

2-3

Major News:

Master Academic Clinician
Award 2024 Winners:
Associate Professor Ong
Hock Soo and Clinical
Associate Professor Peter Lu

4

Awards:

National Medical Research
Council (NMRC) Award July
2023 - 4 Winners

1st Place for the ASPO
William Potsic Basic Science
Award 2023 - Clinical
Assistant Professor Chan
Ching Yee

Yahya Cohen Memorial
Lecture Award 2023 -
Clinical Professor Brian Goh

14

FAPD:

Fellowship Experience -
Clinical Assistant Professor
Raj Vikesh Tiwari

Click <https://www.singhealthdukenus.com.sg/acp/surgery/our-newsletter>
to view our past SurgeOn
publications.

NEWSLETTER SurgeOn



Associate Professor Ong Hock Soo

Senior Consultant,
 Department of Upper GI and Bariatric Surgery
 Deputy Chairman,
 Division of Surgery and Surgical Oncology (DSSO), SGH and NCCS

We are so proud of you!

"Assoc Prof Ong dedicates time and effort to help shape the landscape of tomorrow's medicine and moulds the future generation of doctors. He fosters an environment of encouragement and has consistently earned outstanding feedback from medical students and residents. He continuously hones his pedagogical skills and seeks to contribute to surgical knowledge through personal research and collaboration, in pursuit of better clinical and patient outcomes."

- Clin Assoc Prof Henry Ho, Academic Chair, Surgery ACP



Teaching houseofficers in the GS Library at SGH Blk 6 Level 7



Conducting Acute Care of Severe Trauma Course with Dr Jeremy Ng at Phnom Penh for Cambodian doctors, 2010

Master Academic Clinician Award 2024 – Associate Professor Ong Hock Soo

When I started my training at the Department of General Surgery in SGH, in the 1990s, the concept of Academic Medicine was distant from my mind. My primary focus was on honing my surgical skills to become a proficient and compassionate surgeon for my patients. At that time, it was common knowledge that embarking on a journey in General Surgery at SGH required a robust work ethic, so that's precisely what I prepared myself for.

Fortuitously, I found myself in an environment that not only valued clinical excellence, but also encouraged and expected its doctors to delve into academic pursuits. This involved dedicating time to research, writing and presenting papers at conferences, and teaching medical students. The driving force behind this culture was Prof Soo Khee Chee, the Head of the Department then. It was not uncommon for us to work continuously for 36 to 40-hour stretches on weekdays, then spend the weekend tracing case notes in the MRO (Medical Records Office) to write our papers. Despite the demanding pace of work, these pursuits laid the foundation for a comprehensive approach to the practice of surgery within an institution.

Balancing the numerous commitments in surgery was challenging. Two things helped me to navigate those challenging moments - having like-minded colleagues who shared the workload and a supportive family. Collaborating with colleagues who understood the demands of the profession fostered a sense of camaraderie and shared responsibility. The unwavering support of my family has been indispensable and provided a stable foundation for me to harmonise the demands of an academic career with personal and professional commitments.

While I contributed to the diverse domains of clinical practice, research, education, and administration, my most gratifying accomplishment has been spearheading the Department of Upper GI and Bariatric Surgery. Working alongside a talented group of colleagues, we strategically positioned the department for substantial growth and regional influence. This achievement is not attributable to individual success but underscores the collective efforts of a dedicated and talented team working towards a common goal.

Although my primary focus did not revolve around basic research, I actively engaged in collaborative projects with brilliant scientists across the SingHealth ecosystem, resulting in many publications elucidating novel insights into various surgical conditions. Additionally, my role in curriculum planning for Duke-NUS Medical School and the General Surgery Residency Advisory Committee (RAC) presented significant opportunities to shape the landscape of surgical education, aligning with my desire to pay it forward to the next generation through teaching and surgical education.

This realisation became particularly poignant when I accompanied my son to consult a hand surgeon for an injury. Witnessing the surgeon introduce himself to my son as my junior, whom I had mentored and taught, brought to the fore the profound impact of paying it forward. The doctors I trained in the past now care for my loved ones.

For my colleagues feeling uncertain about where to commence their academic journey, here is my advice:

- Take full advantage of the extensive network, ample resources and conducive environment within SingHealth for professional growth and development.
- Identify an area of passion that aligns with your clinical interests. This will make the academic journey personally fulfilling and enhances your resilience in the face of challenges.
- Remember the value of Academic Medicine. Quoting a paper I read recently, "Academic pursuits at any stage of a medical career offer opportunities to acquire valuable generic skills, enhance clinical practice and foster critical thinking. These skills not only contribute to career development but, more importantly, improve patient care."

My journey in Academic Medicine wasn't a specific decision I had to make at a particular point; rather, I grew into it because of the conducive environment fostered by the department and the hospital, and for that, I am profoundly grateful.



Clinical Associate Professor Lu Kuo Sun Peter

Senior Consultant, Department of
Otorhinolaryngology - Head & Neck
Surgery
Chief Risk Officer, CGH

We are so proud of you!

"Clin Assoc Prof Lu has held leadership roles in various committees at the hospital, cluster and national levels throughout his career. He has facilitated many changes, improved hospital operations and utilisation of resources to benefit patients. He treats patients of all classes with the same concern and holds that same standard when interacting with colleagues and junior doctors. He is also an avid educator, who aims to not only develop students in clinical excellence, but also a strong sense of integrity, professionalism, and compassion."

- Clin Assoc Prof Henry Ho, Academic Chair,
Surgery ACP



College of Surgeons Council 2016, CSS Lecture



Peter Lu performing a videostroboscopic examination

Master Academic Clinician Award 2024 – Clinical Associate Professor Lu Kuo Sun Peter

First of all, I must say that I feel truly humbled to have been selected to receive the Master Academic Clinician 2024 award. When I look to my fellow award winners from the Surgery ACP both past and present, I feel honoured to be considered one of their peers.

I must confess that during the early years of my career, it had never been my ambition to become an academic clinician. However, it gradually became obvious to me that training and mentoring my junior colleagues was one of the most meaningful and gratifying parts of my professional life. In fact, during the midpoint of my career, when I was considering a move to the private sector, my love for interacting with my younger colleagues was the main factor in my decision to remain in institutional practice.

