analysis of the Whole-Exome Sequencing of Tumor and Circulating Tumor DNA in Metastatic Melanoma." **Cancers** 11: 1905 PMID:31795494 Surgical staff: **Andrew Spillane**
- Farshid et al. **2019** "ASCO/CAP 2018 breast cancer HER2 testing guidelines: summary of pertinent recommendations for practice in Australia." **Pathology** 51: 345-348 PMID:31076089 Surgical staff: **Andrew Spillane**
- Feng et al. **2019** "Patterns of immediate breast reconstruction in New South Wales, Australia: a population-based study." **ANZ Journal of Surgery** 89: 1230-1235 PMID:31418524 Surgical staff: **Andrew Spillane**
- Flitcroft et al. **2019** "Increasing access to breast reconstruction for women living in underserved non-metropolitan areas of Australia." **Supportive Care in Cancer** 28: 2843-2856 PMID:31729569 Surgical staff: **Andrew Spillane**
- Flitcroft et al. **2019** "On the frontiers of change: breast surgeons' views on demarcation between surgical sub-specialties in Australia." **ANZ Journal of Surgery** 90: 317-324 PMID:31845437 Surgical staff: **Andrew Spillane**
- Flitcroft et al. **2019** "Principles of patient-centred care and barriers to their implementation: a case study of breast reconstruction in Australia." **Supportive Care in Cancer** 28: 1963-1981 PMID:31372747 Surgical staff: **Andrew Spillane**
- Flitcroft et al. **2019** "The impact on Australian women of lack of choice of breast reconstruction options: A qualitative study." **Psycho-oncology** 28: 547-552 PMID:30620117 Surgical staff: **Andrew Spillane**
- Henderson et al. **2019** "New treatment paradigms for clinically apparent metastatic melanoma in regional lymph nodes." **ANZ Journal of Surgery** 89: 1187-1189 PMID:31621166 Surgical staff: **Andrew Spillane**
- Kanesalingam et al. **2019** "Postmastectomy radiotherapy and immediate implant-based breast reconstruction: attitudes and practices of Australian and New Zealand breast surgeons." **ANZ Journal of Surgery** 89: 1186-1187 PMID:31621162 Surgical staff: **Samitri Sood**
- Lee et al. **2019** "Pre-operative ctDNA predicts survival in high-risk stage III cutaneous melanoma patients." **Annals of Oncology** 30: 815-822 PMID:30860590 Surgical staff: **Andrew Spillane**
- Long et al. **2019** "Neoadjuvant dabrafenib combined with trametinib for resectable, stage IIIB-C, BRAFV600 mutation-positive melanoma (NeoCombi): a single-arm, open-label, single-centre, phase 2 trial." **The Lancet. Oncology** 20: 961-971 PMID:31171444 Surgical staff: **Andrew Spillane**
- Newell et al. **2019** "Whole-genome landscape of mucosal melanoma reveals diverse drivers and therapeutic targets." **Nature Communications** 10: 3163 PMID:31320640 Surgical staff: **Andrew Spillane**
- Nijhuis et al. **2019** "Current management of patients with melanoma who are found to be sentinel node-positive." **ANZ Journal of Surgery** 90: 491-496 PMID:31667924 Surgical staff: **Andrew Spillane**
- Oh et al. **2019** "Outcomes of breast reconstruction in older women: patterns of uptake and clinical outcomes in a large metropolitan practice." **ANZ Journal of Surgery** 89: 706-711 PMID:31033164 Surgical staff: **Kylie Snook, Andrew Spillane**
- Rozeman et al. **2019** "Identification of the optimal combination dosing schedule of neoadjuvant ipilimumab plus nivolumab in macroscopic stage III melanoma (OpACIN-neo): a multicentre, phase 2, randomised, controlled trial." **The Lancet. Oncology** 20: 948-960 PMID:31160251 Surgical staff: **Andrew Spillane**
- Spillane et al. **2019** "Do we need higher-level evidence of improved quality of life outcomes before promoting uptake of oncoplastic breast conservation surgery techniques?" **ANZ Journal of Surgery** 89: 626-627 PMID:31179634 Surgical staff: **Andrew Spillane**
- Spillane et al. **2019** "Evaluation of a structured clinical program and formal coursework in breast surgeon training in Australia and New Zealand." **European Journal of Surgical Oncology** 45: 1821-1826 PMID:31331802 Surgical staff: **Andrew Spillane**
- Wilsher et al. **2019** "Metachronous metaplastic carcinomas of breast arising in association with multiple induct papillomata, with eventual cardiopulmonary metastasis and death." **The Breast Journal** 25: 716-718 PMID:31087410 Surgical staff: **Kylie Snook**
- Zdenkowski et al. **2019** "Patient-reported outcomes with neoadjuvant vs adjuvant systemic therapy for operable breast cancer." **Breast** 46: 25-31 PMID:31059987 Surgical staff: **Andrew Spillane, Kylie Snook**

Azimi et al. **2018** "Low-Level Laser Treatment Is Ineffective for Capsular Contracture: Results of the LaTCon Randomized Controlled Trial." **Plastic and Reconstructive Surgery** 142: 621e-631e PMID:30511966 Surgical staff: **Kylie Snook, Andrew Spillane**

Flitcroft et al. **2017** "Decisional regret and choice of breast reconstruction following mastectomy for breast cancer: A systematic review." **Psycho-oncology** 27: 1110-1120 PMID:29143481 Surgical staff: **Andrew Spillane**

Friedman et al. **2018** "Correlation Between Surgical and Histologic Margins in Melanoma Wide Excision Specimens." **Annals of Surgical Oncology** 26: 25-32 PMID:30327975 Surgical staff: **Andrew Spillane**

Galimberti et al. **2018** "Axillary dissection versus no axillary dissection in patients with breast cancer and sentinel-node micrometastases (IBCSG 23-01): 10-year follow-up of a randomised, controlled phase 3 trial." **The Lancet. Oncology** 19: 1385-1393 PMID:30196031 Surgical staff: **Katrina Moore, Mark Sywak, Andrew Spillane**

Moncrieff et al. **2018** "1 Versus 2-cm Excision Margins for pT2-pT4 Primary Cutaneous Melanoma (MelMarT): A Feasibility Study." **Annals of Surgical Oncology** 25: 2541-2549 PMID:29850955 Surgical staff: **Andrew Spillane** (Published correction published **Annals of Surgical Oncology** 25: 991 PMID:29947003)

Oh et al. **2018** "Patient-reported outcomes of breast reconstruction in older women: Audit of a large metropolitan public/private practice in Sydney, Australia." **Psycho-oncology** 27: 2815-2822 PMID:30225915 Surgical staff: **Kylie Snook, Andrew Spillane**

Solinas et al. **2018** "Pigmented Paget's disease of the nipple mistaken for melanoma in situ: a diagnostic pitfall for the unwary." **Pathology** 50: 364-367 PMID:29490872 Surgical staff: **Andrew Spillane**

Spillane et al. **2018** "Re-examining the role of adjuvant radiation therapy." **Journal of Surgical Oncology** 119: 242-248 PMID:30554414 Surgical staff: **Andrew Spillane**

Tetzlaff et al. **2018** "Pathological assessment of resection specimens after neoadjuvant therapy for metastatic melanoma." **Annals of Oncology** 29: 1861-1868 PMID:29945191 Surgical staff: **Andrew Spillane**

Wilmott et al. **2018** "Whole genome sequencing of melanomas in adolescent and young adults reveals distinct mutation landscapes and the potential role of germline variants in disease susceptibility." **International Journal of Cancer** 144: 1049-1060 PMID:30178487 Surgical staff: **Andrew Spillane**

BURNS, PLASTICS & RECONSTRUCTIVE SURGERY

Head of Department: Robert Gates



DEPARTMENTAL RESEARCH RESOURCES

CLINICAL DATABASES TO SUPPORT OUTCOMES RESEARCH

- State-wide Burn Injury Service (SBIS) Registry
- Burns Registry Australia & New Zealand (BRANZ)
- Plastic Surgery Department REDCap Database

CURRENT NSLHD HUMAN RESEARCH ETHICS APPLICATION (HREA) APPROVALS

- The use of digital thermography in free flap reconstruction. Cohort study. Commenced.
- Compression therapy versus vacuum-assisted closure in lower limb burns. Cohort study, commenced
- Fluid resuscitation requirements of the severe burns patient following Australian bushfire. Cohort study, commenced.



CURRENT RESEARCH ACTIVITY

- Burns therapies including bacteriophage treatments and improving wound closure with application of bio-membranes and compression and vacuum-assisted.
- Outcome predictors of in burns wounds
- Skin donor sites for major burns
- Jewellery associated burn treatment.
- Digital thermography in free flap reconstructions
- Optimising Flow State in Microsurgery” aims to answer the following questions:
 - Is flow state achieved during microsurgery?
 - Is a mindfulness intervention able to improve a microsurgeons experience of flow?
- Work-related electrical burns associated with jewellery
- A pilot study in the assessment of the utility of intra-operative high-resolution duplex ultrasound in microvascular reconstruction.
- A Brief history and review of living donor skin allografting
- Burns in the Extreme Geriatric Population
- Outcome predictors in elderly lower limb microsurgical reconstruction: a comparative study
- Dual Surgeon - Operating efficiency and patient outcomes
- How to do it: Utilizing Biobrane for the Burnt Auricle
- Compression therapy versus vacuum-assisted closure in lower limb burns
- Electrical burns associated with jewellery.



PUBLICATIONS

2020

Cubitt et al. **2020** "Mandibular distraction osteogenesis for Pierre Robin sequence: The Sydney experience." *Journal of Plastic, Reconstructive & Aesthetic Surgery* *In press* doi: 10.1016/j.bjps.2020.10.022 PMID: 33162386 Surgical Staff: **Robert Gates**

Haines et al. **2020** "How to do it: treating the burnt auricle using Biobrane." *ANZ Journal of Surgery* *In press* doi: 10.1111/ans.16462 PMID: 33289189 Surgical Staff: **Jeon Cha**

Itinteang et al. **2020** "A Large Dermoid Cyst Causing Plagiocephaly." *The Journal of Craniofacial Surgery* 31 e155-e156 PMID: 31977706 Surgical Staff: **Robert Gates**

Liang et al. **2020** "A rare case of Bowen's disease of the nipple: Literature review and management pathway." *The Breast Journal* *In press*: doi: 10.1111/tbj.13824. PMID:32212188 Surgical staff: **Jeon Cha**

2019

Cubitt et al. **2019** "Auricular reconstruction." *Journal of Paediatrics and Child Health* 55: 512-517 PMID:30920067 Surgical staff: **John Vandervord**

Fitzpatrick et al. **2019** "The use of a combined profunda femoris perforator-based fasciocutaneous flap and gracilis muscle flap in the treatment of ischial pressure wounds in patients with limited mobility." *Eur J Plast Surg* 42: 379-384 Surgical Staff: **Jeon Cha**

Holt R et al. **2019** "Insecure adult attachment style is associated with elevated psychological symptoms in early adjustment to severe burn: A cross-sectional study." *Burns* 45: 1359-1366 PMID:31160134 Surgical staff: **John Vandervord**

Lang et al. **2019** "A Critical Update of the Assessment and Acute Management of Patients with Severe Burns." *Advances in Wound Care* 8: 607-633 PMID:31827977 Surgical staff: **John Vandervord**

Lang et al. **2019** "Plasma protein C levels are directly associated with better outcomes in patients with severe burns." *Burns* 45: 1659-1672 PMID:31221425 Surgical staff: **Aruna Wijewardena, John Vandervord**

Yeap et al. **2019** "Current evidence for outcomes of free-flap reconstruction in factor V Leiden patients." *Australasian Journal of Plastic Surgery* 2(2):58-66 Surgical Staff: **Rowan Gillies, John Vandervord**

2018

Fitzpatrick et al. **2019** "The Use of a Combined Profunda Femoris Perforator-Based Fasciocutaneous " *European Journal of Plastic Surgery* 42: 379-384 PMID: Surgical staff: **Jeon Cha, John Vandervord**

Holt et al. **2019** "Insecure adult attachment style is associated with elevated psychological symptoms in early adjustment to severe burn: A cross-sectional study." *Burns* 45: 1359-1366 PMID:31160134 Surgical staff: **John Vandervord, Julia Kwiet**

CARDIOTHORACIC SURGERY

Head of Department: David Marshman



DEPARTMENTAL RESEARCH RESOURCES

CLINICAL DATABASES TO SUPPORT OUTCOMES RESEARCH

- Australian & New Zealand Society of Cardiac and Thoracic Surgeons (ANZSCTS) National Database
- RNSH Cardiovascular Surgery Database
- Implantable Cardiac Device Database

CURRENT NSLHD HUMAN RESEARCH ETHICS APPLICATION (HREA) APPROVALS

- A randomised control trial of axillary artery cannulation versus standard aortic cannulation for aortic valve replacement.
- 2019/ETH12555: A study of flow dynamics in Coronary Artery Bypass Grafts Developing a model to predict the flow based on which conduit, coronary distribution, and graft configuration.



CURRENT RESEARCH ACTIVITY

- Enhanced Recovery after Surgery (ERAS) protocol- collaborative project to optimise perioperative care of cardiac surgical patients.
- AI tool development for predicting cardiothoracic ward patients that are likely to deteriorate (with Sydney Adventist Hospital).
- Development of a RNSH Implantable Cardiac Device database to record all cases performed.
- Long term follow up (10-15 years) of off-pump arterial grafts and projects related to assessing and improving off-pump surgery.
- Bio-printing of human cardiac patches to improve heart regeneration.
- Evaluating use of aortic cannulation in valve replacement.
- Investigating axillary inflow Cerebral Injury in patients undergoing aortic valve replacement.
- Vascular leak associated micro RNA in cardiovascular surgery.
- Determining trans-catheter aortic valve implantation outcomes in low risk patients.



PUBLICATIONS

2020

Chen et al. **2020** "Salvage thoracotomy for atraumatic tension haemothorax in a patient with neurofibromatosis type 1: an Australian experience." *ANZ Journal of Surgery* *In press* doi: 10.1111/ans.16458 PMID: 33236494 Surgical Staff: **Levi Bassin**

Gimpel et al. **2020** "Operative Results of Mitral Valve Repair and Replacement in Chronic Ischaemic Mitral Valve Regurgitation." *Heart, Lung & Circulation* 29 1713-1724 PMID: 32493579 Surgical Staff: **Levi Bassin**

Manuel et al. **2020** "Robotic approach to the porcelain aorta: staged transcatheter aortic valve replacement and robotically assisted coronary artery bypass." *ANZ Journal of Surgery* Surgical staff: **Levi Bassin**

Manuel et al. **2020** "Is totally endoscopic coronary artery bypass grafting compared with minimally invasive direct coronary artery bypass grafting associated with superior outcomes in patients with isolated left anterior descending disease?" *Annals of Medicine and Surgery* 57:264-7 PMID: 32884744 Surgical staff: **Levi Bassin**

Roche et al. **2020** "Current challenges in three-dimensional bioprinting heart tissues for cardiac surgery " *European Journal of Cardiothorac Surgery* *In press*: doi:10.1093/ejcts/ezaa093 PMID:32340555 Surgical staff: **John Breton**

2019

Bamford et al. **2019** "Delayed diagnosis of right-sided valve endocarditis causing recurrent pulmonary abscesses: a case report." *Journal of Medical Case Reports* 13: 97 PMID:30999926 Surgical staff: **Levi Bassin**

Bamford et al. **2019** "Large Bioprosthetic Aortic Valve Thrombi on DOACs." *Heart Lung & Circulation* 28: e139-e142 PMID:31076237 Surgical staff: **Levi Bassin**

Kay et al. **2019** "Rugby Player's Aorta: Alarming Prevalence of Ascending Aortic Dilatation and Effacement in Elite Rugby Players." *Heart Lung & Circulation* 29: 196-201 PMID:31494040 Surgical staff: **David Marshman**

Pu et al. **2019** "Intravenous amino acid therapy for kidney protection in cardiac surgery patients: A pilot randomized controlled trial." *The Journal of Thoracic and Cardiovascular Surgery* 157: 2356-2366 PMID:30685166 Surgical staff: **John Breton**

Talwar et al. **2019** "Experience With the Axillary Artery as an Arterial Cannulation Site in Patients With Acute Type A Aortic Dissection." *Heart Lung Circ.* 28(2):342-347 PMID: 29748059 Surgical staff: **Manu Mathur**

2018

Litton et al. **2018** "Six-Month Outcomes After High-Risk Coronary Artery Bypass Graft Surgery and Preoperative Intra-aortic Balloon Counterpulsation Use: An Inception Cohort Study." *Journal of Cardiothoracic and Vascular Anesthesia* 32: 2067-2073 PMID:29456049 Surgical staff: **David Marshman**

Ramponi et al. **2018** "Dual inflow, total-arterial, anaortic, off-pump coronary artery bypass grafting: how to do it." *Annals of Cardiothoracic Surgery* 7: 552-560 PMID:30094221 Surgical staff: **John Breton**

COLORECTAL SURGERY

Head of Department: Alexander Engel



RESEARCH SUPERVISION (2018-2020)

Alexander Engel

- 2 PhD students ongoing
- 1 PhD completed 2020 (co-supervisor)
- 2 Masters students completed 2018-2020
- 2 Masters students ongoing,
- 8 MD research students completed, 4 MD research students ongoing



