

RISE NEWSLETTER

Empowering students. Supporting surgeons. Advancing research.

Edition 1
25/01/2026



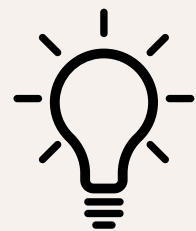
About Us

Read about our goals and what we have achieved at RISE in 2025



Meet the team

Get to know the views of our founders and directors and the future of RISE



Project Highlights

Learn about the cutting edge research our scholars are doing with their surgical mentors

Introducing RISE: Research, Innovation & Surgical Education

This year marks the official launch of Research, Innovation & Surgical Education (RISE), a student-led mentorship initiative designed to strengthen the research and surgical training ecosystem.

RISE was founded to address a growing need: students are eager to contribute meaningfully to research, but often lack clear pathways, mentorship, and coordinated support. Surgeons and academics, in turn, are keen to involve motivated students but face barriers in finding the right fit. RISE exists to bridge this gap by creating a structured system where students and clinicians can work together on impactful projects with confidence and efficiency.

What We've Achieved This Year

Building the Foundations

2025 has been a year of connection, collaboration, and building something lasting. From the beginning, our focus has been on building a strong RISE community; bringing together students, surgeons, and supporters who believe in the value of mentorship and academic growth.

In parallel, we've laid the groundwork to support that vision long term: establishing roles, creating processes, and shaping a framework that allows collaboration to thrive. These foundations will ensure that RISE becomes lasting platform powered by shared purpose and collective effort.

Matching Students With Surgeons and Mentorship Matching

RISE has already begun connecting students with supervisors across a range of surgical specialties, including General Surgery (HPB & Transplant), Orthopaedics, and Urology. These early partnerships have gained strong momentum, with several scholars already progressing through project development and even achieving conference presentations under the guidance of their mentors.

Expanding Educational Opportunities

Alongside research, we piloted small-group educational activities designed to complement formal teaching. These included targeted introductions to surgical subspecialties, practical skills exposure opportunities, and integration with existing programs including the summer surgery introductions. These sessions have been well received and will be further expanded next year



Establishing Partnerships

RISE has built meaningful connections with both institutional research groups and individual mentors across Sydney. We've partnered with leading units such as the Nepean Urology Research Group (NURG), the Surgical Outcomes Research Centre (SOuRCe), and Chris O'Brien Lifehouse, while also engaging academic surgeons at RPAH, Westmead, and RNSH. These partnerships form the backbone of our growing project portfolio and will be key to supporting an expanded scholar intake in 2026.

Thank you for continuing to support RISE. We are grateful for everyone's ongoing commitment and look forward to what we can achieve together in the year ahead.

Christian Ratnayake and Leonard Lee

Founders and Directors of Research



Accessible, High-Yield Education for Future Surgeons

RISE Education has been developed to support medical students and junior doctors who are interested in surgery and surgical research. We provide structured learning in practical skills, core surgical theory, research literacy, and a clear understanding of training pathways.

The aim of RISE Education is to provide accessible, high-yield education that complements clinical experiences during medical school. This includes practical surgical skills, anatomy, physiology and pathology relevant to surgical decision making, and case based learning that encourages students to think like surgeons.



Mukund Karthik
Director of Education

Alongside this, the program focuses on developing research skills that are directly useful for students and junior doctors, such as understanding literature, understanding relevant statistics, writing papers, and presenting work clearly and confidently at conferences. RISE Education also aims to demystify surgical careers. Through talks, panels, and educational resources, we want to provide clear insight into surgical training pathways and academic opportunities, helping students make informed decisions about the pathways available to them. Ultimately, the goal of RISE Education is to lower barriers to surgical learning, support early engagement with surgery and research, and foster a community of students who are curious, capable, and well prepared for the next stages of training.

Amplifying Research, Education, and Opportunity at RISE

Communications at RISE exists to connect researchers, clinicians, and students in order to support meaningful engagement across research and surgical education. Our goal is to make research and surgery more accessible by highlighting the diverse pathways through which individuals can become involved, whether as students, scholars, mentors, or collaborators.

RISE currently engages its community through Facebook and LinkedIn, using these platforms to showcase scholar and mentor achievements and promote upcoming events. Alongside this, we are in the process of designing the RISE website, which serves as a central hub for educational resources, project updates, and information about our mentors and scholars. By bringing these resources together in a single, accessible online space, RISE communications aims to make it easier for students and early-career clinicians to learn about research, explore opportunities in surgery, and take the first steps toward active involvement.