Before I even stepped foot in medical school, my father, who was a general surgeon, taught me valuable lessons about the importance of keeping medical care patient-centred. These early lessons have kept me focused throughout my career. I was also very fortunate to have excellent teachers and mentors throughout my training. Their generosity and willingness to impart their knowledge and skills to me was truly inspiring.

As a result, I have always strived to impart not only the knowledge and skills of good surgical practice, but also the integrity, empathy and compassion that are vital to our profession. I have also tried to instil in them a sense of duty to pass on what they have learnt to the next generation.

Looking back, while I have had many good teachers, the education I received as a young trainee was relatively unstructured, and we relied on informal teaching to prepare us for the challenges of life as otolaryngology surgeons. When I look at the programmes – both undergraduate and postgraduate – that are available today, I can't help but to feel extremely envious.

One of my most impactful experiences came when I was able to observe residency training in the United States during my fellowship training in 1994. The selfless effort and commitment my mentor and his colleagues put into the training and education of their residents was truly inspirational. When the opportunity came for me to have an influence on specialist training locally as part of the Specialist Training Committee (STC), and later as Chair of Residency Advisory Committee (RAC) for Otolaryngology, I was fortunate to have the support of many like-minded colleagues who have worked tirelessly over the years to improve our training programmes.

As a clinician leader, the two most valuable lessons I have for my younger colleagues is, firstly, always be completely impartial and fair in your decision making. Secondly, always treat your staff, even the most junior, with respect and make them feel that they are part of the team. I believe these two habits have helped me immensely during my career.

If I could have my wish to leave a mark, it would be that my trainees, past and present, will continue to pass on the values and convictions that I learned from my mentors onto the next generation of surgeons.

I would have to say I count the successful and talented colleagues I have mentored and trained during my career among my greatest achievements. I am proud of the success they have achieved in their own careers, but even prouder that they behave with professionalism, honour, and integrity in their practices. I am certain their accomplishments will outshine my own, and genuinely hope to be able to see some of them receiving this prestigious award in the future too!

CATEGORY: AWARDS

Congratulations on your achievements!

National Medical Research Council (NMRC) Award

Winners July 2023

Clinician Innovator Award - Senior Investigator (CIA-SI)



**Clinical Assistant Professor
Ng Tze Kiat**

Senior Consultant

Department of Urology, SGH & NCCS

Project title: WeeCare - Providing cost-effective home monitoring of urinary flow for men with Lower Urinary Tract Symptoms (LUTS)

Clinician Innovator Award - Investigator (CIA-INV)



**Clinical Assistant Professor
Andy Chua Jian Kai**

Consultant

Department of
Otorhinolaryngology -
Head & Neck Surgery, SKH

Project title: The development of a novel myringoplasty device (SMART)



Dr Wong Seng Mun (PhD)

Senior Principal Speech
Therapist (R)

Department of Speech Therapy,
SGH

Project title: Remote monitoring of swallowing function using a mechanoreceptor sensor system

Clinician Trial Grant Investigator-Initiated Trials (CTG-IIT)



**Associate Professor
Lim Chwee Ming**

Senior Consultant

Department of Otorhinolaryngology -
Head & Neck Surgery, SGH & NCCS

Project title: Phase 1/2 trial integrating allogeneic NK cells in high-risk advanced stage III-IV nasopharyngeal cancer patients

1st Place for the Aspo William Potsic Basic Science Award 2023 - Clinical Assistant Professor Chan Ching Yee

Title: Otologic safety of intratympanic N-acetylcysteine



Left to right: Prof Sam Daniel (mentor) & Clin Asst Prof Chan Ching Yee (award winner)

Clin Asst Prof Chan Ching Yee's research has been recognised with a prestigious award from the American Society of Pediatric Otolaryngology (ASPO). Clin Asst Prof Chan is a Consultant with the Department of Otolaryngology at KKH.

During her Pediatric Otolaryngology Fellowship in Montréal Children's Hospital, Clin Asst Prof Chan embarked on a research project with her mentor, Prof Sam Daniel, a clinician scientist who heads the McGill Otolaryngology Sciences Laboratory at the McGill University Health Centre Research Institute.

Their study, titled "Otologic safety of intratympanic N-acetylcysteine", presented at the ASPO annual meeting last May, won the William Potsic Basic Science Award for best research paper. Since then, the study has also been published in the International Journal of Pediatric Otorhinolaryngology.

N-acetylcysteine, or NAC, has been shown to possess antimicrobial properties, including against pseudomonal biofilms, which led Clin Asst Prof Chan and Prof Sam Daniel to believe it could be effective in treating chronically discharging ears that fail to respond to conventional treatments such as antibiotics. The study examines the safety of topical NAC (commonly known as fluimucil) when combined with a topical antibiotic eardrop in the middle ears of guinea pigs. The outcome of their research is promising – suggesting that the combination is safe and for use in the treatment of chronically discharging ears. Further studies are needed to assess the effectiveness of the combination in humans.

Congratulations to the winners and their contribution to the advancement of medical research!

More details on "MCH receives otolaryngology award in the U.S." can be found at <https://www.mcgill.ca/ent/>

Yahya Cohen Memorial Lecture Award 2023 Winner – Clinical Professor Brian Goh

Topic: Defining global benchmarks for laparoscopic liver resections: an international multicenter study

<https://pubmed.ncbi.nlm.nih.gov/35837974/>



Clinical Professor Brian Goh

Head of Department, HPB/
Transplant Surgery
Division of Surgery and Surgical
Oncology, SGH & NCCS

The Spirit of the Yahya Cohen Memorial Lecture

In recognition of the outstanding contributions to the development of surgery in Singapore by Dr Yahya Cohen, the 1st Chairman of the Chapter of Surgeons and a past Master of the Academy, the 1994 Chapter of Surgeons has established the Yahya Cohen Memorial Lecture in his honour.

The Lecturer will be awarded a gold medal and a certificate. The co-authors of the paper will be given certificates in recognition of their contributions.

More details can be found at <https://www.ams.edu.sg/colleges/CSS/awards-lectureships>



Annual College of Surgeons
Singapore Lectureship Dinner on
21 Nov 2023 @ Pan Pacific Hotel,
Singapore

“Let’s Journey with HER”

SingHealth Duke-NUS Breast Centre - Breast Cancer Awareness Month (BCAM) 2023

Every year, the Breast Cancer Awareness Month (BCAM) calls upon us, as a society, to foster a sense of unity and purpose. It is a time to come together as a community to raise awareness of the disease, pool the resources available for survivors and their families, and bravely share our experiences so that no one feels like they are on this journey alone.