DEPARTMENTAL RESEARCH RESOURCES

CLINICAL DATABASES TO SUPPORT OUTCOMES RESEARCH

- RNSH Colorectal Audit
- Bi-National Colorectal Cancer Audit (BCCA)
- Colorectal Cancer Surgical Pathology Database (Prof Anthony Gill)

CURRENT NSLHD HUMAN RESEARCH ETHICS APPLICATION (HREA) APPROVALS

- ETH08162-Analysis of patients presenting with haematochezia/PR bleeding at a single centre
- ETH01264-CT and clinical correlation of diverticulitis severity
- ETH00301: IMAP Study - Integrative Molecular Analysis of Polyps
- HREC/17/RPAH/542- Hide and Seek: MDT advice and subsequent genetic counselling for suspected Lynch syndrome

LINKS TO TRANSLATIONAL RESEARCH PARTNERS OR UNIVERSITY DEPARTMENTS

- University of Sydney Nano Institute
- University of Sydney Charles Perkins Centre
- University of NSW Nano Photonics Institute



CURRENT RESEARCH ACTIVITY

- Faecal Incontinence: effect of tibial nerve stimulation (A/Prof Margaret Schitzler)
- Linking public obstetric health data to surgical problems. (A/Prof Margaret Schnitzler)
- Outcome of primary repair of obstetric sphincter rupture (Prof Alexander Engel)
- Classification of intra-operative complications (Prof Alexander Engel)
- Nanotechnology and improvement in diagnosis and management of CRC lymphnode metastasis (Prof Alexander Engel)
- Photodynamic therapy in combination with low dose radiotherapy as an alternative to chemoradiation in advanced and recurrent rectal cancer. (Prof Alexander Engel)
- Integrative molecular classification of colorectal polyps (Prof Alexander Engel)
- Molecular signature of lymphnode metastasis in early colorectal cancer (Prof Alexander Engel)
- New classification of large bowel diverticulitis (Prof Alexander Engel)

- Understanding the pathophysiology, diagnostics and management of lower GI bleeding (Prof Alexander Engel)



PUBLICATIONS

2020

- Björn LDM Brücher, et.al. **2020** "COVID-19: Pandemic Surgery Guidance". **4Open** 3,1 Surgical staff: **Alexander Engel**
- Chan et al. **2020** "Serum bicarbonate is a marker of peri-operative mortality but is not associated with long term survival in colorectal cancer." **PloS One** 15: e0228466 PMID:31999779 Surgical staff : **Alexander Engel**
- Chan et.al. **2020** "Routine early 68Ga-DOTATATE positron emission tomography has low yield after resection of appendiceal neuroendocrine neoplasms. " **Pancreas**. 4):891-896. doi: 10.1097/MPA.0000000000001589. PMID: 32658069 Surgical Staff: **Alexander Engel**
- Dell-Kuster et.al. **2020** "Prospective validation of classification of intraoperative adverse events (ClassIntra): international, multicentre cohort study." **BMJ** doi: 10.1136/bmj.m2917 PMID: 32843333. Surgical staff: **Alexander Engel**
- Deng et al. **2020** "Application of Mitochondrially Targeted Nanoconstructs to Neoadjuvant X-ray-Induced Photodynamic Therapy for Rectal Cancer." **ACS Central Science** 6: 715-726 PMID:32490188 Surgical staff : **Alexander Engel**
- Lajevardi et al. **2020** "Phlegmonous enteritis: a cause for acute abdomen with unusual findings." **ANZ Journal of Surgery** *In press*: doi: 10.1111/ans.15776 PMID:32104946 Surgical staff : **Justin Evans**
- Lyu et al. **2020** "Multiplex detection of ctDNA mutations in plasma of colorectal cancer patients by PCR/SERS assay." **Nanotheranostics** 4 224-232 PMID: 32923312 Surgical Staff: **Alexander Engel**
- Mazor et al. **2020** "A novel combined anorectal biofeedback and percutaneous tibial nerve stimulation protocol for treating fecal incontinence." **Therapeutic Advances in Gastroenterology** 13 1.7562848209e+015 PMID: 32577132 Surgical Staff: **Margaret Schnitzler**

2019

- Chan et al. **2019** "Tumor sidedness is not an independent prognostic marker of colorectal cancer patients undergoing curative resection: A retrospective cohort study." **PloS One** 14: e0218207 PMID:31188892 Surgical staff : **Alexander Engel**
- Delaney et al. **2019** "Risk of bias judgements and strength of conclusions in meta-evidence from the Cochrane Colorectal Cancer Group." **Systematic reviews** 8: 90 PMID:30961675 Surgical staff : **Alexander Engel**
- Fok et al. **2019** "Management of per rectal bleeding is resource intensive." **ANZ Journal of Surgery** 89: E113-E116 PMID:30887672 Surgical staff : **Alexander Engel**
- Ibibebe et al. **2019** "Perinatal outcomes following bariatric surgery between a first and second pregnancy: a population data linkage study." **BJOG (an international journal of obstetrics and gynaecology)** 127: 345-354 PMID:31749274 Surgical staff : **Margaret Schnitzler**
- Molloy et al. **2019** "Precision medicine beyond medical oncology: using molecular analysis to guide treatments of colorectal neoplasia." **Expert Review of Gastroenterology & Hepatology** 12: 1179-1181 PMID:30791786 Surgical staff : **Alexander Engel**
- Murugesan et.al. **2019** "Perforation of Cecum Secondary to Foreign Body—Toothpick." **Indian Journal of Surgery**, 81:604-606 Surgical staff: **Alexander Engel**
- Murugesan et.al. **2019** "Meta-analysis – perineural invasion as prognostic factor in rectal cancer." *Journal of Coloproctology* 39:74-80. Surgical staff: **Alexander Engel**
- Murugesan et.al. **2019** "Giant Sigmoid Diverticulum (GSD): Is there a case for conservative management?" **Austin Journal of Surgery** 6:1191 Surgical staff: **Alexander Engel**
- Rana et al. **2019** "Small Bowel Evisceration through the Vaginal Vault: A Rare Surgical Emergency." **Cureus** 11: e5947 PMID:31799088 Surgical staff : **Yasser Salama**
- Toh et al. **2019** "Association of Mechanical Bowel Preparation and Oral Antibiotics Before Elective Colorectal Surgery With Surgical Site Infection: A Network Meta-analysis." **JAMA Network Open** 1: e183226 PMID:30646234 Surgical staff : **Alexander Engel**

2018

Chan et al. **2017** "A Longitudinal Investigation of Inflammatory Markers in Colorectal Cancer Patients Perioperatively Demonstrates Benefit in Serial Remeasurement." **Annals of Surgery** 267: 1119-1125 PMID:28394869 Surgical staff : **Alexander Engel**

Den Boer et.al. **2018** "Value of additional surgical resection after endoscopic removal of a T1 colorectal carcinoma". **International Journal of Gastroenterology, Hepatology and Endodcopy** 1:1-5 Surgical Staff: **Alexander Engel**

Deng et al. **2018** "Controlled gene and drug release from a liposomal delivery platform triggered by X-ray radiation." **Nature Communications** 9: 2713 PMID:30006596 Surgical staff : **Alexander Engel**

Engel et al. **2018** "Could Blockchain technology add value to surgical outcomes research?" **Colorectal Disease** 20: 369-370 PMID:29717560 Surgical staff : **Alexander Engel**

Ibibebe et al. **2018** "Appendectomy during pregnancy and the risk of preterm birth: A population data linkage study." **ANZ Journal of Obstetrics & Gynaecology** 59: 45-53 PMID:29602171 Surgical staff : **Margaret Schnitzler**

Molloy and Engel **2018** "Precision medicine beyond medical oncology: using molecular analysis to guide treatments of colorectal neoplasia." **Expert Review of Gastroenterology and Hepatology** 12:1179-1181 1535897 PMID: 30791786 Doi.org/10.1080/17474124.2018. Surgical Staff: **Alexander Engel**

Schlichtemeier et al. **2018** "Less is more: re-evaluating systematic reviews." **Colorectal Disease** 20: 662-663 PMID:30152157 Surgical staff : **Alexander Engel**

ENDOCRINE SURGERY

Head of Department: Stanley Sidhu



RESEARCH SUPERVISION (2018-2020)

Stanley Sidhu

- PhD x3

Mark Sywak

- Master of Surgery x1
- MD x1

Anthony Glover

- University of Sydney Supervision of Higher degree research course completed
- Master of Surgery Program Lead



DEPARTMENTAL RESEARCH RESOURCES

CLINICAL DATABASES TO SUPPORT OUTCOMES RESEARCH

- Adrenal Surgery Database
- Thyroid / Parathyroid Surgery Database
- Thyroid Cancer
- Follow up Database
- Australian and New Zealand Thyroid Cancer Registry (ANZTCR)

CURRENT NSLHD HUMAN RESEARCH ETHICS APPLICATION (HREA) APPROVALS

- Unlocking new treatments for endocrine tumours: a bio-bank for single cell science and novel technologies, Jan 2019
- Clinical Outcomes of Thyroid Cancer, July 2019

LINKS TO TRANSLATIONAL RESEARCH PARTNERS OR UNIVERSITY DEPARTMENTS

- Garvan Institute (Genomics)
- Kolling Institute Cancer Genetics
- Sydney University Discipline of Surgery



CURRENT RESEARCH ACTIVITY

- Garvan Endocrine Cancer Program (ECP) – integrating endocrine patient care with genomic analysis.
- Studies of the influences of the long non-coding RNAs and micro-RNAs in cancer and cancer therapies.
- Study of Thyroid cancer patients with distant metastasis (Cohort study).
- Alternative splicing and RBM10 mutations in advanced thyroid cancer (Cohort study).
- Comparisons of endocrine tumour recurrence.
-



PUBLICATIONS

2020

- Cehade et al. **2020** "Key MicroRNA's and Their Targetome in Adrenocortical Cancer." **Cancers** 12 doi: 10.3390/cancers12082198 PMID: 32781574 Surgical Staff: **Anthony Glover, Stanley Sidhu**
- Di Marco et al. **2020** "Letter to the Editor: Reoperation for Bleeding After Thyroid and Parathyroid Surgery: Incidence, Risk Factors, Prevention, and Management." **World Journal of Surgery** *In press*: doi: 10.1007/s00268-020-05460-y. PMID:32189032 Surgical staff: **Anthony Glover, Mark Sywak, Stanley Sidhu**
- Fuchs et al. **2020** "A Proposed Grading Scheme for Medullary Thyroid Carcinoma Based on Proliferative Activity (Ki-67 and Mitotic Count) and Coagulative Necrosis." **The American Journal of Surgical Pathology** 44 1419-1428 PMID: 32452872 Surgical Staff: **Anthony Glover, Mark Sywak, Stanley Sidhu**
- Jayasekara et al. **2020** "Early post operative stimulated serum thyroglobulin quantifies risk of recurrence in papillary thyroid cancer." **Surgery** 167: 40-45 PMID:31515121 Surgical staff: **Anthony Glover, Stanley Sidhu, Mark Sywak, Ahmed Aniss**
- Nassour et al. **2020** "Biochemistry may be misleading in metachronous MEN2A-associated pheochromocytoma following unilateral total adrenalectomy." **BMJ Case Reports** 13 doi: 10.1136/bcr-2019-234132 PMID: 32532909 Surgical Staff: **Mark Sywak**
- Nickel et al. **2020** "Delays to Low-risk Thyroid Cancer Treatment During COVID-19-Refocusing From What Has Been Lost to What May Be Learned and Gained." **JAMA Otolaryngology Head & Neck Surgery** 147 5-Jun PMID: 33119084 Surgical Staff: **Anthony Glover**
- Nylén et al. **2020** "Molecular Markers Guiding Thyroid Cancer Management." **Cancers** 12 doi: 10.3390/cancers12082164 PMID: 32759760 Surgical Staff: **Mark Sywak, Stanley Sidhu, Anthony Glover**
- Nylén et al. **2020** "Prophylactic central lymph node dissection informs the decision of radioactive iodine ablation in papillary thyroid cancer." **American Journal of Surgery** *In press* doi: 10.1016/j.amjsurg.2020.08.012 PMID: 32878695 Surgical Staff: **Mark Sywak, Anthony Glover, Stanley Sidhu**
- Papachristos et al. **2020** "Bi-national Review of Pheochromocytoma Care: Is ICU Admission Always Necessary?" **World Journal of Surgery** *In press* doi: 10.1007/s00268-020-05866-8 PMID: 33219416 Surgical Staff: **Stanley Sidhu, Mark Sywak**
- Parkin et al. **2020** "Utility of the American College of Surgeons National Surgical Quality Improvement Program surgical risk calculator in predicting mortality in an Australian acute surgical unit." **ANZ Journal of Surgery** PMID: 32348035 Surgical Staff: **Anthony Glover**
- Tsang et al. **2020** "Thyroid cancer in the age of COVID-19." **Endocrine-Related Cancer** 27 R407-R416 PMID: 32810844 Surgical Staff: **Anthony Glover**
- van der Plas et al. **2020** "Parathyroidectomy for patients with secondary hyperparathyroidism in a changing landscape for the management of end-stage renal disease." **Surgery** 169 275-281 PMID: 33059930 Surgical Staff: **Stanley Sidhu, Mark Sywak**
- Zaborowski et al. **2020** "Unique and distinctive histological features of immunotherapy-related thyroiditis." **Pathology** 52: 271-273 PMID:31902621 Surgical staff: **Mark Sywak**

2019

- DeHoog et al. **2019** "Preoperative metabolic classification of thyroid nodules using mass spectrometry imaging of fine-needle aspiration biopsies." **Proceedings of the National Academy of Sciences of the USA** 116: 21401-21408 PMID:31591199 Surgical staff: **Stanley Sidhu**
- DiMarco et al. **2019** "Risk of needing completion thyroidectomy for low-risk papillarythyroid cancers treated by lobectomy." **BJS Open** 3: 299-304 PMID:31183445 Surgical staff: **Anthony Glover, Stanley Sidhu, Mark Sywak**
- Gartland et al. **2019** "Posterior retroperitoneoscopic approach is feasible in selected patients requiring revision adrenal surgery." **ANZ Journal of Surgery** 89: 1175-1176 PMID:31522478 Surgical staff: **Mark Sywak**
- Hassan et al. **2019** "Reciprocal interplay of miR-497 and MALAT1 promotes tumourigenesis of adrenocortical cancer." **Endocrine-Related Cancer** 26: 677-688 PMID:31085769 Surgical staff: **Anthony Glover, Stanley Sidhu**
- Ioannou et al. **2019** "Development of a binational thyroid cancer clinical quality registry: a protocol paper." **BMJ Open** 9: e023723 PMID:30782713 Surgical staff: **Stanley Sidhu**
- Joo et al. **2019** "RET Kinase-Regulated MicroRNA-153-3p Improves Therapeutic Efficacy in Medullary Thyroid Carcinoma." **Thyroid** 29: 830-844 PMID:30929576 Surgical staff: **Stanley Sidhu**

Kim et al. **2019** "BRAF V600E status may facilitate decision-making on active surveillance of low-risk papillary thyroid microcarcinoma." **European Journal of Cancer** 29: 161-169 PMID:31790974 Surgical staff: **Mark Sywak**

Krawitz et al. **2019** "Pneumothorax and Pneumomediastinum with Subcutaneous Emphysema Following Parathyroidectomy and Thyroidectomy" **World Journal of Endocrine Surgery** 11: 46-48 PMID: Surgical staff: **Anthony Glover, Stanley Sidhu**

Krawitz et al. **2019** "The Significance of Histologically "Large Normal" Parathyroid Glands in Primary Hyperparathyroidism." **World Journal of Surgery** 44: 1149-1155 PMID:31773224 Surgical staff: **Anthony Glover, Swaetha Koneru, Ahmad Aniss, Mark Sywak, Leigh Delbridge, Stanley Sidhu**

Kwok et al. **2019** "microRNA-431 as a Chemosensitizer and Potentiator of Drug Activity in Adrenocortical Carcinoma." **The Oncologist** 24: e241-e250 PMID:30918109 Surgical staff: **Anthony Glover, Stanley Sidhu**

Kwok et al. **2019** "Treatment and management of adrenal cancer in a specialized Australian endocrine surgical unit: approaches, outcomes and lessons learnt." **ANZ Journal of Surgery** 89: 48-52 PMID:30710432 Surgical staff: **Anthony Glover, Mark Sywak, Stanley Sidhu**

Lin et al. **2019** "Surgery alone for papillary thyroid microcarcinoma is less costly and more effective than long term active surveillance." **Surgery** 167: 110-116 PMID:31543327 Surgical staff: **Stanley Sidhu, Leigh Delbridge, Anthony Glover, Ahmad Aniss, Mark Sywak**

Vorselaars et al. **2019** "Clinical Outcomes After Unilateral Adrenalectomy for Primary Aldosteronism." **JAMA Surgery** 154: e185842 PMID:30810749 Surgical staff: **Mark Sywak**