Looking ahead, RISE is committed to continuing to strengthen its communications strategy by expanding its digital presence, improving accessibility, and creating more opportunities for meaningful connection across the RISE community.



Paloma DiDia
Director of Communications



RISE Scholar Highlights: Project Summaries

Wootack Hong

Radical Prostatectomy vs Radiation Therapy: Comparing Hospital Re-presentations Following Prostate Cancer Treatments in NSW

Under the supervision of Dr Jonathan Kam, I am leading a retrospective cohort study investigating long-term hospital re-presentations (2–20 year follow-up) among prostate cancer patients in NSW, comparing outcomes following the two most conventional curative treatment modalities: radical prostatectomy and radiation therapy. Initially developed as a smaller-scale local outcomes study, the project has since attracted support from the Cancer Institute NSW and is now progressing as a sub-study under the CanDLe (Enduring Cancer Data Linkage) program. Leveraging NSW Health’s extensive, population-level linked datasets, the study will apply negative binomial regression to quantify and compare rates of hospital re-presentations — capturing both urological and broader complication profiles — across treatment groups.

Annie Le

Rate of pelvic LN dissection in prostatectomy.

We’re examining trends in the management of prostate cancer in Australia from 1997–2024. Pelvic lymph node dissection has long been regarded as the gold standard for staging prostate cancer. However, recent reports suggest a decline in its use during radical prostatectomy, particularly with the emergence of newer, less invasive technologies such as PSMA-PET. In our research project, we utilise MBS data to identify fluctuations in the use of lymph node dissection and to assess whether the number of lymph nodes yielded per case is sufficient to qualify the procedure as a node dissection.

Maximilian Gerber

Survival Rates and Rates of Recurrence in Amputations at RPA for Orthopedic Sarcoma Surgery

The purpose of our research is to ascertain current numbers of amputations conducted at RPA in the last 5-10 years. We will measure survival outcomes for patients that received an amputation whilst also ascertaining what types of patients are receiving amputations based on their clinical context (demographics and pathologies). We are currently considering BKA, AKA, BEA, AEA, four quarter, hind quarter amputations in our research.

Paloma DiDia & Edmond Liang

Efficacy of Preoperative and Intraoperative Interventions aimed at improving R0 surgical margins in colorectal malignancy surgery

Our project is a systematic review assessing the efficacy of preoperative and intraoperative interventions designed to improve R0 resection margins in colorectal malignancy surgery. We are working in collaboration with researchers from the Surgical Outcomes Research Centre (SOuRCe) and Dr Peter Lee, a colorectal surgeon at RPA. The aim is for this review to inform RPA surgeons in the development of a future clinical trial evaluating selected interventions — an exciting prospect with real clinical impact.

Christian Ratnayake

Strengthening Surgical Research and Clinical Trials Across Australia

A national qualitative study exploring how clinicians across the surgical workforce engage with research and deliver clinical trials, and what barriers and enablers shape this in real-world practice. Through short semi-structured interviews with key stakeholders, the project aims to identify practical, system-level opportunities to strengthen research culture and trial feasibility across Australia. Findings will inform future strategies to improve research participation, capacity and impact within surgical services.

Ziyao Geng

Improving SLNB Risk Prediction in Thin Melanoma

Sentinel lymph node biopsy (SLNB) plays an important role in melanoma staging, but current risk tools may overestimate the chance of nodal spread in thin melanomas (Breslow 0.05–0.74 mm), potentially leading to unnecessary surgery and anxiety. Using the large international SLNWG database, this project will externally validate and recalibrate the Melanoma Institute Australia SLNB risk nomogram to improve accuracy. The goal is to deliver more reliable, personalised risk estimates to support better decision-making in melanoma care.

Vaibhav Arora and Takudzwa Chivazve

Mapping outcome measures for evaluating technology-assisted total shoulder arthroplasty: A scoping review

Our RISE project is a scoping review examining outcome measures used in technology-assisted total shoulder arthroplasty, including robotic systems, navigation, patient-specific instrumentation, and augmented-reality-based planning. The aim is to systematically map how these technologies are evaluated across clinical, radiographic, biomechanical, patient-reported, operational, and economic domains. By identifying patterns, gaps, and inconsistencies in outcome reporting, this work seeks to support more standardised evaluation frameworks and inform future clinical trials and implementation of emerging surgical technologies.