Being the largest multi-disciplinary centre in Singapore, the SingHealth Duke-NUS Breast Centre plays a pivotal role in our collective fight against breast cancer.

SingHealth’s BCAM 2023 was the first in-person event since the pandemic and the third for SDDC Breast Centre, where survivors and caregivers from across all five institutions (SGH, CGH, KKH, SKH and NCCS) came together to participate in our cluster-wide BCAM initiatives.

The committee, led by Clin Asst Prof Mok Chi Wei, Consultant, Department of Breast Surgery, CGH, decided for the theme of BCAM 2023 to be “Let’s Journey with Her”, highlighting that a breast cancer survivor’s journey is never hers to walk alone and the importance of supportive relationships in their road to recovery. Through the various talks, workshops and activities held in October by faculty from across the five institutions, the committee hoped to increase awareness on breast cancer prevention through physical activity and exercise, as well as early detection programmes.

Attendees also participated in fun-filled events such as tufting workshops and a mass trampoline event aptly named “SingHealth JumpPINK 2023”.



SingHealth BCAM 2023 Opening Ceremony



SingHealth Tufting Workshop



SingHealth JumpPINK 2023



1st Minimally Invasive Breast Surgery Mini-Symposium (MIBSS)



SKH's Breast Service hosted Singapore's community of breast surgical experts on 5 and 6 September 2023 for open dialogue and technical sharing as part of an effort to establish Singapore's 1st Minimally Invasive Breast Surgery Mini-Symposium (MIBSS).

Clin Asst Prof Sabrina Ngaserin, Consultant and Head of Breast Service, SKH, and the SKH surgical team demonstrated their approach towards the minimally invasive endoscopic nipple-sparing mastectomy and immediate breast reconstruction in live surgery. The mini-symposium and live operation was attended by 20 established local breast surgeons who share in our enthusiasm for continued learning and progress

In Singapore, minimally invasive cancer resection is relatively new to breast surgery. Conventional nipple-sparing mastectomy usually leaves scars on the breast, nipple and areola region, or lengthy scars along the bra line or lateral breast. With minimally invasive breast surgery, breast surgeons can make small incisions in discreet locations such as the under-arm or bra line. In the endoscopic approach, a digital endoscope is utilised – it has a long fibre optic cable system with a video camera and light attached, akin to laparoscopic or thoracoscopic surgery in other organ systems. It functions within the air-insufflated surgical space alongside fine surgical instruments to display the operative field with optimal clarity, enabling surgeons to precisely remove breast and cancerous tissue during surgery. With this single-incision, single-port, minimally invasive procedure, in addition to the aesthetic benefit of concealing surgical scars, smaller 'off-the-breast' incisions also result in less pain, minimal operative scarring and decreased nipple, skin, and wound complications. In expert

hands, operative time and overall costs are comparable to conventional procedures.

The goal of minimally invasive breast surgery (MIBS) is to allow for the removal and restoration of tissues in a more discreet manner. MIBS was initially developed in partnership with implant-based reconstruction since the method of reconstruction is limited by the mini-incision size and distant location that hinders other complex methods of reconstruction. SKH further developed technical variations allowing concurrent autologous breast reconstruction that uses a woman's own body's skin, fat, and blood vessels to recreate the breasts as a free-flap procedure. It looks and feels more natural, contoured akin to natural breast tissues, and as opposed to implants, is a lifelong restorative solution.

More details about minimally invasive breast cancer surgery can be found at <https://bit.ly/breast-service-news-articles>



Commemorating 1000 Laparoscopic Liver Resections at SGH



throughout his tenure, guiding the transplant programme to greater heights.

As healthcare continues to evolve, it is our greatest hope that the legacy of this milestone will serve as a beacon of inspiration, guiding future generations of healthcare professionals towards continued excellence and collective advancement in patient care.

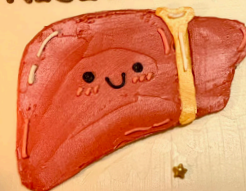
As 2023 drew to a close, the Department of Hepato-pancreato-biliary and Transplant Surgery organised a celebratory dinner to honour the monumental achievement of 1000 laparoscopic liver resections at SGH. This milestone not only celebrated the hospital's surgical prowess, it also underscored the collaborative spirit among professionals spanning diverse disciplines and departments within the medical realm.

The celebration gathered individuals from across surgery, anaesthesia and administrative domains. Held at the Aloft Hotel, the event reflected the shared commitment to excellence that underpinned the journey towards the historic milestone. Clin Assoc Prof Henry Ho, Division Chair, and Clin Prof Brian Goh, Head of Department, shared a few words and insights into the evolution of laparoscopic liver resection and acknowledged the pivotal role of the inter-disciplinary collaboration and seamless teamwork that has safeguarded patient safety throughout the surgical journey.

Beyond commemorating a surgical achievement, the dinner served as a catalyst to foster future collaborations, laying the groundwork for sustained inter-disciplinary cooperation and knowledge exchange. We also recognised Clin Assoc Prof Prema Raj, SGH Director of Liver Transplant Programme since 2015, for his utmost professionalism and dedication



CELEBRATING SGH
1000 LAPAROSCOPIC
LIVER RESECTIONS 2023



Cutting Edge Lymphedema Screening at CGH: ICG lymphography for early detection in breast cancer and traumatic limb injury patients

Secondary lymphedema, a condition often underdiagnosed and misunderstood, must no longer be regarded as a mere surgical complication. Instead, it should be recognised as a consequence of cancer treatment. The past decade has witnessed remarkable advancements in lymphedema surgery, offering a ray of hope to patients by complementing traditional conservative therapies and potentially eliminating the necessity for lifelong compression therapy through timely diagnosis and intervention.

Guided by Clinical Assistant Professor Jeremy Sun, Consultant and Director of Plastic Reconstructive and Aesthetic Surgery (PRAS), Department of Surgery, CGH, our team, which includes Nurse Clinician Ong Ling and Senior Physiotherapist Alicia Tan, embarked on a transformative journey to Tokyo, Japan, to immerse in a specialised fellowship programme dedicated to lymphedema management. This one-of-a-kind fellowship exposed us to a comprehensive range of surgical and therapeutic techniques, and the immersive experience fostered the seamless integration of therapists, nurses, and surgeons, uniting us into a closely-knit and synergistic team.