2018

Cole-Clark et al. **2018** "Impact of the American Thyroid Association guidelines on the Australian surgical management of papillary thyroid cancer." **ANZ Journal of Surgery** 88: 1102-1103 PMID:30387282 Surgical staff: **Mark Sywak, Anthony Glover, Stanley Sidhu**

diMarco et al. **2018** "Primary Hyperparathyroidism." **The New England journal of medicine** 379: e43 PMID:30592589 Surgical staff: **Mark Sywak, Stanley Sidhu**

Engelsman et al. **2018** "Influence of neural monitoring during thyroid surgery on nerve integrity and postoperative vocal function." **BJS open** 2: 135-141 PMID:29951637 Surgical staff: **Stanley Sidhu**

Fraser et al. **2018** "Randomized trial of low versus high carbon dioxide insufflation pressures in posterior retroperitoneoscopic adrenalectomy." **Surgery** 163: 1128-1133 PMID:29395236 Surgical staff: **Stanley Sidhu, Mark Sywak**

Gild et al. **2018** "Role of DOTATATE-PET/CT in preoperative assessment of pheochromocytoma and paragangliomas." **Clinical Endocrinology** 89: 139-147 PMID:29741215 Surgical staff: **Mark Sywak, Stanley Sidhu, Leigh Delbridge**

Gill et al. **2018** "Parafibromin-deficient (HPT-JT Type, CDC73 Mutated) Parathyroid Tumors Demonstrate Distinctive Morphologic Features." **The American Journal of Surgical Pathology** 43: 35-46 PMID:29324469 Surgical staff: **Mark Sywak, Stanley Sidhu, Leigh Delbridge**

Kruijff et al. **2018** "Changing landscape of the treatment of hyperparathyroidism related to end-stage renal disease-can we turn the clock backward?" **Surgery** 165: 289-290 PMID:30266441 Surgical staff: **Leigh Delbridge**

Sywak et al. **2018** "Re-operation for Benign Thyroid Disease," **Surgery of the Thyroid and Parathyroid Glands, 2nd E. Elsevier, Editor: Greg Randolph** : PMID:Book Chapter. Surgical staff: **Mark Sywak**

van der Plas et al. **2018** "Treatment strategy of end stage renal disease-related hyperparathyroidism before, during, and after the era of calcimimetics." **Surgery** 165: 135-141 PMID:30413324 Surgical staff: **Stanley Sidhu, Leigh Delbridge, Mark Sywak**

Vrielink et al. **2018** "Multicentre study evaluating the surgical learning curve for posterior retroperitoneoscopic adrenalectomy." **The British Journal of Surgery** 105: 544-551 PMID:29493779 Surgical staff: **Mark Sywak**

HAND AND PERIPHERAL NERVE SURGERY

Head of Department: Richard Lawson



DEPARTMENTAL RESEARCH RESOURCES

CLINICAL DATABASES TO SUPPORT OUTCOMES RESEARCH

- Hand and Peripheral Nerve Surgery Database

CURRENT NSLHD HUMAN RESEARCH ETHICS APPLICATION (HREA) APPROVALS

- Ultrasound to Predict Tendinopathy from Distal Radius Volar Locking Plates: A Pilot Study.



CURRENT RESEARCH ACTIVITY

- Anatomical and clinical studies of Intercostal to axillary nerves and nerve transfer, including cadaveric studies
- Nerve transfers in tetraplegic hand reconstruction.
- Outcomes research in pollicisation treatment.
- Rehabilitation application of extensor tendon excursion.
- Autograft suspension methods
- Carpal tunnel syndrome studies.
- Use of ultrasound in tendinopathy.
- One bone forearm procedure with medial femoral condyle osseous free flap- technique development
- Ongoing study of utility of medial femoral console vascularised bone grafts in hand surgery



PUBLICATIONS

2020

Bhardwaj et al. 2020 "Fracture dislocations of the carpometacarpal joints of the fingers." **Journal of Clinical Orthopaedics and Trauma** 11 562-569 PMID: 32684693 Surgical Staff: **Brahman Sivakumar**

Haines et al. 2020 "Iatrogenic Femur Fracture Following Medial Femoral Condyle Flap Harvest " **Journal of Hand Surgery American** *In press*: doi:10.1016/j.jhsa.2019.12.001 PMID:32089380 Surgical staff: **David Stewart**

Ledgard et al. 2020 "Evidence for efficacy of new developments in reconstructive upper limb surgery for tetraplegia. " **Journal of Hand Surgery European** 45: 43-50 PMID:31735097 Surgical staff: **James Ledgard, Claudia Gschwind**

Mende et al. 2020 "Surgical treatment and outcomes of syndactyly: A systematic review" **Journal of Hand Surgery Asian Pacific** 25: pp1-12 PMID:32000609 Surgical staff: **Konrad Mende, Anna Watson, David Stewart**

Sivakumar et al. 2020 "Intramedullary Compression Screw Fixation of Proximal Phalangeal Fractures: A Systematic Literature Review." **Hand** *In press* doi: 10.1177/1558944720928503 PMID: 32988227 Surgical Staff: **Brahman Sivakumar, James Ledgard, Richard Lawson**

Sivakumar et al. 2020 "Range of Motion Following Extensor Tendon Splitting vs. Tendon Sparing Approaches for Plate Osteosynthesis of Proximal Phalangeal Fractures - A Systematic Review and Meta-Analysis." **The Journal of Hand Surgery Asian-Pacific** 25 462-468 PMID: 33115365 Surgical Staff: **Brahman Sivakumar, James Ledgard, Richard Lawson**

Vanhees et al. 2020 "The effect of knot position in Adelaide flexor tendon repairs." **Journal of Hand Surgery European** 45: 303-304 PMID:31791165 Surgical staff: **Mark Hile**

2019

Graham et al. **2019** "Modification of obturator to femoral nerve transfer for femoral nerve palsy." **Annals of the Royal College of Surgeons of England** 102: e70-e72 PMID:31859522 Surgical staff: **Brahman Sivakumar, Richard Lawson**

Gschwind et al. **2019** "Upper limb surgery for severe spasticity after acquired brain injury improves ease of care." **Journal of Hand Surgery European Volume** 44: 898-904 PMID:31403871 Surgical staff: **Claudia Gschwind**

Smith et al. **2019** "Interosseous Membrane Reconstruction Utilizing Flexor Digitorum Superficialis Autograft." **Techniques in Hand and Upper Extremity Surgery** 23: 122-127 PMID:30807436 Surgical staff: **Richard Lawson, Brahman Sivakumar**

2018

Donald et al. **2018** "Reply to Citation Accuracy Regarding the Influence of Compression on Fracture Healing" **The Journal of Hand Surgery** 43: e13 PMID:30077232 Surgical staff: **Richard Lawson**

Ledgard et al. **2018** "Mid-carpal Arthrodesis Biomechanics: Memory Staples versus Cannulated Screws." **Journal of Hand Surgery Asian Pacific Volume** 23: 474-478 PMID:30428793 Surgical staff: **James Ledgard, Claudia Gschwind**

Marshall et al. **2018** "Mechanics of Metacarpophalangeal Joint Extension." **Journal of Hand Surgery American Volume** 43: 681.e1- 681.e5 PMID:29395585 Surgical staff: **Brahman Sivakumar, Mark Hile**

Rastogi et al. **2018** "Cadaveric Dissection of the Axillary Nerve: An Investigation of Extra-Muscular and Intra-Muscular Branching Patterns." **Journal of Hand Surgery Asian Pacific Volume** 23: 533-538 PMID:30428810 Surgical staff: **Richard Lawson** [Published Erratum : The Journal of Hand Surgery Asian-Pacific volume 24: 1992001 PMID:30760137]

Sefton et al. **2018** "Cost Comparison of Collagenase Clostridium Histolyticum and Fasciectomy for Treatment of Dupuytren's Contracture in the Australian Health System." **Journal of Hand Surgery Asian Pacific Volume** 23: 336-341 PMID:30282551 Surgical staff: **David Stewart**

Tonkin et al.. **2018** "Growth of the New Thumb Metacarpal After Pollicization for Thumb Hypoplasia." **Journal of Hand Surgery American Volume** 43: 83.e1-83.e6 PMID:28917547 Surgical staff: **Richard Lawson**

NEUROSURGERY

Head of Department: Nazih Assaad



RESEARCH SUPERVISION (2018-2020)

Jonathon Parkinson

- Master of Surgery x1



DEPARTMENTAL RESEARCH RESOURCES

CLINICAL DATABASES TO SUPPORT OUTCOMES RESEARCH

- Neurosurgery Activity & Clinical Outcomes Database
- Interventional NeuroRadiology Workload Database
- Endovascular Clot Retrieval Database



CURRENT RESEARCH ACTIVITY

- DIRECT-SAFE - Direct endovascular clot retrieval (compared to bridging intravenous thrombolysis with endovascular clot retrieval). Clinical trial.
- MOSES - The Monitoring Of Stroke Endovascular Services (MOSES) study. Observational study.
- RISCIS - Riluzole in Spinal Cord Injury Study. Clinical Trial.
- OPTIMAL - Optimising Acute Management to Improve Long-Term Outcome in Acute Traumatic Spinal Cord Injury: A registry-platform study.
- SAHaRA - Aneurysmal Subarachnoid Hemorrhage - Red Blood Cell Transfusion and Outcome: A Randomized Controlled Trial.



PUBLICATIONS

2020

Anderson et al. 2020 "Molecular and clonal evolution in recurrent metastatic gliosarcoma." **Cold Spring Harbor molecular case studies** 6: a004671 PMID:31896544 Surgical staff: **Jonathon Parkinson**

Fitzgerald et al. 2020 "Functional outcome at 12 months for patients with traumatic brain injury, intracerebral haemorrhage and subarachnoid haemorrhage treated in an Australian Neurocritical Care Unit: A prospective cohort study" **Australian Critical Care** 33: 497-503 PMID: 32739245 Surgical staff: **Jonathon Parkinson**

Gedye et al. 2020 "Driving innovation through collaboration: development of clinical annotation datasets for brain cancer biobanking." **Neuro-Oncology Practice** 7: 31-37 PMID:32257282 Surgical staff: **Ray Cook, Jonathon Parkinson**

Johnston et al. 2020 "Ongoing improvements in postoperative survival of glioblastoma in the temozolomide era: a population-based data linkage study." **Neuro-Oncology Practice** 7: 22-30 PMID:32257281 Surgical staff: **Jonathon Parkinson**

Ma et al. 2020 "Stroke and Thromboprophylaxis in the Era of COVID-19." **Journal of Stroke and Cerebrovascular Diseases** 30 105392 PMID: 33130478 Surgical Staff: **Alice Ma, Andrew Ellis**

Manoharan et al. **2020** "Sodium Fluorescein in Brain Tumor Surgery: Assessing Relative Fluorescence Intensity at Tumor Margins" **Asian Journal of Neurosurgery** 15: 88-93 PMID:32181179 Surgical staff: **Jonathon Parkinson**

Quinn et al. **2020** "The association between hyponatraemia and long-term functional outcome in patients with aneurysmal subarachnoid haemorrhage: A single centre prospective cohort study." **Journal of Clinical Neuroscience** 78 353-359 PMID: 32622650 Surgical Staff: **Keryn Davidson**

Wijetunga et al. **2020** "Hypofractionated adjuvant surgical cavity radiotherapy following resection of limited brain metastasis." **Journal of Clinical Neuroscience** 82 155-161 PMID: 33317725 Surgical Staff: **Ray Cook, Jonathon Parkinson, Nicholas Little, Jonathan Curtis**

2019

Davidoff et al. **2019** "Risk of First Hemorrhage of Brain Arteriovenous Malformations During Pregnancy: A Systematic Review of the Literature" **Neurosurgery** 85: E806-E814 PMID:31149721 Surgical staff: **Nazih Assaad**

Gambhir et al. **2019** "How Does Cage Lordosis Influence Postoperative Segmental Lordosis in Lumbar Interbody Fusion." **World Neurosurgery** 126: e606-e611 PMID:30831285 Surgical staff: **Jonathon Ball**

Lo Presti et al. **2019** "Laminar Wall Shear Stress in Brain Arteriovenous Malformations: Systematic Review of Literature." **World Neurosurg** 128: e760-e767 PMID:31077894 Surgical staff: **Nazih Assaad**

Or et al. **2019** "Focal radiation therapy for limited brain metastases is associated with high rates of local control and low subsequent whole brain radiation therapy." **ANZ Journal of Surgery** 89: 418-422 PMID:30836451 Surgical staff: **Jonathon Parkinson, Ray Cook, Nicholas Little**

Sharwood et al. **2019** "Heterogeneous emergency department management of published recommendation defined hypotension in patients with acute traumatic spinal cord injury: A multi-centre overview" **Emergency Medicine Australasia** 31: 967-973 PMID:30968575 Surgical staff: **Jonathon Ball**

Van Der Veken et al. **2019** "Kinked Perforator Due to Clipping of Parent Vessel Aneurysm: Technical Note and Lessons Learned." **World Neurosurgery** 128: 473-476 PMID:31132497 Surgical staff: **Nazih Assaad**

2018

Chan et al. **2018** "FET PET in the evaluation of indeterminate brain lesions on MRI: Differentiating glioma from other non-neoplastic causes - A pilot study" **Journal of Clinical Neuroscience** 58: 130-135 PMID:30243602 Surgical staff: **Raymond Cook, Jonathon Parkinson**

Davidson et al. **2018** "Syrinx to Subarachnoid Shunting for Syringomyelia" **World Neurosurgery** 110: e53-e59 PMID:29017977 Surgical staff: **Keryn Davidson**

Hudson et al. **2018** "Glioblastoma Recurrence Correlates With Increased APE1 and Polarization Toward an Immunosuppressive Microenvironment." **Frontiers in Oncology** 8: 314 PMID:30151353 Surgical staff: **Jonathon Parkinson**

Ibbett et al. **2018** "Role of 18F-fluoro-ethyl-tyrosine Positron Emission Tomography in Investigation and Management of Suspected Gliomas" **World Neurosurgery** 121: e712-e715 PMID:30300714 Surgical staff: **Jonathon Parkinson, Raymond Cook**

Jayamanne et al. **2018** "Survival improvements with adjuvant therapy in patients with glioblastoma." **ANZ Journal of Surgery** 88: 196-201 PMID:28922698 Surgical staff: **Raymond Cook**

Lo Presti et al. **2018** "De novo brain arteriovenous malformation after tumor resection: case report and literature review." **Acta Neurochirurgica** 160: 2191-2197 PMID:30206686 Surgical staff: **Nazih Assaad**

Mulcahy et al. **2018** "The Morel-Lavallée lesion in thoracolumbar spine trauma-two index cases." **Journal of Spine Surgery** 4: 654-657 PMID:30547132 Surgical staff: **Michael Mulcahy, Jonathon Ball**

O'Donnell et al. **2018** "Quality of life and disability 12 months after surgery vs. conservative management for unruptured brain arteriovenous malformations: Scottish population-based and Australian hospital-based studies." **Acta Neurochirurgica** 160: 559-566 PMID:29327142 Surgical staff: **Nazih Assaad**

Patel et al. **2018** "Results of Surgery for Low-Grade Brain Arteriovenous Malformation Resection by Early Career Neurosurgeons: An Observational Study." **Neurosurgery** 84: 655-661 PMID:29608734 Surgical staff: **Nazih Assaad**

Perera et al. **2018** "Balance control systems in Parkinson's disease and the impact of pedunculopontine area stimulation." **Brain** 141: 3009-3022 PMID:30165427 Surgical staff: **Ray Cook**

Rao et al. **2018** "Traumatic mid-thoracic spondyloptosis without neurological deficit: a case report and review of literature" **ANZ Journal of Surgery** 88:1083-1085 PMID:27860147 Surgical staff: **Ioannis Sergides**

Sharwood et al. **2018** "Emergency and acute care management of traumatic spinal cord injury: a survey of current practice among senior clinicians across Australia" **BMC Emergency Medicine** 18: 57 PMID:30567501 Surgical staff: **Jonathon Ball**

OPHTHALMOLOGY

Head of Department: James Smith



RESEARCH SUPERVISION (2018-2020)

Samantha Fraser-Bell

- PhD x2
- Master of Ophthalmic Science x1

Timothy Roberts

- Master of Medicine x2
- Master of Public Health x1
- SMP MD research x3



DEPARTMENTAL RESEARCH RESOURCES

CLINICAL DATABASES TO SUPPORT OUTCOMES RESEARCH

- Fight retinal Blindness! Registry for age related macular degeneration, retinal vein occlusion, diabetic macular oedema

LINKS TO TRANSLATIONAL RESEARCH PARTNERS OR UNIVERSITY DEPARTMENTS

- University of Sydney, Save Sight Institute
- Adelaide University (Prof Robert Casson)
- Chang Mai University, Thailand (Dr Voraporn Chaikitmongkol)
- University of Melbourne (A/Prof Lyndell Lim and A/Prof Sanj Wickramasinghe)
- University of Milan (Dr Alessandro Invernizzi and Prof Giovanni Staurenghi)
- University of Leipzig (Dr Catharina Busch and Prof Matus Rehak)



CURRENT RESEARCH ACTIVITY

RETINA

Retinal vein occlusion:

- Long term outcomes of retinal vein occlusion treated with vascular endothelial derived growth factor inhibitors.
- Early predictors of one-year outcomes of eyes with retinal vein occlusion treated with VEGF inhibitors.
- Near-infrared light photobiomodulation treatment for retinal vein occlusion macular oedema.