Rainy Yang

Short versus prolonged continuous oxygenated hypothermic machine perfusion prior to kidney transplantation

Kidney transplantation remains the treatment of choice for patients with end-stage kidney disease (ESKD), offering superior survival and quality of life compared to dialysis. However, a persistent shortage of donor organs has led to increased reliance on "marginal" or less optimal kidneys. One of the key determinants of transplant success is the degree of ischaemia-reperfusion injury (IRI), which occurs when blood flow is temporarily interrupted and then restored to the organ. The severity of IRI is strongly influenced by the method and conditions of organ preservation prior to transplantation.

In Australia, kidneys are most commonly preserved using cold static storage, in which the organ is stored in cold preservation solution and iced slush. In contrast, machine perfusion (MP), particularly oxygenated hypothermic machine perfusion (HMP), has gained prominence in Europe and the USA over the past 1–2 decades. MP has demonstrated particular benefit in marginal donor kidneys, improving both short- and long-term graft function by reducing the impact of IRI.

Our project aims to compare short to prolonged continuous, oxygenated HMP of kidneys prior to transplantation, with respect to short and medium-term kidney transplantation outcomes. The findings from this project will provide evidence on the optimal perfusion duration and could support the broader adoption of HMP technology, improving kidney transplant outcomes nationally.

Rory Wylie and Evan Kapasakis

Assessing Inter- and Intra-Rater Reliability in the interpretation of Computational Fluid Dynamics (CFD) derived imaging of the bladder neck and posterior urethra

Our current research, in collaboration with Professor Ani Deshpande, explores the integration of Computational Fluid Dynamics (CFD) into the diagnostic toolkit of paediatric urology. By applying engineering-grade fluid modelling to the renal system, we are evaluating the technology's potential as a functional imaging modality. This project seeks to establish the legitimacy of CFD in predicting pressure-flow relationships, potentially offering a non-invasive, radiation-free pathway to assess complex congenital anomalies and refine surgical decision-making for paediatric patients.

Our current project involves designing a survey for urologists, using a database of computational urological images. Clinicians will evaluate each image to determine the presence and severity of any obstructions. We aim to analyse the collected responses to identify if a consensus exists among clinicians regarding image interpretations. Additionally, our survey incorporates duplicate images presented without clinicians' knowledge. By assessing if variations exist in a single clinicians' responses to these duplicates, we will evaluate intra-observer reliability, i.e., the consistency in clinicians' judgments when viewing the same image multiple times. The collated data will then be analysed using the kappa statistic, which quantifies both intra- and inter-observer reliability. This measure will help establish the reliability and diagnostic value of computational urological pressure dynamics imaging, contributing significantly to existing literature.

Christian Ratnayake, Mukund Karthik, Leonard Lee

Defining Futility in Curative-Intent Surgery: Multi-stakeholder consensus

A modified Delphi method to develop a consensus definition of futility in high-risk curative-intent cancer surgery, incorporating the perspectives of patients, carers, and clinicians. Participants will contribute to identifying and prioritising clinical, functional, and value-based indicators that inform decision-making in complex surgical contexts. The findings aim to support more consistent, transparent, and patient-centred approaches to surgical selection.

Liam Fell

Surgical management of ED presentations for bouldering injuries

A retrospective study on the surgical management of ED presentations for acute injuries acquired from bouldering. A gap in the research related to bouldering specific acute injuries has been identified and given the increasing popularity of the sport and its accessibility to novice and beginner hobbyists, ED presentations are becoming more frequent, and management should be appraised.

Jinglu Yang and James Smith

Strategies that improve quality of life post gastrointestinal cancer

This systematic review aims to identify and evaluate the effectiveness of interventions to improve QoL following major surgery for GI cancers. A key objective of the review is to systematically identify and categorise the range of post-operative interventions that have been tested in patients with GI cancer, as well as to assess whether these strategies have demonstrated effectiveness in improving QoL.

Annabelle Perferment

Evolution of the Robotic Program at Nepean Hospital – 13 year outcomes of 2000 cases

My RISE project involves evaluating the implementation of the Robotic Program at Nepean Hospital. Notably, Nepean is the first public hospital in NSW to introduce a robotic surgery program. The project involves gathering data from surgeries performed using the Da Vinci robot over the past 13 years and evaluating perioperative and patient outcomes.

Brendan Chan

Comparison of delirium assessment tools, UB CAM and 3D CAM

This project compares two different delirium assessment tools (3D CAM and UB CAM). Data was extracted from a patient database and R studio was used to filter data for comparison.





SOuRCe
Surgical Outcomes Research Centre

 **NURG**
Nepean Urology Research Group


Melanoma
Institute Australia

 **Griffith**
UNIVERSITY

 **Chris O'Brien**
Lifehouse

 **RPA**
INSTITUTE OF
ACADEMIC SURGERY