At the heart of our service lies an unwavering commitment to deliver streamlined, patient-centered care. We have instituted standardised outcome measures at various patient contact points, including volumetry, extremity index calculations, and quality-of-life assessments, to elevate the patient experience while guiding our research initiatives. Our meticulously designed protocol ensures a seamless patient journey, eliminating redundancy and maximising the efficiency of their care. Regular multi-disciplinary meetings also bring together key stakeholders to address complex cases and advance our strategic objectives.

CGH is proud to introduce a unique prospective screening protocol for breast cancer-related lymphedema, a collaborative effort with the Division of Breast Surgery. With the guidance of Breast Surgeon Consultants Dr Tan Su-Ming and Dr Jeffrey Hing, our primary aim is early detection and the provision of effective therapy and curative surgery for patients. This pioneering protocol identifies high-risk



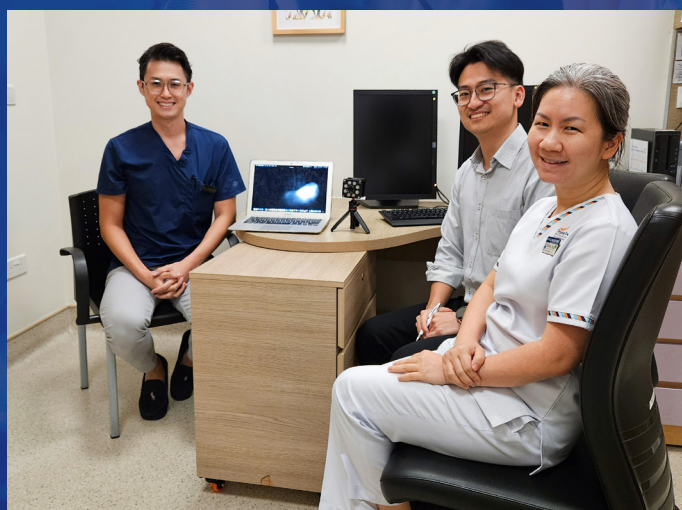
CGH Lymphedema Service Team: (left to right) 1) Ms Nadiyah Jamil, Senior Staff Nurse, 2) Ms Ong Ling, Nurse Clinician, 3) Dr Christopher Ho Wei Guang, Associate Consultant, PRAS, 4) Dr Jeremy Sun, Director of Service, PRAS, 5) Ms Alicia Tan, Senior Physiotherapist, 6) Ms Tan Suling Meliza, Principal Occupational Therapist (C), 7) Dr Stephanie Chan Li-Shan, Associate Consultant, PRAS (not in picture)

individuals, upon completion of their oncological treatment, to undergo specialised nursing education support and outcome measurement within our lymphedema service. This screening philosophy has also been implemented for post-traumatic lymphedema to ensure that patients with significant limb trauma receive timely diagnoses and intervention.

What sets our protocol apart is the use of Indocyanine Green (ICG) lymphography for screening and surveillance, offering a cost-effective and radiation-free alternative to traditional lymphoscintigraphy scans. ICG lymphography has become a fundamental aspect of our clinic's surveillance strategy, serving not only for diagnosing lymphedema but also for monitoring its severity and assessing post-surgical improvements. We have also streamlined the ICG lymphography protocol, ensuring that patients spend a mere average of 30 to 45 minutes in the clinic per session, and prioritising cost-efficiency to minimise patient expenses. Moreover, ICG lymphography is no longer confined to pre-operative planning, but has evolved into a versatile tool for ongoing patient care.

Our innovative approach not only transforms the patient experience but also enhances our ability to detect and address lymphedema in its early stages. This enables prompt intervention and significantly improved outcomes. By integrating ICG lymphography into our prospective screening protocol, we stand at the forefront of advancing lymphedema care and research, with the ultimate goal of making a positive impact on the lives of our patients.

Although our service is still in its early stages, the unwavering dedication and passion of our team drive us forward. We aspire to make substantial contributions to lymphedema research and redefine the landscape of this condition in Singapore. Our newly formed partnership with our PRAS counterparts at KKH also represents an exciting opportunity to replicate our prospective screening protocol for high-risk breast cancer-related lymphedema and lymphedema following pelvic lymph node dissection. Together, we are determined to transform lives and advance lymphedema care throughout Singapore.



Clin Asst Prof Jeremy Sun collaborates with Clin Asst Prof Jeffrey Hing, Consultant, Breast Surgery, CGH, and Ms Sofia Chua, Nurse Clinician, CGH, to set up the screening protocol.

The Geriatric Perioperative Service (GPS): Helping cognitively impaired elderly navigate their way through surgery

The GPS is a new service in SKH, led by Dr Tan Boon Hian and Dr Roshan Mahesh Lalimalani from the Department of Geriatrics, and Clin Assoc Prof Frederick Koh from the Department of Surgery, who started a pilot project of geriatric involvement in General Surgery patients and optimising cognitively-frail elders pre- or post- Major OT surgery.

In collaboration with dedicated nursing teams led by Senior Nurse Manager Lim Pei Xuan and pilots in Wards 18 and 28 since April 2023, we have started nursing-led geriatric care and concomitantly, the application of a suite of medical services ranging from perioperative assessment, medical optimisation, management of geriatric syndromes and behavior, nutrition, polypharmacy and rehabilitation to achieve the aims of comprehensive, consolidated and coordinated (3 C's) management of the elderly across the continuum of care.

Our team is pleased to report preliminary positive outcomes of reduced relative re-admission rates of 66% at four months, from 17.5% re-admission pre-intervention to 6% post-intervention. We also reduced anticholinergic burden in patients post-referral, which is clinically and statistically significant. This represents a major achievement in SingHealth and SKH in perioperative and multi-disciplinary care, and the team looks forward to expanding this new approach to care to more wards in the hospital, and eventually the entire surgical service, starting this year.