Age related macular degeneration:

- Ten year outcomes of eyes with neovascular age related macular degeneration treated with vascular endothelial derived growth factor inhibitors.
- Imaging of eyes with polypoidal choroidal vasculopathy.
- Effect of speed of intravitreal injection on acute intraocular pressure rise.

Diabetic macular oedema:

- Predictors of 2 year outcomes of eyes with diabetic macular oedema treated with VEGF inhibitors.
- 5-year outcomes of eyes with diabetic macular oedema treated with antiVEGF.
- Intravitreal injections of aflibercept with or without laser to areas of peripheral ischaemia for diabetic macular oedema (supported by Diabetes Australia Trust grant (DART) and an unrestricted grant from Bayer).
- Outcomes of eyes with diabetic macular oedema treated with the dexamethasone implant

UVEITIS

- Early worsening of TB associated uveitis associated with TB treatment.

CATARACT SURGERY

- Long-term visual acuity and adverse event outcomes for new generation Clareon and Panoptix Trifocal intraocular lens compared to historical safety and performance endpoint (SPE) rates as reported in EN ISO 11979-7:2014.
- Magnitude of postoperative refractive astigmatism compared to preoperative corneal astigmatism in eyes with 0.50 D to 1.50 D of astigmatism implanted with TECNIS Toric IOL Model ZCT100
- Manual versus automated marking systems for intraoperative management of corneal astigmatism

GLAUCOMA

- Intraocular pressure (IOP)-lowering efficacy and safety of 2 dose strengths of Bimatoprost SR (Sustained-release implant) in the anterior chamber of patients with open-angle glaucoma (OAG) or ocular hypertension (OHT)

INDUSTRY SPONSORED TRIALS

- Kestrel Phase III Study of Efficacy and Safety of Brolucizumab vs. Aflibercept in Patients With Visual Impairment Due to diabetic macular edema 2019:
- Talon: A 64-week, Two-arm, Randomized, Double-masked, Multicenter, Phase IIIb Study Assessing the Efficacy and Safety of Brolucizumab 6 mg Compared to Aflibercept 2 mg in a Treat-to-control Regimen in Patients With Neovascular Age-related Macular Degeneration (TALON):
- Raven: An Eighteen-Month, Two-Arm, Randomized, Double Masked, Multicenter, Phase III Study Assessing the Efficacy and Safety of Brolucizumab Versus Aflibercept in Adult Patients With Visual Impairment Due to Macular Edema Secondary to Central Retinal Vein Occlusion:
- Renexus Phase 3 CNTF-Secreting cells for treatment of Macular telangiectasia type 2 - ongoing
- PANDA: A Phase III, Multicenter, Randomized, Double-masked study. Efficacy and Safety Trial of Conbercept Intravitreal Injection for neovascular age related macular degeneration. 2019
- Rhine: A Phase III, Multicenter, Randomized, Double-Masked, Active Comparator-Controlled Study to Evaluate the Efficacy and Safety of Faricimab (RO6867461) in Patients With Diabetic Macular Edema 2019
- Lucerne Phase 3 study to evaluate the efficacy and safety of faricimab in participants with neovascular age related macular degeneration. 2019
- OAKS: Phase 3 study to compare the efficacy and safety of intravitreal APL-2 therapy with sham injections in patients with geographic atrophy secondary to age-related macular degeneration
- GOLDEN: Phase 2 Study to assess safety and efficacy of multiple doses of IONIS-FB-LRx in participants with geographic atrophy secondary to age-related macular degeneration
- Clareon IOL: To demonstrate the long-term (3 years) favourable visual acuity and adverse event outcomes for the Clareon IOL compared to historical safety and performance endpoint (SPE) rates as reported in EN ISO 11979-7:2014
- STIRLING: To investigate the magnitude of postoperative refractive astigmatism following implantation of the TECNIS® Toric IOL Model ZCT100 in eyes with 0.50 D to 1.50 D of preoperative corneal astigmatism, compared with preoperative corneal astigmatism (as measured by keratometry).
- Bimatoprost sustained-release implant: To evaluate the intraocular pressure (IOP)-lowering efficacy and safety of 2 dose strengths of Bimatoprost SR (Sustained-release implant) in the anterior chamber of patients with open-angle glaucoma (OAG) or ocular hypertension (OHT) after initial and repeated administrations
- Panoptix: Multi-centre retrospective study of 750 eyes implanted with a new generation trifocal Intraocular Lens



2020

- Bae et al. **2020** "Role of Optic Nerve Sheath Fenestration in Inflammatory Pachymeningitis Causing Visual Impairment." **Ophthalmic Plastic and Reconstructive Surgery** *In press* doi: 10.1097/IOP.0000000000001769 PMID: 32732548
Surgical Staff: **Kimberley Tan, Brett O'Donnell**
- Bhandari et al. **2020** "Ranibizumab or Aflibercept for Diabetic Macular Edema: Comparison of One Year Outcomes from the Fight Retinal Blindness! Registry" **Ophthalmology** 127: 608-15 PMID:31932092 Surgical staff: **Samantha Fraser-Bell**
- Biechl et al. **2020** "Changes in real-world treatment patterns for diabetic macular oedema from 2009-2019 and five-year outcomes: Data from the Fight Retinal Blindness! Registry" **Clinical & Experimental Ophthalmology**
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Surgical staff: **Timothy Roberts**
- Busch et al. **2020** "Baseline predictors for visual acuity loss during observation in diabetic macular oedema with good baseline visual acuity" **Acta Ophthalmologica** doi:10.1111/aos.14390 PMID:32115886 Surgical staff: **Samantha Fraser-Bell**
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PMID: 31916341 Surgical Staff: **James Smith**
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Surgical staff: **Keith Ong**
- Lawless et al. **2020** "Total keratometry in intraocular lens power calculations in eyes with previous laser refractive surgery." **Clinical & Experimental Ophthalmology** Aug;48(6):749-756. doi: 10.1111/ceo.13760. Epub 2020 Apr 27. PMID: 32279436
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- Shah et al. **2020**. 'Emerging corticosteroid delivery platforms for treatment of diabetic macular edema.' **Expert Opin Emerg Drugs.** doi: 10.1080/14728214.2020.1810664. Epub ahead of print. PMID: 32815413 Surgical staff: **Samantha Fraser-Bell**
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- Singh SR, Fraser-Bell S et al. **2020**. Optical coherence tomography angiography findings of fellow eye of proliferative macular telangiectasia type 2: Long term study. **Eur J Ophthalmol.** 2020 Jul 2:1120672120939505. doi: 10.1177/1120672120939505. Epub ahead of print. PMID: 32613846. Surgical staff: **Samantha Fraser-Bell**
- Singh SR. **2020**. "One-year outcomes of anti-vascular endothelial growth factor therapy in peripapillary choroidal neovascularization" **British Journal of Ophthalmology** 104: 678-83 PMID:31401554 Surgical staff: **Samantha Fraser-Bell**
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2019

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- Joe et al. **2019** "Dexamethasone implant for the treatment of persistent diabetic macular oedema despite long term treatment with bevacizumab" **Clinical & Experimental Ophthalmology** 47: 287-289 PMID:30084193 Surgical staff: **Samantha Fraser-Bell**
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- Nguyen V et al. **2019** "Projection of long-term visual acuity outcomes based on initial treatment response in neovascular age-related macular degeneration" **Ophthalmology** 126: 64-74 PMID:30149035 Surgical staff: **Samantha Fraser-Bell**
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- Spooner et al. **2019** "Current Outcomes of Anti-VEGF Therapy in the Treatment of Macular Edema Secondary to Central Retinal Vein Occlusions: A Systematic Review and Meta-Analysis" **Asia Pacific Journal of Ophthalmology** 8: 236-46 PMID:31158837 Surgical staff: **Samantha Fraser-Bell**
- Spooner et al. **2019** "Current Outcomes of Anti-VEGF Therapy in the Treatment of Macular Oedema Secondary to Branch Retinal Vein Occlusions: A Meta-Analysis" **Ophthalmologica** 3: 42 PMID:31132002 Surgical staff: **Samantha Fraser-Bell**
- Spooner et al. **2019** "Five-year outcomes of retinal vein occlusion treated with vascular endothelial derived growth factor inhibitors" **BMJ Open Ophthalmology** 4: 49 PMID:30997407 Surgical staff: **Samantha Fraser-Bell**
- Tynan et al. **2019** "Complete Inferior Rectus Transection Following Blunt Trauma: A Case Report and Novel Approach to Surgical Repair." **Ophthalmic Plastic and Reconstructive Surgery** 35: e69-e72 PMID:30908462 Surgical staff: **Timothy Roberts**
- Waldie et al. **2019** "Lymphocytic Hypophysitis presenting as bilateral sixth nerve palsy: A Case Report" **Neuroophthalmology** 44: 121-127 PMID:32395162 Surgical staff: **James Smith**
- Yek et al. **2019** "Outcomes of Eyes with Failed Primary Surgery for Idiopathic Macular Hole." **Ophthalmology. Retina** 2: 757-764 PMID:31047526 Surgical staff: **Michael Branley**

2018

- Busch et al. **2018** "Shall we stay, or shall we switch? Continued anti-VEGF therapy versus early switch to dexamethasone implant in refractory diabetic macular edema" **Acta Diabetologica** 55: 789-796 PMID:29730822 Surgical staff: **Samantha Fraser-Bell**
- Hui et al. **2018** "Comparison of ICare tonometry to Goldmann tonometry for the measurement of intraocular pressure changes following intravitreal anti-vascular endothelial growth factor injection" **Clinical & Experimental Ophthalmology** 46: 821-823 PMID:29442417 Surgical staff: **Samantha Fraser-Bell**
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- Leung et al. **2018** "Acute retinopathy and loss of vision following routine cataract surgery." **Clinical & Experimental Ophthalmology** 47: 294-296 PMID:30260062 Surgical staff: **Timothy Roberts, Samantha Fraser-Bell**

Leung et al. 2018 "Metastasis to the extraocular muscles: a case report, literature review and pooled data analysis." **Clinical & Experimental Ophthalmology** 46: 687-694 PMID:29394006 Surgical staff: **Timothy Roberts**

Leung et al. 2018 "Orbital Apex Syndrome in Pseudomonas Sinusitis After Functional Endoscopic Sinus Surgery." **Ophthalmic Plastic and Reconstructive Surgery** 34: e166-e168 PMID:30124608 Surgical staff: **Brett O'Donnell**

Leung et al. 2018 "Surfboard-related intraorbital foreign bodies: a case series and radiological considerations." **Clinical & Experimental Ophthalmology** 46: 702-705 PMID:29393996 Surgical staff: **James Smith, Brett O'Donnell**

Mehta et al. 2018 "Anti-vascular endothelial growth factor combined with intravitreal steroids for diabetic macular oedema" **Cochrane Database Systematic Reviews** 4: CD011599 PMID:29669176 Surgical staff: **Samantha Fraser-Bell, Vuong Nguyen, Mark Gilles**

Mehta et al. 2018 "Short-term vision gains at 12 weeks correlate with long-term vision gains at 2 years: results from the BEVORDEX randomised clinical trial of bevacizumab versus dexamethasone implants for diabetic macular oedema" **British Journal of Ophthalmology** 102: 479-82 PMID:28779007 Surgical staff: **Samantha Fraser-Bell, Vuong Nguyen, Mark Gilles**

Mehta et al. 2018 "The Interval between Treatments of Bevacizumab and Dexamethasone Implants for Diabetic Macular Edema Increased over Time in the BEVORDEX Trial" **Ophthalmology Retina** 2: 231-4 PMID:31047591 Surgical staff: **Samantha Fraser-Bell, Mark Gilles**

Nguyen et al. 2018 "Simultaneous Subconjunctival Triamcinolone and Bevacizumab Injections for Management of Blepharokeratoconjunctivitis in Children" **Case Reports in Ophthalmological Medicine** : 2602487 PMID:29967706 Surgical staff: **James Smith, Noni Lewis**

Ong et al. 2018 "Ideal laser posterior capsulotomy size." **Clinical & Experimental Ophthalmology** 46: 837-838 PMID:29468786 Surgical staff: **Keith Soo Ong**

Roberts TV, et al. 2018. Comparison of Hill-RBF, Barrett Universal and current third generation formulas for the calculation of intraocular lens power during cataract surgery. **Clinical & Experimental Ophthalmology** ;46(3):240-246. Surgical staff: **Timothy Roberts**

Teo et al. 2018 "The use of endothelial growth factor inhibitors and complementary treatment options in polypoidal choroidal vasculopathy: A subtype of neovascular age-related macular degeneration." **International Journal of Molecular Sciences** 3: 19 PMID:30177632 Surgical staff: **Samantha Fraser-Bell, Mark Gilles**

ORTHOPAEDIC SURGERY

Head of Department: Nathan Hartin



RESEARCH SUPERVISION (2018-2020)

Benjamin Cass

- Master of Surgery x2

Myles Coolican

- University of Sydney Supervision of Higher degree research course completed

Bill Walter

- University of Sydney Supervision of Higher degree research course completed
- PhD x2
- Master of Surgery x1



DEPARTMENTAL RESEARCH RESOURCES

CLINICAL DATABASES TO SUPPORT OUTCOMES RESEARCH

- Australian Orthopaedic Association National Joint Replacement Registry (AOANJRR)
- The Orthopaedic Registry and Implant/Tissue Bank
- RNSH Orthopaedic Trauma and Spine Database
- RNSH Trauma and Spine Registry

CURRENT NSLHD HUMAN RESEARCH ETHICS APPLICATION (HREA) APPROVALS

- SOFIE: Surgery for Olecranon Fracture in the Elderly: a randomized controlled trial of operative versus non-operative treatment.
- Recalcitrant Plantar Fasciitis and Actisound Ultrasound – A prospective randomized controlled trial.
- The Orthopaedic Registry and Implant/Tissue Bank
- A3BC Tissue BioBank.
- RNSH Trauma and Spine Registry

LINKS TO TRANSLATIONAL RESEARCH PARTNERS OR UNIVERSITY DEPARTMENTS

- University of Sydney, Discipline of Surgery
- University of Sydney, School of Information Technology (Jinman Kim)
- University of Sydney, Australian Centre for Field Robotics (Ian Manchester, Stefan Williams)
- Raymond Purves Bone and Joint Research Laboratory (Chris Little)
- Murray Maxwell Biomechanics Laboratory (Elizabeth Clarke)
- Department of Rheumatology (David Hunter and Lyn March)



CURRENT RESEARCH ACTIVITY

SHOULDER AND ELBOW

- Biomechanical comparison of shoulder materials.
- Precision And Accuracy Of Pumps Used In Shoulder Arthroplasty
- TXA Study (Systemic Tranexamic Acid in Shoulder Arthroplasty)
- Review of the use of the Rota-Lok system for massive rotator cuff repairs
- Comparative study of physician applied and patient reported Constant Scores utilising bathroom scales to derive force measurements
- Validation of Patient Completed Constant Shoulder Score
- Fitness Band Use in Shoulder Evaluation
- TXA 2 Study (Systemic Tranexamic Acid in Shoulder Arthroscopy and Rotator Cuff Repair)
- Arthroscopic RCR with muscle advancement for massive tears
- Supraspinatus and infraspinatus muscle advancement in irreparable rotator cuff tears: A cadaveric study quantifying the muscle slide
- Supraspinatus and infraspinatus muscle advancement in irreparable rotator cuff tears: A cadaveric study examining the effect on the suprascapular nerve
- Total Shoulder Replacement – Long Term Follow Up with the Constant Score
- Reverse Total Shoulder Replacement – Long Term Follow Up with the Constant Score.
- The ReShape study

HAND

- Hand surgery research projects, including biomechanics and case based studies on tendon surgery and nerve surgery, including nerve transfers

HIP

- Studies on the results of hip resurfacing arthroplasty including the results of ceramic-on-ceramic resurfacing.
- Cadaveric studies of cement penetration into the femoral head with resurfacing arthroplasty.
- Studies of the accuracy of navigation technologies in the alignment of hip replacements.
- Use of augmented reality for placement of guidewires in hip resurfacing arthroplasty.

KNEE

- Cognitive behavioural therapy in managing dissatisfaction following total knee replacement.
- Assessment of outcomes and readiness for return to sport after anterior cruciate ligament reconstruction.
- Study of multi-alignment in knee injuries
- Case controlled studies of bilateral vs unilateral total knee arthroplasty
- Knee biomechanics of patients after total knee replacement
- Predominantly prospective clinical trials in knee and elbow, retrospective, case series, radiological review, cadaveric and biomechanical. 90% independent investigator-initiated studies and 2 industry associated studies.
- Clinical trials comparing unicompartmental knee replacement and osteotomy, measurement of satisfaction following total knee replacement, studies on knee biomechanics and techniques for revision knee replacement.
- Stability of total knee replacements.

FOOT AND ANKLE

- Studies on the management of trauma of the foot and ankle and lower limb, ankle arthroscopy and ankle replacement.

TRAUMA

- Clinical studies of tibial fracture management, and results of tibial nail use in tibial fracture.
- Hip fracture registry measuring the management of patients with these injuries.
- Establishment of an orthopaedic trauma registry database, recording all trauma cases prospectively.

COVID-19

- Studies of impact of COVID19 on orthopaedic trauma practise.

BASIC SCIENCE

- Biomechanical studies of kangaroo tendon properties for use as a xenograft for reconstruction of human ligaments.

ARTIFICIAL INTELLIGENCE

- Developing Artificial Intelligence Algorithm for surgical planning of total knee replacement



PUBLICATIONS

2020

Bui et al. **2020** "Collocated burn and fracture injuries in major trauma: a 10 year experience." **Annals of the Royal College of Surgeons of England** 102: 256-262 PMID:32081026 Surgical staff: **Brahman Sivakumar, Andrew Ellis**

Chahla et al. **2020** "The posteromedial corner of the knee: an international expert consensus statement on diagnosis, classification, treatment, and rehabilitation." **Knee Surgery, Sports Traumatology, Arthroscopy** *In press* doi: 10.1007/s00167-020-06336-3 PMID: 33104867 Surgical Staff: **David Parker**

Chisari et al. **2020** "Prevention of Infection and Disruption of the Pathogen Transfer Chain in Elective Surgery." **The Journal of Arthroplasty** *In press*: DOI: 10.1016/j.arth.2020.04.049 PMID:32389410 Surgical staff: **Bill Walter**

Dhaliwal et al. **2020** "Results of Arthroscopic Talar Osteochondral Lesions Treatment with BST-CarGel." **The Journal of Foot and Ankle** *In press*: DOI: 10.1053/j.jfas.2020.03.006 PMID:32307286 Surgical staff: **Andrew Wines**

Eckhard et al. **2020** "The ceiling effects of patient reported outcome measures for total knee arthroplasty." **Orthopaedics & Traumatology, Surgery & Research** 11 102758 PMID: 33316442 Surgical Staff: **Bill Walter**

Eckhard et al. **2020** "The KOOS-12 shortform shows no ceiling effect, good responsiveness and construct validity compared to standard outcome measures after total knee arthroplasty." **Knee Surgery, Sports Traumatology, Arthroscopy** *In press* doi: 10.1007/s00167-020-05904-x PMID: 32300847 Surgical Staff: **Bill Walter**

Hohmann et al. **2020** "Degenerative Meniscus Lesions: An Expert Consensus Statement Using the Modified Delphi Technique." **Arthroscopy** 36: 501-512 PMID:31901384 Surgical staff: **David Parker**

Jones et al. **2020** "Stability and Implant Design Affect Patient Reported Outcomes After Total Knee Arthroplasty." **Journal of Arthroplasty** 35: 747-751 PMID:30648493 Surgical staff: **Bill Walter**

Klasan et al. **2020** "Anterior knee translation measurements after ACL reconstruction are influenced by the type of laximeter used." **Knee Surgery, Sports Traumatology, Arthroscopy** *In press*: DOI: 10.1007/s00167-020-05950-5 PMID:32240345 Surgical staff: **David Parker**

Klasan et al. **2020** "Conventional instruments are more accurate for measuring the depth of the tibial cut than computer-assisted surgery in total knee arthroplasty: a prospective study." **Archives of Orthopaedic and Trauma Surgery** 140: 801-806 PMID:32146591 Surgical staff: **Myles Coolican**

Klasan et al. **2020** "Should Sequential Bilateral Total Knee Arthroplasty Be Limited to Patients Younger than 80? A Two-Arm Propensity Matched Study." **The Journal of Knee Surgery** *In press*: doi: 10.1055/s-0040-1712100 PMID:32450604 Surgical staff: **Myles Coolican, David Parker**

Klasan et al. **2020** "Correlation of tibial component size and rotation with outcomes after total knee arthroplasty." **Archives of Orthopaedic and Trauma Surgery** 140 1819-1824 PMID: 32748043 Surgical Staff: **Brendan Miles, David Parker**

Klasan et al. **2020** "Patients with lateral compartment knee osteoarthritis during arthroscopy are at highest risk of subsequent knee arthroplasty." **The Knee** 27 1476-1483 PMID: 33010764 Surgical Staff: **Myles Coolican**

Klasan et al. **2020** "Tegner level is predictive for successful return to sport 2 years after anterior cruciate ligament reconstruction." **Knee Surgery, Sports Traumatology, Arthroscopy** *In press* doi: 10.1007/s00167-020-06335-4 PMID: 33118063 Surgical Staff: **David Parker**

Koong et al. **2020** "Management of lower limb fractures in patients with spinal cord injuries." **ANZ journal of Surgery** *In press*: DOI: 10.1111/ans.15924 PMID:32356588 Surgical staff: **Michael Symes, Brahman Sivakumar, Andrew Ellis**

Leie et al. **2020** "Large osteophyte removal from the posterior femoral condyle significantly improves extension at the time of surgery in a total knee arthroplasty." **Journal of Orthopaedics** 19: 76-83 PMID:32021042 Surgical staff: **Myles Coolican**

Leie et al. **2020** "Decreasing Posterior Femoral Condyle Offset Improves Intraoperative Correction of Flexion Contracture in Total Knee Arthroplasty." *The Journal of Knee Surgery* *In press* doi: 10.1055/s-0040-1716415 PMID: 32927494 Surgical Staff: **Myles Coolican**

Oshima et al. **2020** "The space available for the anterior cruciate ligament in the intercondylar notch is less in patients with ACL injury." **Knee Surgery, Sports Traumatology, Arthroscopy** *In press*: doi: 10.1007/s00167-020-05921-w. PMID:32157364 Surgical staff: **David Parker**

Parker et al. **2020** "In Osteoarthritis of the Knee, Physical Therapy Reduced Pain and Functional Disability Compared with Glucocorticoid Injection at 1 Year." **The Journal of Bone and Joint Surgery. American** 102 2010 PMID: 33208645 Surgical Staff: **David Parker**

Probert et al. **2020** "Impact of COVID-19-related social restrictions on orthopaedic trauma in a level 1 trauma centre in Sydney: the first wave." **ANZ Journal of Surgery** *In press* doi: 10.1111/ans.16375 PMID: 33047480 Surgical Staff: **Brahman Sivakumar, Michael Symes, Andrew Ellis**

Putnis et al. **2020** "The outcome of biphasic calcium phosphate bone substitute in a medial opening wedge high tibial osteotomy." **Journal of Materials Science. Materials in Medicine** 31: 53 PMID:32468401 Surgical staff: **Myles Coolican**

Putnis et al. **2020** "Adjustable suspension versus hybrid fixation in hamstring autograft anterior cruciate ligament reconstruction." **The Knee** 28 1-8 PMID: 33278738 Surgical Staff: **Myles Coolican, David Parker**

Shatrov et al. **2020** "Computer and robotic - assisted total knee arthroplasty: a review of outcomes." **Journal of Experimental Orthopaedics** 770 PMID: 32974864 Surgical Staff: **David Parker**

Taha et al. **2020** "A Biomechanical Comparison of Different Suture Materials Used for Arthroscopic Shoulder Procedures." **Arthroscopy** 36: 708-713 PMID:31727418 Surgical staff: **Benjamin Cass**

Taha et al. **2020** "Accuracy of arthroscopic fluid pump systems in shoulder surgery: a comparison of 3 different pump systems." **Journal of Shoulder and Elbow Surgery** *In press* Surgical staff: **Benjamin Cass**

2019

Audige et al. **2019** "Core set of unfavourable events of shoulder arthroplasty: an international Delphi consensus process." **Journal of Shoulder and Elbow Surgery** 28: 2061-2071 PMID:31542325 Surgical staff: **Benjamin Cass**

Beach et al. **2019** "The effect of knee prosthesis design on tibiofemoral biomechanics during extension tasks following total knee arthroplasty." **The Knee** 26: 1010-1019 PMID:31402095 Surgical staff: **David Parker**

Dearden et al. **2019** "Clinical and Radiological Outcomes of Forefoot Offloading Versus Rigid Flat Shoes in Patients Undergoing Surgery of the First Ray." **Foot & ankle international** 40: 1189-1194 PMID:31303022 Surgical staff: **Andrew Wines**

Ellis A **2019** "Forensic psychiatry and mental health in Australia: an overview." **CNS Spectrums** 25: 119-121 PMID:31587677 Surgical staff: **Andrew Ellis**

Hayasaka et al. **2019** "Coronal tibial alignment is linked to femoral rotational asymmetry: Implications for total knee arthroplasty surgery" **Knee** 26: 435-443 PMID:30745220 Surgical staff: **Bill Walter**

Jones et al. **2019** "Sagittal stability and implant design affect patient reported outcomes following total knee arthroplasty" **Journal of Arthroplasty** 35: 747-751 PMID:31735490 Surgical staff: **Bill Walter**

Katchky et al. **2019** "Medial ball and socket total knee arthroplasty: five-year clinical results." **The Bone and Joint Journal** 101B (1 Supple A): 59-65 PMID:30648493 Surgical staff: **Bill Walter**

Klasan et al. **2019** "Advanced Age Is Not a Barrier to Total Knee Arthroplasty: A Detailed Analysis of Outcomes and Complications in an Elderly Cohort Compared With Average Age Total Knee Arthroplasty Patients." **The Journal of Arthroplasty** 34: 1938-1945 PMID:31155457 Surgical staff: **Myles Coolican, David Parker**

Klasan et al. **2019** "Healthy knee KT1000 measurements of anterior tibial translation have significant variation." **Knee Surgery, Sports Traumatology, Arthroscopy** *In press*: DOI: 10.1007/s00167-019-05768-w PMID:31676998 Surgical staff: **David Parker**

Klasan et al. **2019** "Response to the Letter to the Editor on "Advanced Age Is Not a Barrier to Total Knee Arthroplasty: A Detailed Analysis of Outcomes and Complications in an Elderly Cohort Compared With Average Age Total Knee Arthroplasty Patients." **The Journal of Arthroplasty** 34: 3135-3136 PMID:31564527 Surgical staff: **Myles Coolican, David Parker**

Lewis et al. **2019** "What Is the Risk of Repeat Revision When Patellofemoral Replacement Is Revised to TKA? An Analysis of 482 Cases From a Large National Arthroplasty Registry." **Clinical Orthopaedics and Related Research** 477: 1402-1410 PMID:31136442 Surgical staff: **David Parker**

Neri et al. **2019** "Clinical and Radiological Predictors of Functional Outcome After Isolated Medial Patellofemoral Ligament Reconstruction at Midterm Follow-up." **The American Journal of Sports Medicine** 47: 1338-1345 PMID:30943374 Surgical staff: **David Parker**

Neri et al. **2019** "Determining the change in length of the anterolateral ligament during knee motion: A three-dimensional optoelectronic analysis." **Clinical Biomechanics (Bristol, Avon)** 62: 86-92 PMID:30710797 Surgical staff: **David Parker**

Oshima et al. **2019** "Graft Size and Orientation Within the Femoral Notch Affect Graft Healing at 1 Year After Anterior Cruciate Ligament Reconstruction." **The American Journal of Sports Medicine** 48: 99-108 PMID:31730373 Surgical staff: **David Parker**

Parker et al. **2019** "A Cautionary Note for Advocates of "Constitutional" or "Kinematic"; Alignment: Commentary on an article by Koen T. van Hamersveld, MD, et al.: "The Effect of Coronal Alignment on Tibial Component Migration Following Total Knee Arthroplasty. A Cohort Study with Long-Term Radiostereometric Analysis Results." **The Journal of Bone and Joint Surgery: American volume** 101: e67 PMID:31274732 Surgical staff: **David Parker**

Putnis et al. **2019** "ACL hamstring grafts fixed using adjustable cortical suspension in both the femur and tibia demonstrate healing and integration on MRI at one year." **Knee Surgery, Sports Traumatology, Arthroscopy** 28: 906-914 PMID:31209542 Surgical staff: **David Parker**

Putnis et al. **2019** "One-Stage Sequential Bilateral Total Knee Arthroplasty: An Effective Treatment for Advanced Bilateral Knee Osteoarthritis Providing High Patient Satisfaction." **The Journal of Arthroplasty** 35: 401-406 PMID:31635904 Surgical staff: **David Parker, Myles Coolican**

Sivakumar et al. **2019** "Internal degloving injury of the foot." **ANZ Journal of Surgery** 90: 926-927 PMID:31667950 Surgical staff: **Brahman Sivakumar, Michael Symes**

Twiggs et al. **2019** "Clinical and Statistical Validation of a Probabilistic Prediction Tool of Total Knee Arthroplasty Outcome." **The Journal of Arthroplasty** 34: 2624-2631 PMID:31262622 Surgical staff: **David Parker, Brendan Miles**

Xu et al. **2019** "The Association Between Anxiety, Depression, and Locus of Control With Patient Outcomes Following Total Knee Arthroplasty." **The Journal of Arthroplasty** 35: 720-724 PMID:31708293 Surgical staff: **David Parker**

Yeo et al. **2019** "Factors Predicting Failure Rates and Patient-Reported Outcome Measures After Arthroscopic Meniscal Repair." **Arthroscopy** 35: 3146-3164.e2 PMID:31699269 Surgical staff: **David Parker**

2018

Bokhari et al. **2018** "Morbidity and mortality in cervical spine injuries in the elderly." **ANZ journal of surgery** 89: 412-417 PMID:30294850 Surgical staff: **Brahman Sivakumar, Randolph Gray, Nathan Hartin**

Chahla et al. **2018** "Posterolateral corner of the knee: an expert consensus statement on diagnosis, classification, treatment, and rehabilitation." **Knee Surgery, Sports Traumatology, Arthroscopy** 27: 2520-2529 PMID:30478468 Surgical staff: **David Parker**

Cunningham et al. **2018** "Comparative analysis of 2 glenoid version measurement methods in variable axial slices on 3-dimensionally reconstructed computed tomography scans." **Journal of Shoulder and Elbow Surgery** 27: 1809-1815 PMID:29778592 Surgical staff: **Benjamin Cass**

Cunningham et al. **2018** "The greater tuberosity angle: a new predictor for rotator cuff tear." **Journal of Shoulder and Elbow Surgery** 27: 1415-1421 PMID:29703680 Surgical staff: **Benjamin Cass**

Goldhofer et al. **2018** "Increase in Benign Squeaking Rate at Five-Year Follow-Up: Results of a Large Diameter Ceramic-on-Ceramic Bearing in Total Hip Arthroplasty" **Journal of Arthroplasty** 33: 1210-1214 PMID:29246719 Surgical staff: **Bill Walter**

Grasso et al. **2018** "Validation of an MRI Protocol for Routine Quantitative Assessment of Tunnel Position in Anterior Cruciate Ligament Reconstruction." **The American Journal of Sports Medicine** 46: 1624-1631 PMID:29589954 Surgical staff: **David Parker**

Hodges et al. **2018** "Prevalence and determinants of physical activity and sedentary behaviour before and up to 12 months after total knee replacement: a longitudinal cohort study." **Clinical Rehabilitation** 32: 1271-1283 PMID:29690780 Surgical staff: **David Parker**

McKenna et al. **2018** "Limited femorotomy – Removing a well fixed cementless stem" **Seminars in Arthroplasty** 29: 188-190 PMID: Surgical staff: **Bill Walter**

Neri et al. **2018** "Anterolateral Ligament of the Knee: What we Know About its Anatomy, Histology, Biomechanical Properties and Function." **Surgical Technology International** 33: 312-318 PMID:29985517 Surgical staff: **David Parker**

Neri et al. **2018** "Medial patellofemoral ligament reconstruction with or without tibial tubercle transfer is an effective treatment for patellofemoral instability." **Knee Surgery, Sports Traumatology, Arthroscopy** 27: 805-813 PMID:30167754 Surgical staff: **David Parker**

Sivakumar et al. **2018** "Indirect reduction screws: a technique to aid reduction in intramedullary nailing." **Annals of the Royal College of Surgeons of England** 101: 226-227 PMID:30286629 Surgical staff: **Brahman Sivakumar, Stephen Ruff**

Wong et al. **2018** "Outcomes of Primary Total Knee Arthroplasty in Patients With Parkinson's Disease." **The Journal of Arthroplasty** 33: 1745-1748 PMID:29576489 Surgical staff: **David Parker**

Wong et al. **2018** "Simultaneous, same-anaesthetic bilateral total knee arthroplasty has low mortality and complication rates." **Knee Surgery, Sports Traumatology, Arthroscopy** 26: 3395-3402 PMID:29574549 Surgical staff: **David Parker**

OTOLARYNGOLOGY HEAD AND NECK SURGERY

Head of Department: Martin Forer



RESEARCH SUPERVISION (2018-2020)

Leo Pang

- SMP MD research x3



DEPARTMENTAL RESEARCH RESOURCES

CLINICAL DATABASES TO SUPPORT OUTCOMES RESEARCH

- Paediatric and General ENT Surgery Database

CURRENT NSLHD HUMAN RESEARCH ETHICS APPLICATION (HREA) APPROVALS

- Endoscopic Management of Middle Ear Paraganglioma: An Australian Series. N. Patel, Cohort study
- Endoscopic Management of Advanced Congenital Cholesteatoma. N. Patel, Cohort study
- Improvement in Endoscopic Ear Surgery Skills with Simulator Practice. N. Jufas, Cohort study