Dr Tan Boon Hian
Associate Consultant,
Department of Geriatric Medicine,
SKH



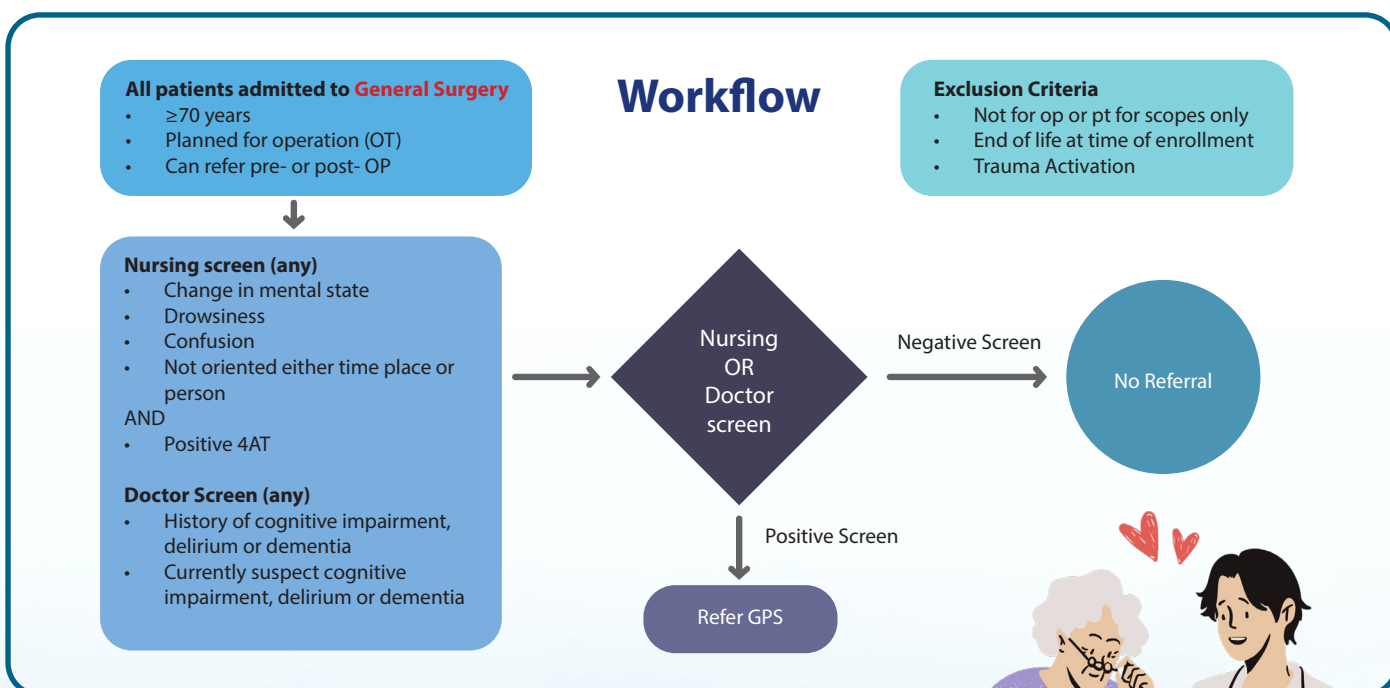
Clinical Associate Professor Frederick Koh
Consultant,
Department of Surgery,
SKH



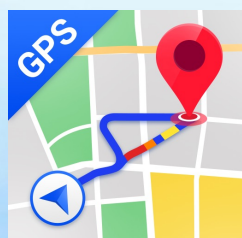
Dr Roshan Mahesh Lalimalani
Consultant,
Department of Geriatric Medicine,
SKH



Sister Lim Pei Xuan
Senior Nurse Manager,
Department of Ward 18,
SKH



Referral Criteria for the Geriatric Perioperative Service (GPS)



GPS helps elderly navigate through surgery

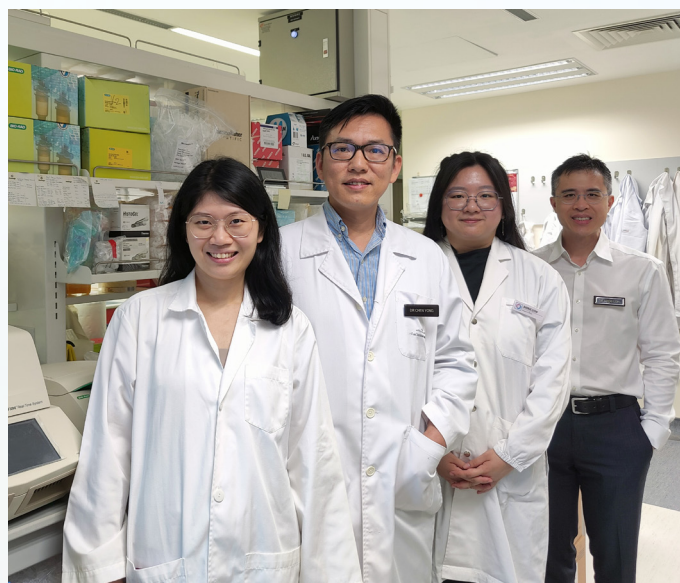


KKH Endowment Fund in Paediatric Surgery

In 2021, the KKH Endowment Fund was awarded to Assistant Professor Chen Yong, Senior Staff Physician, and Dr Meghan Lim, Clinician-Scientist Resident, Paediatric Surgery, KKH, to promote research in the field of paediatric surgery. The generous research fund has allowed us to conduct research to better understand the cause of biliary atresia and investigate the role of cool reperfusion in reducing liver reperfusion injury during liver transplant surgery. This will hopefully translate to better outcomes for these conditions in children.