LINKS TO TRANSLATIONAL RESEARCH PARTNERS OR UNIVERSITY DEPARTMENTS

- University of Sydney, Department of Otolaryngology Head and Neck



CURRENT RESEARCH ACTIVITY

- Endoscopic Management of ear lesions
- Endolymphatic Sac Tumour Removal
- Assessment of ENT Instruction videos.
- Environmental exposures and otitis media among Australian children
- Improvement in Endoscopic Ear Surgery Skills with Simulator Practice
- Endoscopic Anatomy of the Eustachian Tube and the Carotid Artery
- Assessment of Outcome in Idiopathic Subglottic Stenosis (Multicentre study)
- The short and long-term swallowing results of surgery for pharyngeal pouch – questionnaire based study
- Environmental exposures and otitis media among Australian children
- Projects on oral cavity squamous cell carcinoma
- Quality of life after treatment for laryngeal SC
- Minor salivary gland malignancies
- Regional recurrence of Head and Neck mucosal SCC



PUBLICATIONS

2020

Ma et al. 2020 "Endoscope-assisted Partial Cochlectomy for Intracochlear Schwannoma With Simultaneous Cochlear Implantation: A Case Report." **Otology & Neurotology** 41: 334-338 PMID:31923084 Surgical staff: **Nirmal Patel**

MacKay et al. 2020 "Effect of Multilevel Upper Airway Surgery vs Medical Management on the Apnea-Hypopnea Index and Patient-Reported Daytime Sleepiness Among Patients With Moderate or Severe Obstructive Sleep Apnea: The SAMS Randomized Clinical Trial." **JAMA** 324 1168-1179 PMID: 32886102 Surgical Staff: **Nicholas Stow**

Rubini et al. 2020 "Transcanal infrapromontorial approach for internal auditory canal surgery and cochlear implantation." **European Archives of Oto-Rhino-Laryngology** 277: 1053-1060 PMID:32025787 Surgical staff: **Nirmal Patel**

Rubini et al. 2020 "Transcanal infrapromontorial approach for internal auditory canal surgery and cochlear implantation." **Eur Arch Otorhinolaryngol.** 277(4):1053-1060 PMID: 32025787 Surgical staff: **Nirmal Patel**

Ryan et al. 2020 "Endoscopic Management of Pediatric Cholesteatoma." **Journal of Otology** 15: 17-26 PMID:32110236 Surgical staff: **Nirmal Patel**

Ryan et al. 2020 "Getting started in endoscopic ear surgery." **Journal of Otology** 15: pp6-16 PMID:32110235 Surgical staff: **Nirmal Patel**

Saxby et al. 2020 "Novel Radiologic Approaches for Cholesteatoma Detection: Implications for Endoscopic Ear Surgery." **Otolaryngologic Clinics of North America** 54 89-109 PMID: 33153729 Surgical Staff: **Nicholas Jufas, Justin Kong, Nirmal Patel**

Simon et al. 2020 "IVORY Guidelines (Instructional Videos in Otorhinolaryngology by YO-IFOS): A Consensus on Surgical Videos in Ear, Nose, and Throat." **The Laryngoscope** In press doi: 10.1002/lary.29020 PMID: 33270236 Surgical Staff: **Nirmal Patel**

Vaughan et al. 2020 "Endoscopic Stapedectomy: Collective Experience From a Large Australian Center. **Otol Neurotol.** 41(9):1198-1201 PMID: 32925837 Surgical staff: **Nicholas Jufas, Justin Kong, Nirmal Patel**

2019

Bazzi et al. 2019 "Diffusion-weighted magnetic resonance imaging in the detection of residual and recurrent cholesteatoma in children: A systematic review and meta-analysis." **International Journal of Pediatric Otorhinolaryngology** 118: 90-96 PMID:30599286 Surgical staff: **Nicholas Jufas, Nirmal Patel**

Cavada et al. 2019 "Isolated Traumatic Fracture of the Malleus Handle Causing Hearing Fluctuation." **Otology & Neurotology** 40: e244-e247 PMID:30741902 Surgical staff: **Nirmal Patel**

Gelbard et al. 2019 "Comparative Treatment Outcomes for Patients With Idiopathic Subglottic Stenosis." **JAMA Otolaryngology - Head & Neck Surgery** 146: pp1-10 PMID:31670805 Surgical staff: **David Veivers**

Rubini et al. 2019 "The Endoscopic Relationship of the Stapedius Muscle to the Facial Nerve: Implications for Retrotympanic Surgery." **Otology & Neurotology** 41: e64-e69 PMID:31834184 Surgical staff: **Nicholas Jufas, Jonathon Kong, Nirmal Patel**

van Gysen et al. 2019 "Validation of the 8th Edition UICC/AJCC TNM Staging System for HPV Associated Oropharyngeal Cancer Patients Managed With Contemporary Chemo-Radiotherapy" **BMC Cancer** 19: 674 PMID:31288767 Surgical staff: **David Veivers, Andrew Wignall, Leo Pang**

Vaughan et al. 2019 "The "Chopstick Drilling Technique": A novel solution to drilling bone in endoscopic ear surgery." **Clinical Otolaryngology** 44: 1231-1233 PMID:31536669 Surgical staff: **Nicholas Jufas, Nirmal Patel, Justin Kong**

2018

Jufas et al. 2018 "The protympanum, protiniculum and subtensor recess: an endoscopic morphological anatomy study." **The Journal of Laryngology and Otology** 132: 489-492 PMID:29888690 Surgical staff: **Nicholas Jufas, Nirmal Patel**

Kumar KL et al. 2018 "Expanding the Spectrum of PEX16 Mutations and Novel Insights Into Disease Mechanisms" **Molecular Genetics and Metabolism Reports** 16: 46-51 PMID:30094183 Surgical staff: **David Veivers**

Ryan et al. 2018 "Prevention of Otic Barotrauma in Aviation: A Systematic Review." **Otology & Neurotology** 39: 539-549 PMID:29595579 Surgical staff: **Nirmal Patel, Nicholas Jufas**

Ryan et al. 2018 "Response to comment on: 'Prevention of barotrauma in aviation: a systematic review'" **Otology & Neurotology** 39: 1339 PMID:30289840 Surgical staff: **Nirmal Patel, Nicholas Jufas, Nirmal Patel**

Sardiwalla et al. **2018** "Long term follow-up demonstrating stability and patient satisfaction of minimally invasive punch technique for percutaneous bone anchored hearing devices." **JAMA Otolaryngology - Head & Neck Surgery** 47: 71
PMID:30458887 Surgical staff: **Nicholas Jufas**

Wuesthoff et al. **2018** "IgG4 disease of the ear: Report and review." **SAGE Open Medical Case Reports** 6:
2050313X18791428 PMID:30116527 Surgical staff: **Nirmal Patel**

UPPER GASTROINTESTINAL SURGERY

Head of Department: Garrett Smith



RESEARCH SUPERVISION (2018-2020)

Garett Smith

- SMP MD research x1
- Master of Surgery x1

Thomas Hugh

- University of Sydney Supervision of Higher degree research course completed
- PhD x4
- Master of Philosophy (Medicine) x 1
- Master of Surgery x1
- Master of Biostatistics x1
- SMP MD research x2

Jaswinder Samra

- SMP MD x3 (co-supervisor)
- Master of Philosophy x1 (co-supervisor)
- PhD x1 (co-supervisor)

Anubhav Mittal

- SMP MD x3 (supervisor)
- Honours x1 (supervisor)
- Master of Philosophy x2 (one supervisor and co-supervisor)
- PhD x1 (co-supervisor)



DEPARTMENTAL RESEARCH RESOURCES

CLINICAL DATABASES TO SUPPORT OUTCOMES RESEARCH

- Prospective Upper GI total practice clinical database (2011-2020)
- Oesophago-Gastric cancer database (2001–2020)
- Bariatric clinical database (2000–2020)
- Paraoesophageal hernia and Fundoplication database (2001-2020)
- Prospective liver resection database (1998–2020)
- Prospective laparoscopic cholecystectomy database (1998–2020)
- Prospective pancreatic resection database (2011-2020)

CURRENT NSLHD HUMAN RESEARCH ETHICS APPLICATION (HREA) APPROVALS

- 2019/ETH12206: Improving care in patients with liver and biliary tumours –tissue and data banking and low risk observational studies in patients with hepato-biliary tumours
- 2019/ETH08462: Microenvironmental biomarkers in primary and metastatic colorectal cancer
- 2019/ETH00061: Evaluating long-term patient outcomes and evidence in hernia repair
- 2019/ETH10589: Survival after resection of gallbladder carcinoma— external validation of a prognostic nomogram based on clinical and histopathological characteristics
- 2018 RESP/16/76: Improving care in patients with pancreatic tumours –tissue and data banking, and low/negligible risk observational studies in patients with pancreatic tumours.

LINKS TO TRANSLATIONAL RESEARCH PARTNERS OR UNIVERSITY DEPARTMENTS

- University of Sydney, Discipline of Surgery
- The Bowel Cancer and Biomarker Laboratory, Kolling Institute
- CanSur foundation, Kolling Institute
- All upper GI tumours resected at RNSH and NSPH including sera (2001-2020) – stored in the Kolling Institute tumour bio-bank



CURRENT RESEARCH ACTIVITY

OESOPHAGOGASTRIC CANCER

- Outcomes following benign foregut surgery including quality of life assessment
- Outcomes following oesophago-gastric cancer surgery
- Characterising the laparoscopic bypass learning curve in an Australian context (cohort study)
- The impact of age on the management and outcome of patients undergoing resection for oesophageal and gastric cancer (cohort study)
- Cohort study on whether neoadjuvant chemoradiotherapy increases post-operative complications following oesophagectomy.
- Incidence and hospital health care costs of cervical anastomotic leaks in oesophagectomy patients (cohort study)
- Long term quality of life and nutritional outcomes study following oesophagectomy
- Cohort study into whether surgical approach (Ivor Lewis vs. Three stage) impact post-operative complications following an oesophagectomy

HEPATOBIILIARY SURGERY AND HERNIA

- A retrospective analysis of long term outcomes using biological agents (bevacizumab and cetuximab) in patients who have undergone resection of colorectal liver metastases.
- Patterns of tumour recurrence after curative liver resection for colorectal metastases
- Long term outcomes following radical resection of gallbladder carcinoma
- Regional treatment options for neuroendocrine liver metastases
- Prognostic significance of the stromal micro-environment in colorectal in primary and secondary colorectal cancer
- Economic cost of treatment of colorectal liver metastases
- Variation in clinical practice related to hernia surgery
- Predictors of bile leak after liver resection: a single institution analysis of 20 years of consecutive hepatectomies (cohort study)
- Gallbladder carcinoma – patterns in presentation, treatment, survival and disease recurrence over a 20-year period in a large tertiary Australian hospital
- The prognostic significance of tumour FX3P expression in patients with primary and secondary colorectal cancers (cohort study)

PANCREATIC SURGERY

- Review of pancreatitis related to percutaneous transhepatic cholangiography at the Northern Campus
- Benchmarking in pancreatic surgery to compare the Northern Campus outcomes against published studies
- Management of acute cholecystitis in patients with biliary stenting during neoadjuvant therapy in patients with pancreatic adenocarcinoma (cohort study)
- Serum biomarkers in pancreatic cancer (several cohort studies)
- Gene expression analysis of pancreatic ductal adenocarcinomas (PDAC) to identify surrogate markers for molecular phenotypes of PDAC
- Urinary metabolomic biomarkers for PDAC.
- Stage IV PDAC resections – study of prognosis and survival
- Drain Fluid analysis to identify biomarkers for the development of pancreatic fistula in PDAC patients

- The role and indication for staging laparoscopy in pancreatic cancers
- Association between NAC and portal vein resections in PDAC
- Proteomic analysis of surgically resected PDAC tumours to compare response to Neoadjuvant Chemotherapy
- Plasma proteomic analysis to identify prognostic and diagnostic biomarkers for PDAC



PUBLICATIONS

2020

Babidge et al. **2020** "Surgery triage during the COVID-19 pandemic." **ANZ Journal of Surgery** 90 1558-1565 PMID: 32687241 Surgical Staff: **Thomas Hugh**

Barbour et al. **2020** "The AGITG GAP Study: A Phase II Study of Perioperative Gemcitabine and Nab-Paclitaxel for Resectable Pancreas Cancer." **Annals of Surgical Oncology** *In press*: doi: 10.1245/s10434-020-08205-2. PMID:31997125 Surgical staff: **Jaswinder Samra, Jaswinder Samra**

Brunton et al. **2020** "HNF4A and GATA6 Loss Reveals Therapeutically Actionable Subtypes in Pancreatic Cancer." **Cell Reports** 31: 107625 PMID:32402285 Surgical staff: **Jaswinder Samra**

Chou et al. **2020** "A Critical Assessment of Postneoadjuvant Therapy Pancreatic Cancer Regression Grading Schemes With a Proposal for a Novel Approach." **The American Journal of Surgical Pathology** *In press* doi: 10.1097/PAS.0000000000001601 PMID: 33074853 Surgical Staff: **Anubhav Mittal, Jaswinder Samra**

Ding et al. **2020** "Prediction of tumor recurrence by a-fetoprotein model after curative resection for hepatocellular carcinoma." **European Journal of Surgical Oncology** *In press* doi: 10.1016/j.ejso.2020.10.017 PMID: 33082065 Surgical Staff: **Thomas Hugh**

Dreyer et al. **2020** "Precision Oncology in Surgery: Patient Selection for Operable Pancreatic Cancer." **Annals of Surgery** 272 366-376 PMID: 32675551 Surgical Staff: **Jaswinder Samra**

Fraser et al. **2020** "Routine NTRK immunohistochemistry is not a useful screening strategy in unselected pancreatic carcinomas." **Pathology** 52: 398-400 PMID:32113672 Surgical staff: **Anubhav Mittal, Jaswinder Samra**

Gillespie et al. **2020** "Intra-gastric laparoscopy for oesophageal eroded mesh removal: An approach to avoid resection." **Journal of Minimal Access Surgery** 16 426-428 PMID: 32978356 Surgical Staff: **Steven Leibman, Garrett Smith**

Gillson et al. **2020** Small Molecule KRAS Inhibitors: "The Future for Targeted Pancreatic Cancer Therapy?" **Cancers (Basel)** 12(5):1341 PMID: 32456277 Surgical staff: **Jaswinder Samra, Anubhav Mittal**

Hadden et al. **2020** "Mechanically stressed cancer microenvironment: Role in pancreatic cancer progression." **Biochimica et Biophysica Acta. Reviews on Cancer** 1874 188418 PMID: 32827581 Surgical Staff: **Anubhav Mittal, Jaswinder Samra**

Haines et al. **2020** "Pancreatoduodenectomy With Arterial Resection for Locally Advanced Pancreatic Cancer of the Head: A Systematic Review." **Pancreas** 49: 621-628 PMID:32433398 Surgical staff: **Anubhav Mittal, Jaswinder Samra**

Hugh **2020** "Getting a grip on the hernia literature." **ANZ Journal of Surgery** 90: 396-397 PMID:32147916 Surgical staff: **Thomas Hugh**

ICGC/TCGA Consortium **2020** "Pan-Cancer Analysis of Whole Genomes Consortium. Pan-cancer analysis of whole genomes. Version 2" **Nature** 578: 82-93 PMID:2025007 Surgical staff: **Jaswinder Samra**

Itchins et al. **2020** "Evaluation of Fluorodeoxyglucose Positron Emission Tomography Scanning in the Neoadjuvant Therapy Paradigm in Pancreatic Ductal Adenocarcinoma." **Pancreas** 49: 224-229 PMID:32011525 Surgical staff: **Anubhav Mittal, Jaswinder Samra**

Kokkinos et al. **2020** "Targeting the undruggable in pancreatic cancer using nano-based gene silencing drugs." **Biomaterials** 240: 119742 PMID:32088410 Surgical staff: **Jaswinder Samra, Anubhav Mittal**

Kotecha et al. **2020** "Formation of a splenic artery aneurysm within a pancreatic mucinous cystic neoplasm." **ANZ Journal of Surgery** *In press* doi: 10.1111/ans.16443 PMID: 33217145 Surgical Staff: **Anubhav Mittal, Jaswinder Samra**

Kovoor et al. **2020** "Screening and testing for COVID-19 before surgery." **ANZ Journal of Surgery** *In press* doi: 10.1111/ans.16260 PMID: 32770653 Surgical Staff: **Thomas Hugh**

Law et al. **2020** "Gastrointestinal: Recurrent colic and the percutaneous endoscopic gastrojejunostomy." **Journal of Gastroenterology and Hepatology** *In press* doi: 10.1111/jgh.15349 PMID: 33305402 Surgical Staff: **Jaswinder Samra**

Mehta et al. **2020** "Pancreatic resection in patients with synchronous extra-pancreatic malignancy: outcomes and complications." **ANZ Journal of Surgery** 90: 290-294 PMID:31943690 Surgical staff: **Jaswinder Samra, Anubhav Mittal**

Melstrom et al. 2020 "Management of disappearing colorectal liver metastases: an international survey." *HPB In press* doi: 10.1016/j.hpb.2020.10.005 PMID: 33144051 Surgical Staff: **Thomas Hugh**

Naam et al. 2020 "Management of patients with hepatocellular adenoma: a single-institution experience." *ANZ Journal of Surgery* 90: 786-790 PMID:31943651 Surgical staff: **Nazim Bhimani, Jaswinder Samra, Thomas Hugh**

Nguyen et al. 2020 "Acute cholecystitis or simple biliary colic after an emergency presentation: why it matters." *ANZ Journal of Surgery*. 90: 295-299. PMID: 31845500 Surgical staff: **Anubhav Mittal, Thomas Hugh, Garrett Smith, Maria Albania, Steven Leibman**

Noë et al. 2020 "Genomic characterization of malignant progression in neoplastic pancreatic cysts." *Nature Communications* 11 4085 PMID: 32796935 Surgical Staff: **Jaswinder Samra**

O'Neill et al. 2020 "Unsuspected choledocholithiasis found by routine intra-operative cholangiography during laparoscopic cholecystectomy". *ANZ Journal of Surgery In press* doi: 10.1111/ans.16016 PMID: 32536007 Surgical staff: **Nazim Bhimani, Thomas J Hugh**

O'Rourke et al. 2020 "Data independent acquisition of plasma biomarkers of response to neoadjuvant chemotherapy in pancreatic ductal adenocarcinoma." *Journal of Proteomics* 231 103998 PMID: 33027703 Surgical Staff: **Jaswinder Samra, Anubhav Mittal**

Prall et al. 2020 "RAF1 Rearrangements are common in pancreatic acinar cell carcinomas" *Mod Pathology In press*: doi: 10.1038/s41379-020-0545-9. PMID:32358589 Surgical staff: **Jaswinder Samra, Anubhav Mittal**

Quilantang et al. 2020 "Embedding a data culture in surgical practice – challenges and the need for a new approach" *ANZ Journal of Surgery. Accepted for publication.* Surgical staff: **Maria Quilantang, Thomas J Hugh**

Ruzzenente et al. 2020 "Minimally Invasive Versus Open Liver Resection for Hepatocellular Carcinoma in the Setting of Portal Vein Hypertension: Results of an International Multi-institutional Analysis." *Annals of Surgical Oncology In press*: doi: 10.1245/s10434-020-08444-3. PMID:32274662 Surgical staff: **Thomas Hugh**

Rykina-Tameeva et al. 2020 "Neoadjuvant therapy for pancreatic cancer changes the composition of the pancreatic parenchyma." *HPB In press*: S1365-182X(20)30089-7. PMID:32247587 Surgical staff: **Jaswinder Samra, Anubhav Mittal**

Sahni et al. 2020 "Tissue biomarker panel as a surrogate marker for squamous subtype of pancreatic cancer." *European Journal of Surgery In press*: doi: 10.1016/j.ejs.2020.02.001. PMID:32061458 Surgical staff: **Jaswinder Samra, Anubhav Mittal**

Sahni et al. 2020 "Identification of Novel Biomarkers in Pancreatic Tumor Tissue to Predict Response to Neoadjuvant Chemotherapy." *Frontiers in Oncology* 10: 237 PMID:32195182 Surgical staff: **Jaswinder Samra, Anubhav Mittal**

Sahni et al. 2020 "A unique urinary metabolomic signature for the detection of pancreatic ductal adenocarcinoma." *International Journal of Cancer* 148 1508-1518 PMID: 33128797 Surgical Staff: **Jaswinder Samra, Anubhav Mittal**

Sahni et al. 2020 "PSMD11, PTPRM and PTPRB as novel biomarkers of pancreatic cancer progression." *Biochimica et Biophysica Acta. General Subjects* 1864 129682 PMID: 32663515 Surgical Staff: **Jaswinder Samra, Anubhav Mittal**

Smith et al. 2020 "Pancreatic adenocarcinoma preferentially takes up and is suppressed by synthetic nanoparticles carrying apolipoprotein A-II and a lipid gemcitabine prodrug in mice." *Cancer Letters* 495 112-122 PMID: 32949679 Surgical Staff: **Thomas Hugh**

Tan et al. 2020 "Personal protective equipment and evidence-based advice for surgical departments during COVID-19." *ANZ Journal of Surgery* 90 1566-1572 PMID: 32671968 Surgical Staff: **Thomas Hugh**

Tivey et al 2020 "Safe surgery during the coronavirus disease 2019 crisis". *ANZ Journal of Surgery*. 2020 Sep;90 (9):1553-1557. <https://doi.org/10.1111/ans.16089>. Surgical staff: **Thomas J Hugh**

Tsilimigras et al. 2020 "Assessing Textbook Outcomes Following Liver Surgery for Primary Liver Cancer Over a 12-Year Time Period at Major Hepatobiliary Centers." *Annals of Surgical Oncology In press*: doi: 10.1245/s10434-020-08548-w. PMID:32388742 Surgical staff: **Thomas Hugh**

Tsilimigras et al. 2020 "Hospital variation in Textbook Outcomes following curative-intent resection of hepatocellular carcinoma: an international multi-institutional analysis." *HPB S1365-182X(19): 33221-6* PMID:31889626 Surgical staff: **Thomas Hugh**

Tsilimigras et al. 2020 "Recurrence Patterns and Outcomes after Resection of Hepatocellular Carcinoma within and beyond the Barcelona Clinic Liver Cancer Criteria." *Annals of Surgical Oncology In press*: doi: 10.1245/s10434-020-08452-3 PMID:32285278 Surgical staff: **Thomas Hugh**

Tsilimigras et al. 2020 "Hepatocellular carcinoma tumour burden score to stratify prognosis after resection." *The British Journal of Surgery In press*: doi: 10.1002/bjs.11464. PMID:32057105 Surgical staff: **Thomas Hugh**

Tsilimigras et al. 2020 "Impact of time-to-surgery on outcomes of patients undergoing curative-intent liver resection for BCLC-0, A and B hepatocellular carcinoma." *Journal of Surgical Oncology In press* doi: 10.1002/jso.26297 PMID: 33174627 Surgical Staff: **Thomas Hugh**

Tsilimigras et al. 2020 "Overall Tumor Burden Dictates Outcomes for Patients Undergoing Resection of Multinodular Hepatocellular Carcinoma Beyond the Milan Criteria." *Annals of Surgery* 272 574-581 PMID: 32932309 Surgical Staff: **Thomas Hugh**

Tsilimigras et al. **2020** "Recurrence beyond the Milan criteria after curative-intent resection of hepatocellular carcinoma: A novel tumor-burden based prediction model." **Journal of Surgical Oncology** 122 955-963 PMID: 32602143 Surgical Staff: **Thomas Hugh**

van Roessel et al. **2020** "International validation and update of the Amsterdam model for prediction of survival after pancreatoduodenectomy for pancreatic cancer." **European Journal of Surgical Oncology** : 46: 796-803 PMID:31924432 Surgical staff: **Jaswinder Samra, Anubhav Mittal**

Wei et al. **2020** "Early Versus Late Recurrence of Hepatocellular Carcinoma After Surgical Resection Based on Post-recurrence Survival: an International Multi-institutional Analysis." **Journal of Gastrointestinal Surgery** *In press*: doi: 10.1007/s11605-020-04553-2. PMID:32128681 Surgical staff: **Thomas Hugh**

Wei et al. **2020** "Long-term outcomes after curative resection of HCV-positive versus non-hepatitis related hepatocellular carcinoma: an international multi-institutional analysis." **HPB** S1365-182X(20): 30008-3. PMID:31987739 Surgical staff: **Thomas Hugh**

Wei et al. **2020** "Tumor Necrosis Impacts Prognosis of Patients Undergoing Curative-Intent Hepatocellular Carcinoma." **Annals of Surgical Oncology** 28 797-805 PMID: 33249525 Surgical Staff: **Thomas Hugh**

Wu et al. **2020** "Risk factors for development of diabetes mellitus (type 3c) after partial pancreatectomy: A systematic review." **Clin Endocrinol (Oxf)**. 92: 396-406 PMID:32017157 Surgical staff: **Jaswinder Samra, Anubhav Mittal**

2019

Ashrafizadeh et al. **2019** "Preoperative cardiac and respiratory investigations do not predict cardio-respiratory complications after pancreatectomy." **ANZ Journal of Surgery** 90: 97-102 PMID:31625268 Surgical staff: **Jaswinder Samra, Anubhav Mittal**

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Chou et al. **2019** "RET gene rearrangements occur in a subset of pancreatic acinar cell carcinomas." **Modern Pathology** : 33: 657-664 PMID:31558784 Surgical staff: **Anubhav Mittal, Jaswinder Samra**

Gill et al. **2019** "MiRNA-3653 is a Potential Tissue Biomarker for Increased Metastatic Risk in Pancreatic Neuroendocrine Tumours." **Endocrine Pathology** 30: 128-133 PMID:30767148 Surgical staff: **Jaswinder Samra, Anubhav Mittal**

Jones et al. **2019** "Reshaping the critical role of surgeons in oncology research." **Nature reviews. Clinical oncology** 16: 327-332 PMID:30617343 Surgical staff: **Thomas Hugh**

Nahm et al. **2019** "Pancreatic hamartoma: a sheep in wolf's clothing." **Pancreatic Hamartoma: A Sheep in Wolf's Clothing**. 89: E265-E267 PMID:29316168 Surgical staff: **Christopher Nahm, Anubhav Mittal, Jaswinder Samra**

Oar et al. **2019** "Australasian Gastrointestinal Trials Group (AGITG) and Trans-Tasman Radiation Oncology Group (TROG) Guidelines for Pancreatic Stereotactic Body Radiation Therapy (SBRT)." **Practical Radiation Oncology** 10: e136-e146 PMID:31761541 Surgical staff: **Jaswinder Samra**

Pulvirenti et al. **2019** "Multi-institutional Development and External Validation of a Nomogram to Predict Recurrence After Curative Resection of Pancreatic Neuroendocrine Tumors." **Annals of Surgery** *In press*: doi: 10.1097/SLA.0000000000003579. PMID:31567347 Surgical staff: **Jaswinder Samra**

Sahara et al. **2019** "Evaluation of the ACS NSQIP Surgical Risk Calculator in Elderly Patients Undergoing Hepatectomy for Hepatocellular Carcinoma." **Journal of Gastrointestinal Surgery** 24: 551-559 PMID:30937717 Surgical staff: **Thomas Hugh**

Schlichtemeier et al. **2019** "SELDI-TOF MS Analysis of Hepatocellular Carcinoma in an Australian Cohort." **The Journal of Surgical Research** 238: 127-136 PMID:30771682 Surgical staff: **Thomas Hugh**

Singh et al. **2019** "Management of post-pancreatectomy haemorrhage using resuscitative endovascular balloon occlusion of the aorta." **Langenbeck's Archives of Surgery** 404: 253-255 PMID:30758668 Surgical staff: **Shen Wong, Anubhav Mittal, Jaswinder Samra**

Swan et al. **2019** "Microbiology of pancreatoduodenectomy and recommendations for antimicrobial prophylaxis." **ANZ Journal of Surgery** 90: 283-289 PMID:31743952 Surgical staff: **Jaswinder Samra, Anubhav Mittal**

Tsilimigras et al. **2019** "Defining the chance of cure after resection for hepatocellular carcinoma within and beyond the Barcelona Clinic Liver Cancer guidelines: A multi-institutional analysis of 1,010 patients." **Surgery** 166: 967-974 PMID:31606196 Surgical staff: **Thomas Hugh**

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Tsilimigras et al. **2019** "Prognosis After Resection of Barcelona Clinic Liver Cancer (BCLC) Stage 0, A, and B Hepatocellular Carcinoma: A Comprehensive Assessment of the Current BCLC Classification." **Annals of Surgical Oncology** 26: 3693-3700 PMID:31267302 Surgical staff: **Thomas Hugh**

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2018

Bender et al. **2018** "Total 5-mm port approach: a feasible technique for both elective and emergency laparoscopic cholecystectomy." **ANZ Journal of Surgery** 88: E751-E755 PMID:29687556 Surgical staff: **Thomas Hugh**

Bettison et al. **2018** "Understanding the Pathophysiology of Psychological Distress and Pancreatic Cancer: A Systematic Review." **Pancreas** 47: 376-381 PMID:29521940 Surgical staff: **Anubhav Mittal, Jaswinder Samra, Anthony Gill**

Brown et al. **2018** "Using patient-derived xenograft models of colorectal liver metastases to predict chemosensitivity." **The Journal of Surgical Research** 227: 158-167 PMID:29804848 Surgical staff: **Jaswinder Samra, Thomas Hugh**

Chou et al. **2018** "ATRX loss is an independent predictor of poor survival in pancreatic neuroendocrine tumors." **Human Pathology** 82: 249-257 PMID:30081149 Surgical staff: **Anubhav Mittal, Jaswinder Samra**

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Chua et al. **2018** "Pancreatoduodenectomy in a public versus private teaching hospital is comparable with some minor variations." **ANZ Journal of Surgery** 88: E526-E531 PMID:28982221 Surgical staff: **Terence Chua, Anubhav Mittal, Thomas J Hugh, Jaswinder Samra,**

de Reuver et al. **2018** "Long-term outcomes and quality of life after surgical or conservative treatment of benign simple liver cysts" **Surgical Endoscopy** 32: 105-113 PMID:28639041 Surgical staff: **Maria Albania, Jaswinder Samra, Thomas Hugh**

Dreyer et al. **2018** "Precision Oncology in Surgery: Patient Selection for Operable Pancreatic Cancer." **Annals of Surgery In press**: doi: 10.1097/SLA.0000000000003143. PMID:30570546 Surgical staff: **Jaswinder Samra**

Free et al. **2018** "Gallbladder mucosal lesions associated with high biliary amylase irrespective of pancreaticobiliary maljunction." **ANZ Journal of Surgery** 88: E517-E521. PMID:28782883 Surgical staff **Thomas Hugh, Jaswinder Samra**

Gild et al. **2018** "Hypercalcemia in Glucagon Cell Hyperplasia and Neoplasia (Mahvash Syndrome): A New Association." **The Journal of Clinical Endocrinology and Metabolism** 103: 3119-3123 PMID:30032256 Surgical staff: **Jaswinder Samra**

Jin et al. **2018** "Response and outcome from fluid resuscitation in acute pancreatitis: a prospective cohort study." **HPB** 20: 1082-1091 PMID:30170979 Surgical staff: **Anubhav Mittal**

Lane et al. **2018** "Challenges in chemotherapy delivery: comparison of standard chemotherapy delivery to locoregional vascular mass fluid transfer." **Future Oncology (London, England)** 14: 647-663 PMID:29513086 Surgical staff: **Rodney Lane, Thomas Hugh**

Lane et al. **2018** "The integration of pharmacology and pathophysiology into locoregional chemotherapy delivery via mass fluid transfer." **Journal of Controlled Release** 292: 18-28 PMID:30347244 Surgical staff: **Rodney Lane, Thomas Hugh**

Maharaj et al. **2018** "Monitoring quality of care for patients with pancreatic cancer: a modified Delphi consensus." **HPB** 21: 444-455 PMID:30316625 Surgical staff: **Jaswinder Samra**

Nahm et al. **2018** "Acinar cell density at the pancreatic resection margin is associated with post-pancreatectomy pancreatitis and the development of postoperative pancreatic fistula." **HPB** 20: 432-440 PMID:29307511 Surgical staff: **Jaswinder Samra, Anubhav Mittal**

Nahm et al. **2018** "Biomarker panel predicts survival after resection in pancreatic ductal adenocarcinoma: A multi-institutional cohort study." **European journal of surgical oncology** 45: 218-224 PMID:30348604 Surgical staff: **Jaswinder Samra, Anubhav Mittal**

Nahm et al. **2018** "Density and enhancement of the pancreatic tail on computer tomography predicts acinar score and pancreatic fistula after pancreatoduodenectomy." **HPB** 21: 604-611 PMID:30377050 Surgical staff: **Jaswinder Samra, Anubhav Mittal**

Nahm et al. **2018** "Postoperative pancreatic fistula: a review of traditional and emerging concepts." **Clinical and Experimental Gastroenterology** 11: 105-118 PMID:29588609 Surgical staff: **Jaswinder Samra, Anubhav Mittal**

Parkin et al. **2018** "The Evolving Understanding of the Molecular and Therapeutic Landscape of Pancreatic Ductal Adenocarcinoma." **Diseases (Basel, Switzerland)** 6: 103 PMID:30428574 Surgical staff: **Jaswinder Samra**

Staerkle et al. **2018** "Management of recurrent bleeding after pancreatoduodenectomy." **ANZ Journal of Surgery** 88: E435-E439 PMID:28480620 Surgical staff: **Thomas Hugh, Jaswinder Samra**

Sultana et al. **2018** "Prospective evaluation of the International Study Group for Liver Surgery definition of post hepatectomy liver failure after liver resection: an international multicentre study." **HPB** 20: 462-469. PMID:29287736 Surgical staff: **Thomas Hugh**

Townend et al. **2018** "Histopathological tumour viability after neoadjuvant chemotherapy influences survival in resected pancreatic cancer: analysis of early outcome data." **ANZ Journal of Surgery** 88: E167-E172 PMID:28318082 Surgical staff: **Anubhav Mittal, Jaswinder Samra**

Wennmacker et al. **2018** "Gallbladder polyps: To treat or not to treat?" **Medicine Today** 19: 30-34 PMID: Surgical staff: **Thomas Hugh**