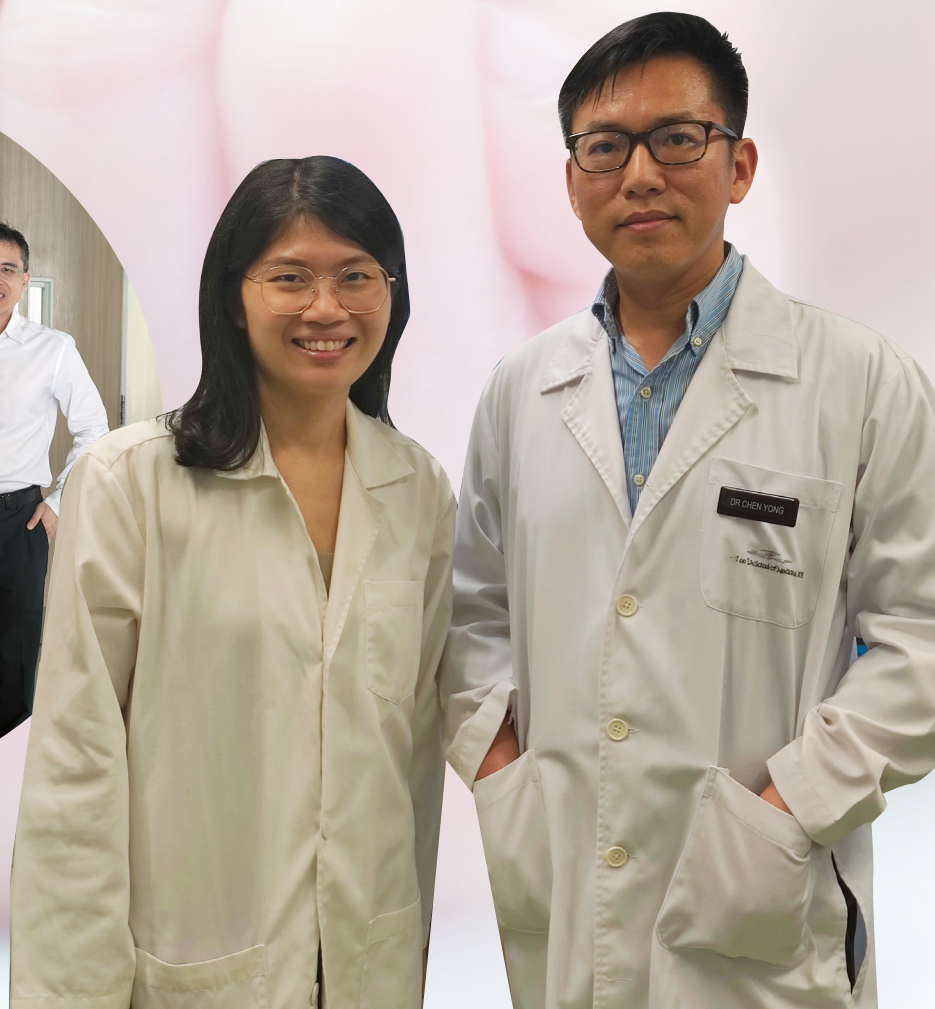
Biliary atresia is a condition where there is extrahepatic inflammation and fibrosis of the biliary system in infants. The condition poses significant morbidity and mortality, which is often difficult to diagnose early. About a third of these patients will eventually require liver transplantation. The endowment fund allows us to perform transcriptomic, metabolomic and proteomic assays to investigate candidate biomarkers as a non-invasive diagnostic test to detect biliary atresia early and understand the pathophysiology of the disease.

The endowment fund has also allowed us to embark on a novel animal study to determine if cool reperfusion reduces liver reperfusion injury during transplantation. Liver transplantation is limited by the availability of suitable organs, especially in the paediatric setting and is a life-changing operation for each patient. Although various methods have been developed to reduce tissue ischemia in organ transplant, few studies have focused on the prevention of reperfusion injury.



Left to Right: Dr Meghan Lim, Assistant Professor Chen Yong, Ms Audrie Leow, Research Officer and Assistant Professor Amos Loh, Chairman, Division of Surgery, KKH

Cool reperfusion is postulated to reduce production of reactive superoxide (ROS), which then lowers hepatocellular damage, metabolic derangements and improves graft function. This study could have significant impact on the graft and patient survival by reducing reperfusion insult during liver transplantation.



Panel Discussion: Uncovering Synergies for Innovation – How Healthcare Professionals and Engineers Collaborate – Thursday, 25 January 2024

Uncovering Synergies for Innovation
How Healthcare Professionals and Engineers Collaborate

Dr Ian Loh
Chief & Senior Consultant,
ENT- Head & Neck Surgery
CGH

A/Prof Huang Shaoying
Engineering Product
Development,
SUTD

Mr John Ng
Singapore Biodesign
Innovation Fellow;
SGInnovate

Dr Danny Tng
Clinician-Innovator;
Resident Physician,
SGH

A/Prof Michael Girard
PI, Ophthalmic Engineering &
Innovation Lab,
SERI

Co-organised by:

Changi General Hospital
SingHealth

DukeNUS
Medical School

SingHealth DukeNUS
ACROSS MEDICAL CENTRE
SURGERY

SUTD
SINGAPORE UNIVERSITY OF
TECHNOLOGY AND DESIGN

Thu 25 Jan 2024

5.00pm to 7.00pm

CGH Medical Centre Level 5

Networking session to follow. Refreshments provided.

Scan now to Register!

This event is opened to all!

We kicked off the new year with a panel discussion on **“Uncovering Synergies for Innovation: How Healthcare Professionals and Engineers Collaborate”**. The event was co-organised by CGH, the Singapore University of Technology and Design (SUTD), the SingHealth Duke-NUS Surgery ACP and Duke-NUS Office of Innovation & Entrepreneurship (OIE).

Held at the CGH Medical Centre, we were thrilled welcome about 50 participants – both in-person and online – from across SingHealth institutions, SUTD, the National University of Singapore (NUS), Nanyang Technological University (NTU) and various industry partners. Attendees gleaned valuable insights from the active discussion with our esteemed panellists, namely, Clin Asst Prof Ian Loh, Senior Consultant and Chief, Department of Otorhinolaryngology - Head & Neck Surgery, CGH; Assoc Prof Huang Shaoying, Engineering Product Development, SUTD; Mr John Ng, Fellow, Singapore Biodesign; Dr Danny Tng, Clinician-Innovator and Resident Physician, Dept of Infectious Diseases, SGH and Assoc Prof Michael Girard, PI, Ophthalmic Engineering and Innovation Lab, SERI. The session ended with a lively networking segment, where attendees made new connections and reconnected with colleagues and friends.

Two main learning points were gleaned from the session:

- 1) Having the right attitude and mindset
This means that we must be open-minded and willing to venture beyond our typical clinical or engineering environments. Bound together by our shared passion and purpose, we are far more similar than we may realize. So, what's stopping us from mingling and sharing?

- 2) Building a supporting eco-system for innovation
That is where education and awareness come in. The more individuals advocate for innovation and collaboration, voicing their vision and goals for improvement and impact, the greater the awareness generated. This, in turn, attracts support and opens new avenues for resources, expertise, and funding opportunities.