UROLOGICAL SURGERY

Head of Department: Justin Vass



DEPARTMENTAL RESEARCH RESOURCES

CURRENT NSLHD HUMAN RESEARCH ETHICS APPLICATION (HREA) APPROVALS

- Stent dwell time and urinary tract infections
- Consent for stents: video vs verbal – Nepean Hospital



CURRENT RESEARCH ACTIVITY

- Female reconstruction patient incision preference - *ethics application submitted*
- Frailty as a predictor of failed trial of void post TURP - *ethics application submitted*
- Recurrent Urinary Tract Infection guidelines - *ethics application submitted*
- Laser (Evolve) prostatectomy
- Preop predictors of laparoscopic pyeloplasty outcomes
- Female reconstruction patient incision preference
- Microdox for recurrent urinary tract infections in patients with spinal cord injuries AN/AC met with stats “random control non-comparative” 2:1, 2=77 (12% to 4%), AC confirmed industry support verbally, AN fwd AC
- Neuropathic sacral nerve modulation in patients with spinal cord injuries
- Indocid suppository at beginning better than end of ureteroscopy and laser
- Bulking agent PPI post sling procedure
- Penile sarcoma – a case review and literature review



PUBLICATIONS

2020

Amin et al. **2020** “Protocol for the PRIMARY clinical trial, a prospective, multicentre, cross-sectional study of the additive diagnostic value of gallium-68 prostate-specific membrane antigen positron-emission tomography/computed tomography to multiparametric magnetic resonance imaging in the diagnostic setting for men being investigated for prostate cancer.” **BJU International** 125: 515-524 PMID:31957122 Surgical staff: **Venu Chalasani, Krishan Rasiah**

Dubin et al. **2020** “Global survey evaluating drawbacks of social media usage for practising urologists.” **BJU International** *In press*: doi: 10.1111/bju.15046. PMID:32147930 Surgical staff: **Amanda Chung**

Dubin et al. **2020** “Global Survey of the Roles and Attitudes Toward Social Media Platforms Amongst Urology Trainees.” **Urology** 147 64-67 PMID: 32950594 Surgical Staff: **Amanda Chung**

Hanna et al. **2020** “Urethral caruncle with intestinal metaplasia: A case report and literature review.” **Urology Case Reports** 30: 101114 PMID:31956512 Surgical staff: **Michael Wines**

Hanna et al. **2020** “Association between ureteric stent dwell time and urinary tract infection.” **ANZ Journal of Surgery** *In press* doi: 10.1111/ans.16414 PMID: 33135843 Surgical Staff: **Venu Chalasani, Justin Vass, Krishan Rasiah, Michael Wines, Amanda Chung**

Hanna et al. **2020** “Double partial nephrectomy in allograft transplanted kidney.” **Urology Case Reports** 35 101517 PMID: 33318944 Surgical Staff: **Venu Chalasani, Matthew Winter**

Hanna et al. **2020** “Ectopic prostatic tissue in the perineum.” **BMJ Case Reports** 13 e239378 PMID: 33148562 Surgical Staff: **Amanda Chung, Venu Chalasani**

Kam et al. **2020** "Long Pulse-Width Setting Improves Holmium-YAG Laser Lithotripsy - Enhanced Fragmentation and Retropulsion Characteristics of Renal Calculi in a Novel In-Vivo Setting." **Surgical technology International** 37: 10;37:sti37/1294 PMID:32520387 Surgical staff: **Matthew Winter**

Makary et al. **2020** "Bladder infusion versus standard catheter removal for trial of void: a systematic review and meta-analysis." **World Journal of Urology** *In press* doi: 10.1007/s00345-020-03408-4 PMID: 32797262 Surgical Staff: **Matthew Winter**

Parkin et al. **2020** "Segmental testicular infarction, a rare complication of epididymo-orchitis." **Urology Case Reports** 32: 101246 PMID:32489887 Surgical staff: **Matthew Winter**

Roberts et al. **2020** "A prospective, matched comparison of ultra-low and standard-dose computed tomography for assessment of renal colic." **BJU International** 126 *Suppl 1* 27-32 PMID: 32573114 Surgical Staff: **Matthew Winter**

Van Puyvelde et al. **2020** "Making surgery safer in an increasingly digital world: the internet - friend or foe?" **World Journal of Urology** 38: 1391-1395 PMID:32270282 Surgical staff: **Amanda Chung**

Zhong et al. **2020** "A Systematic Review and Meta-Analysis of Pelvic Drain Insertion After Robot-Assisted Radical Prostatectomy." **Journal of Endourology** 34: 401-408 PMID:32037859 Surgical staff: **Matthew Winter**

2019

Al-Hakeem et al. **2019** "Substitution urethroplasty for the treatment of male urethral stricture: outcomes in an Australian center." **Lower Urinary Tract Symptoms** 11: 211-216 PMID:31064032 Surgical staff: **Amanda Chung**

Bertram et al. **2019** "Identification of HIV transmitting CD11c⁺ human epidermal dendritic cells." **Nature Communications** 10: 2759 PMID:31227717 Surgical staff: **Michael Wines**

Chung et al. **2019** "Current treatment of lichen sclerosus and stricture" **World Journal of Urology** *In Press*: doi: 10.1007/s00345-019-03030-z. PMID:31807846 Surgical staff: **Amanda Chung**

Eade et al. **2019** "Results of a Prospective Dose Escalation Study of Linear Accelerator-Based Virtual Brachytherapy (BOOSTER) for Prostate Cancer; Virtual HDR Brachytherapy for Prostate Cancer" **Advances Radiation Oncology** 4: 623-630 PMID:31673655 Surgical staff: **Kris Rasiah, Venu Chalasani, Justin Vass**

Emmett et al. **2019** "Rapid Modulation of PSMA Expression by Androgen Deprivation: Serial 68Ga-PSMA-11 PET in Men with Hormone-Sensitive and Castrate-Resistant Prostate Cancer Commencing Androgen Blockade" **Journal of Nuclear Medicine** 60: 950-954 PMID:30552200 Surgical staff: **Venu Chalasani**

Hellstrom et al. **2019** "Intralesional collagenase Clostridium histolyticum causes meaningful improvement in men with Peyronie's disease: Results of a multi-institutional analysis." **The Journal of Urology** 201: 777-782 PMID:30672843 Surgical staff: **Amanda Chung**

Johnston et al. **2019** "Rectourethral fistula: the result of an unusual sequence of events." **British Journal of Hospital Medicine** 80: 352-353 PMID:31180780 Surgical staff: **Matthew Winter**

Kam et al. **2019** "Single use versus reusable digital flexible ureteroscopes: A prospective comparative study." **International Journal of Urology** 26: 999-1005 PMID:31448473 Surgical staff: **Matthew Winter**

Kench et al. **2019** "Dataset for the reporting of prostate carcinoma in radical prostatectomy specimens: updated recommendations from the International Collaboration on Cancer Reporting." **Virchows Archiv** 475: 263-277 PMID:31098802 Surgical staff: **Krishan Rasiah**

Lloyd et al. **2019** "Is your career hurting you? The ergonomic consequences of surgery in 701 urologists worldwide." **Journal of Endourology** 33: 1037-1042 PMID:31187638 Surgical staff: **Amanda Chung**

Lloyd et al. **2019** "Letter to the Editor RE: Gómez-Núñez, Editorial Comment on: Is Your Career Hurting You?" **Journal of Endourology** 33: 1045 PMID:31746654 Surgical staff: **Amanda Chung**

McGeorge et al. **2019** "Trends in urethral stricture management over two decades" **BJU International** 124 *Suppl 1*: 1:37-41 PMID:31638318 Surgical staff: **Amanda Chung**

Shaikh et al. **2019** "Epididymo-orchitis masquerading as an irreducible inguinal hernia." **British Journal of Hospital Medicine** 80: 616-617 PMID:31589493 Surgical staff: **Matthew Winter**

Tran et al. **2019** "Beyond medications: office-based procedures for benign prostatic obstruction." **World Journal of Urology** 37: 1023-1027 PMID:31037402 Surgical staff: **Amanda Chung**

2018

Berger et al. **2018** "⁶⁸Ga-PSMA PET/CT vs. mpMRI for Locoregional Prostate Cancer Staging: Correlation With Final Histopathology" **Prostate Cancer and Prostatic Diseases** 21: 204-211 PMID:29858591 Surgical staff: **Matthew Winter**

Chung et al. **2018** "Update on minimally invasive surgery and benign prostatic hyperplasia" **Asian Journal of Urology** 5: 22-27 PMID:29379732 Surgical staff: **Amanda Chung**

Chung et al. **2018** "Editorial Commentary: Is there a role for antifibrotics in the treatment of urological disease? A systematic review of the literature." **Urology Practice** 5: 38 PMID not available Surgical staff: **Amanda Chung**

Cole-Clark et al. **2018** "An initial melanoma diagnosis may increase the subsequent risk of prostate cancer: Results from the New South Wales Cancer Registry." **Scientific Reports** 8: 7167 PMID:29740153 Surgical staff: **Krishan Rasiah, Venu Chalasani**

Egevad et al. **2018** "Dataset for the reporting of prostate carcinoma in core needle biopsy and transurethral resection and enucleation specimens: recommendations from the International Collaboration on Cancer Reporting (ICCR)." **Pathology** 51: Nov-20 PMID:30477882 Surgical staff: **Krishan Rasiah**

Kam et al. **2017** "Rare case of a massive staphylococcal prostatic abscess presenting as an ischio-rectal abscess." **ANZ Journal of Surgery** 89: 438-440 PMID:28749041 Surgical staff: **Matthew Winter**

Kam et al. **2018** "Fungal prostatic abscess erupting through the penis." **British Journal of Hospital Medicine** 79: 592 PMID:30290739 Surgical staff: **Matthew Winter**

Kam et al. **2018** "Portable Video Media Versus Standard Verbal Communication in Surgical Teaching: A Prospective, Multicenter, and Randomized Controlled Crossover Trial." **Journal of Surgical Education** 76: 440-445 PMID:30253985 Surgical staff: **Matthew Winter**

Kneebone et al. **2018** "Contemporary salvage post prostatectomy radiotherapy: Early implementation improves biochemical control." **Journal of Medical Imaging and Radiation Oncology** 62: 240-247 PMID:29080287 Surgical staff: **Krishan Rasiah, Justin Vass**

Wallis et al. **2018** "Personal prostate-specific antigen screening and treatment choices for localized prostate cancer among expert physicians." **Canadian Urological Association Journal** 12: E59-E63 PMID:29381460 Surgical staff: **Venu Chalasani**

Zhang et al. **2018** "An analysis of a multiple biomarker panel to better predict prostate cancer metastasis after radical prostatectomy." **International Journal of Cancer** 144: 1151-1159 PMID:30288742 Surgical staff: **Krishan Rasiah**

VASCULAR SURGERY

Head of Department: Vikram Puttaswamy



RESEARCH SUPERVISION (2018-2020)

Vikram Puttaswamy

- Master of.Surgery x1 (Vascular and Endovascular Surgery Project)

Charles Fisher

- Master of.Surgery x1 (Associate Supervisor)



DEPARTMENTAL RESEARCH RESOURCES

CLINICAL DATABASES TO SUPPORT OUTCOMES RESEARCH

- Registry of Endologix AFX stent-graft for the treatment of Aorto-Iliac Arterial Disease
- BCLEAR: Type B Aortic Syndrome Database
- Determining the fate of the distal aorta after Type A aortic dissection repair.
- Infra-inguinal directional atherectomy database
- Zilver PTX stent databaseThe ANCHOR Registry (Aneurysm Treatment Aptus™ Heli-FX™ EndoAnchor)
- Australasian Vascular Audit (AVA)

CURRENT NSLHD HUMAN RESEARCH ETHICS APPLICATION (HREA) APPROVALS

- Registry of Endologix AFX stent-graft for the treatment of Aorto-Iliac Arterial Disease. HREA approved, awaiting governance approval.
- Infra-inguinal directional atherectomy: A single site retrospective analysis – HREA approved.
- Determining the fate of the distal aorta after Type A aortic dissection repair.

LINKS TO TRANSLATIONAL RESEARCH PARTNERS OR UNIVERSITY DEPARTMENTS

- University of Sydney, Discipline of Surgery
- Department of Cardiology (Gemma Figtree and Ravi Bhindi)
- Department of Renal Medicine (Carol Pollack and Stella McGinn)
- Department of Microbiology (Bernie Hudson)



CURRENT RESEARCH ACTIVITY

- Registry of Endologix AFX stent-graft for the treatment of Aorto-Iliac Arterial Disease
- BCLEAR: Type B Aortic Syndrome Database
- Determining the fate of the distal aorta after Type A aortic dissection repair.
- Clinical trial testing the Prevena surgical incision management system (IMPART–TRIAL) in renal transplant patients
 - Multicentre RCT involving Health Partners RPA and Westmead Hospitals
 - RNSH is the lead site and in-charge of the project
- Comparison trials of two vascular closure devices - FemoSeal™ vs StarClose™
- Mortality study of Paclitaxel use at North Shore Hospital Campus
- Study of multiple renal artery use in transplant patients

- Study of duplex ultrasound in the treatment of renal transplant patients
- Analysis of infra-inguinal directional atherectomy
 - Multi year study assessing the HawkOne DA system in infra-inguinal occlusive disease
- ANCHOR Registry (Aneurysm Treatment Aptus™ Heli-FX™ EndoAnchor) - 5 Year study
- The LIFE-BTK Randomized Controlled Trial (A pre-market evaluation of the ESPRIT BTK Everolimus Eluting Bioresorbable Scaffold System for treatment of narrowed infrapopliteal lesions in patients with arterial narrowing in infrapopliteal lesions causing Critical Limb Ischemia)
- BIOTRONIK 4French for AMBulatory peripheral intervention. A multicentre, controlled trial comparing 4French versus 6French femoral access for endovascular treatment of lower-extremity peripheral artery disease in an ambulatory setting: BIO4AMB. Completed recruitment waiting study closure.
- BIOTRONIK: First-in-Human assessment of the Safety and Clinical Performance of Sirolimus Derivative-Coated Balloon (Bright DCB) in the Treatment of Subjects with de Novo Lesions in the Superficial Femoral and Proximal Popliteal Artery.
- First in Man study: A Prospective, Multi-Centre, Single-Arm, Feasibility Study to Assess the Safety and Performance With the SUNDANCETM Drug Coated Balloon for the Treatment of De Novo or Restenotic Lesions in Infra-Popliteal Arteries. "SWING Study"

COLLABORATIVE WORK WITH CARDIOLOGY RESEARCH GROUP

- Dr Paul Bonnitcha: Assessment of Carotid Atherosclerotic plaques with FMISO-PET Scans (CatPET study)
- Dr Gemma Figtree: Stimulating Adrenergic Receptors to improve clinical outcomes in patients with Peripheral Arterial Disease STAR-PAD trial



PUBLICATIONS

2020

Gorolay et al. **2020** "Asymptomatic thrombosis of extrahepatic portal vein aneurysm necessitating hybrid operative repair." **Vascular** *In press* doi: 10.1177/1708538120976977 PMID: 33270525 Surgical Staff: **Daniel Nguyen, Jaswinder Samra, Michael Neale**

Herlihy et al. **2020** "Primary prophylaxis for venous thromboembolism in people undergoing major amputation of the lower extremity." **Cochrane Database of Systematic Reviews** *Issue 7. Art. No.: CD010525*. DOI: 10.1002/14651858.CD010525.pub3 Surgical staff: **Vikram Puttaswamy**

Hultin et al. **2020** "Orthostatic Renal Transplant Compression Following Weight Gain Leading to Acute Kidney Injury." **Transplantation Proceedings** 52: 153-156 PMID:31924406 Surgical staff: **Charles Fisher**

Mak et al. **2020** "Transvenous endovascular repair of symptomatic type II endoleak following endovascular repair of a ruptured common iliac aneurysm with arteriovenous fistula." **Journal of Vascular Surgery Cases and Innovative Techniques** 6:614-617 PMID: 33163744 Surgical Staff: **Michael Neale**

Manuel et al. **2020** "A Novel Approach to a Patient with both Aortoiliac and Venous Occlusive Disease." **Annals of Vascular Surgery** *In press* doi: 10.1016/j.avsg.2020.10.043 PMID: 33333185 Surgical Staff: **Vikram Puttaswamy**

2019

Singh et al.. **2019** "Management of post-pancreatectomy haemorrhage using resuscitative endovascular balloon occlusion of the aorta." **Langenbeck's Archives of Surgery** 404: 253-255 PMID:30758668 Surgical staff: **Shen Wong, Anubhav Mittal, Jaswinder Samra**

2018

Lane et al. **2018** "The integration of pharmacology and pathophysiology into locoregional chemotherapy delivery via mass fluid transfer." **Journal of Controlled Release** 292: 18-28 PMID:30347244 Surgical staff: **Rodney Lane, Thomas Hugh**

Lane et al. **2018** "Challenges in chemotherapy delivery: comparison of standard chemotherapy delivery to locoregional vascular mass fluid transfer." **Future Oncology (London, England)** 14: 647-663 PMID:29513086 Surgical staff: **Rodney Lane, Thomas Hugh**

Wang et al. **2018** "Novel Endovascular Approach Using the Gore Iliac Branch Endograft for Short Iliac Anatomy." **Journal of Endovascular Therapy** 25: 28-30 PMID:29251205 Surgical staff: **Michael Neale**

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