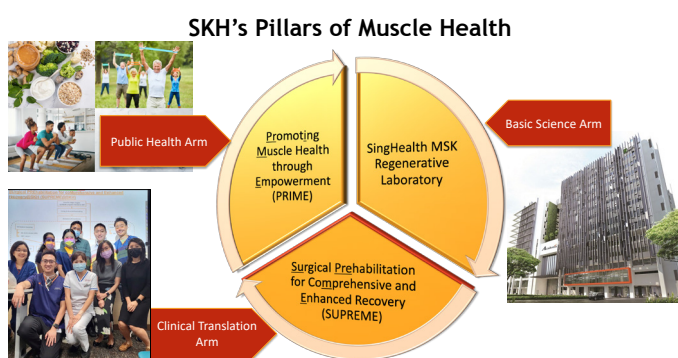
Lastly, when it comes to the topic of support, it is important to acknowledge and appreciate the presence of a strong support eco-system and express gratitude to those contributing to your project.



A Small Step in the Right Direction - Centre of Excellence for the Promotion of Muscle Health



Sarcopenia, or the age-related loss of muscle mass, was first introduced by Irwin Rosenberg in 1989, has recently been recognised as a disease state that has its own ICDD-10 code in 2016. This age-related process of quantitative and qualitative muscle loss is now considered the precursory process of clinical frailty. Clinical frailty is associated with a poorer quality-of-life, but also increased hospitalisation and risk of surgical morbidity and mortality. Two recent epidemiological studies in Singapore, the Yishun study and Geri-LABS2 study, found that the prevalence of sarcopenia in the local community is 27.0% to 32.2%. In addition, those with sarcopenia were unsurprisingly associated with increased age, frailty, and type 2 Diabetes Mellitus.



Sengkang General Hospital's multi-faceted approach in tackling muscle health issues. This includes a basic science arm, a clinical translation pipeline and the newly introduced public health component – PRIME

The Asian and European Workgroup for Sarcopenia (AWSCOP, EWGSCOP) have both acknowledged the clinical significance and impact of sarcopenia in age-related and disease-related degeneration leading to frailty. As of October 2022, Singapore has already published the clinical practice guidelines for the management of the disease, highlighting the the increasing recognition of a previously under-diagnosed condition.

Sarcopenia, which can present in patients as young as 30 years old, has also negative impact on quality of life, overall survival and impaired recovery from acute stress events such as surgery. Numerous meta-analyses have highlighted that sarcopenia is an independent risk factor for increased surgical complications, increased duration of hospitalisation, reduced overall survival and, interestingly enough, reduced disease-free survival in cancer patients. Thus, this condition is also important to be identified and optimised in surgical patients.

SKH, with its Mission of “Better Health Together”, has built up its clinical, basic science research and public health infrastructure and facilities to address this unmet clinical need.

The clinical improvement aims to increase the diagnosis of sarcopenia in the perioperative period and optimise the management of this risk factor, amongst other risk factors, through multimodal prehabilitation (Surgical Prehabilitation for Comprehensive Enhanced Recovery - SUPREME). The SUPREME programme has run for the last three years and has demonstrated improved surgical outcomes with reduced length of stay, complications, and improved healthcare cost savings of an average of S\$15,000 per patient.

The SingHealth Musculoskeletal Regenerative Laboratory was also set up on the SGH Campus with the purpose of grounding clinical translation on sound scientific findings and discovery in the lab. With

longitudinal cohorts being recruited in the clinical space, which has helped established the World's First Muscle and Serum biorepository that is phenotyped for sarcopenia, scientific discovery around the under-researched area of sarcopenia can take place. Findings from the laboratory will advise clinical practice directly and establish a clinical translation “from-bench-to-bedside” pipeline around the management of sarcopenia and surgical optimisation.

Lastly, Public Health is also a critical cog in the promotion of muscle health. As sarcopenia was only described since 1988, this young and increasingly relevant problem is still poorly understood by both healthcare professionals and the public. The programme for Promotion of Muscle Health through Empowerment, or PRIME, aims to educate and equip healthcare staff with the skills and knowledge necessary to diagnose and manage the disease, as well as empower the public to take ownership of their own muscle health at all ages.

These efforts of SKH were recognised by Abbott International with a signing of a Memorandum of Understanding (MOU) on 17 January 2024 to recognise SKH as a Centre of Excellence in the promotion of muscle health in the region, spearheading the improved recognition, management and education about this increasingly relevant and prevalent condition. The MOU also aims to foster a closer institution-industry partnership to leverage the resources and expertise of each institution to expedite scientific discovery, finetune clinical management and optimise outcomes for our patients, who can then “Keep Well, Get Well and Live Well” as they age.



Signing of Memorandum of Understanding between Sengkang General Hospital and Abbott International. Featured in the centre are Ms June Lam, Janse van Rensburg from Abbott (second from left) and Prof Teo Eng Kiong, CEO SKH (third from left).



Members from the SKH and Abbott International teams not only promoting the importance of muscle health, but also the strong partnership between institution and industry towards a common goal.

Education Night 2023

Held on 8 November 2023 at the SingHealth Tower Function Room, Education Night brought together faculty who have contributed significantly to undergraduate education, medical students who were recipients of the SingHealth Medical Student Medical Talent Development Award (SMSTDA) and Duke-NUS Medical Student Fellowship (MSF), and their mentors.

Clin Prof Chong Tze Tec, Vice Chair (Undergraduate Education), Surgery ACP, kicked off the Night with a welcome speech. He thanked the faculties for their contribution and dedication in educating and guiding the undergraduate students. Next, five undergraduate medical students from Duke-NUS Medical School and NUS Yong Loo Lin School of Medicine, who received either SMSTDA or MSF, presented their projects.

Faculty who garnered the greatest number of compliments from the medical students were also recognized at the event. While Clin Asst Prof Julie Liana, Consultant, Department of

Breast Surgery, SGH, received the acknowledgement from Prof Scott Compton, Deputy Head, Office of Education, Duke-NUS, Dr Khor Shao Nan, Associate Consultant, Department of Colorectal Surgery, SGH, Clin Asst Prof Tan Hwee Leong, Consultant, Department of HPB & Transplant Surgery, SGH, and Clin Asst Prof Julie Liana were the top three faculty who received this honour!

Lastly, Clin Prof Chong gave out prizes to the winners from Surgery Open House held in October 2023. Clin Assoc Prof Henry Ho, Chairman, Division of Surgery and Surgical Oncology, SGH & NCCS, and Academic Chair, Surgery ACP, thanked everyone for attending the event, extended his heartfelt thanks to the faculties for dedicating their time to teach the students, the mentors who guided the student awardees and faculties who spent their weekend morning running the Surgery Open House event.

Welcome speech
by Clin Prof Chong
Tze Tec



Closing speech
by Clin Assoc Prof
Henry Ho



Prof Scott Compton
presenting to Clin Asst
Prof Julie Liana



Prize Winners from
Surgery Open House



Group Photo by SMSTDA
and MSF awardees



My Canadian Adventure in Urologic Oncology

Fellowship: Society of Urologic Oncology Fellowship, University of Toronto, Toronto, Canada, 2023

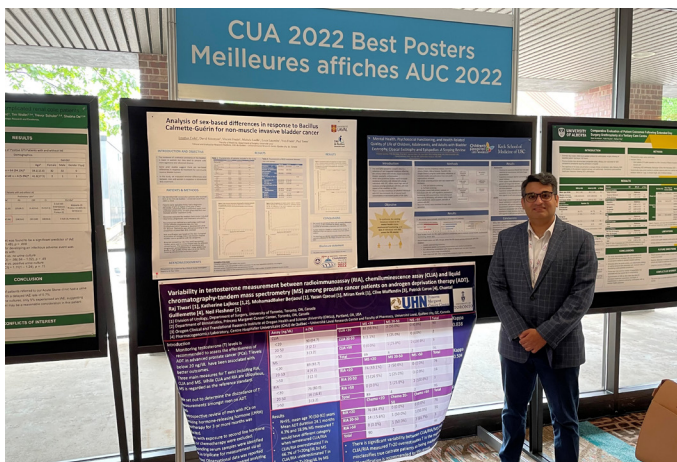


**Clinical Assistant Professor
Raj Vikesh Tiwari**

Consultant, Department of
Urology, SKH

I had the pleasure of attending the Society of Urologic Oncology (SUO) Uro-Oncology fellowship at the University of Toronto Canada from July 2021 to July 2023 across four hospitals –Toronto General Hospital, Princess Margaret Cancer Center (PMCC), Mount Sinai Hospital and Sunnybrook Health Sciences Center. It was almost like a “second residency”, with fellows having a fixed curriculum, logbook-monitored surgical requirements, dedicated didactic educational programs, simulator training, research mentorship and even in-training exams!

The first year consisted 80% research and 20% clinical practice. In this year, my research supervisor was Prof Neil Fleshner, the divisional chairman at University Health Network (UHN). He is a big name in prostate cancer research and invited me to participate in



Presenting research at the Canadian Urological Association Meeting 2022

several projects in the fields of prostate cancer epidemiology, novel biomarkers and genetics. Through his guidance, I was able to obtain several grants and publications! I benefited from working with UHN's vast research network and the McCain genito-urinary biobank, which aided in my understanding of the intricacies of how these work within a publicly funded system.

The second year comprised 20% research and 80% clinical practice. This was my main surgical year. I worked with several faculties across various robotic, laparoscopic, and open procedures managing patients often with multiple complex issues. My case logs were around 250 cases that year, being also fortunate enough to also be involved in novel urological procedures such as trans urethral ultrasound ablation (TULSA) and irreversible electroporation for prostate cancer and micro ultrasound for biopsies. This was also the year I managed to present completed research projects at various international meetings and was fortunate enough to win a best poster prize at the Canadian Urological Association meeting 2022.

Towards the last six months of my fellowship, I was selected to attend the Princess Margaret Global Oncology Leadership Development (GOLD) programme, where I had the privilege of learning from Canadian healthcare leaders on overcoming challenges in oncology care delivery between first-world systems and disadvantaged groups in low to middle income countries.

In all, the 2 years I spent in Canada were positive and fruitful. I hope to bring several of the lessons learnt to improve the multi-disciplinary care of uro-oncology patients in our healthcare system. I am also grateful to Clin Prof Christopher Cheng, Assoc Prof Ong Biauwh Chi and Clin Assoc Prof Lee Lui Shiong for their support.



Various robotic assisted systems



With close mentors Prof Tony Finelli, Prof of Surgery and Chair of Urology, University of Toronto, Canada, and Asst Prof Girish Kulkarni, Fellowship Program Director, Department of Surgery, University of Toronto, Canada



With Prof Laurence Klotz,
Sunnybrook Hospital

With Prof Alex Zlotta, Mount Sinai Hospital, Toronto

Surgery ACP Family Meeting 2024 - EPIC and the surgeon 2nd Event on 7th February 2024

SURGERY ACP FAMILY MEETING 2024
Yearly meeting binding people across institutions

7 FEBRUARY
CGH AUDITORIUM
(Park at B2, Main Building and take Lift Lobby C)
6.00PM to 8.30PM

SingHealth's approach for EPIC and its potential
Dr Goh Min Liong
Group Chief Medical Informatics Officer, SingHealth

EPIC and the surgeon
Dr Aung Myint Oo @ Ye Jian Guo
Assistant Chief Clinical Informatics Officer, Tan Tock Seng Hospital

How Breast SDDC proposes to implement EPIC
Dr Mok Chi Wei
Consultant, Breast Surgery, CGH General Hospital

Forum moderated by
Dr Adrian Chiow
Chief of Surgery, Chang Ghee Hospital

SCAN OR CLICK TO REGISTER
<https://form.gov.sg/657da5264ddee10012f43cf5>

6.00pm	Welcome Address by Assoc Prof Andrew Wong, Vice Chair (Clinical), Surgery ACP
6.10pm	Speaker Presentations
6.50pm	Forum
7.10pm	Closing Remarks & New Year Dinner with Lohei
8.30pm	End of Programme

2024

SURGERY

Held at CGH's auditorium on a Wednesday evening, our 2nd Family Meeting was attended by over 60 members from across SingHealth institutions, including colleagues from the nursing and allied health disciplines. This annual event aims to share and update on the areas of priorities in Surgery ACP and serve as an opportunity for our faculty across institutions to interact and share knowledge.

The Event Host, Clin Assoc Prof Andrew Wong, Vice Chair (Clinical), Surgery ACP, kick-started the event by giving a warm welcome to the two Guest VIPs: Clin Assoc Prof Ng Kee Chong, Chief Executive Officer, CGH, and Clin Assoc Prof Augustine Tee, Deputy CMB (Medical Disciplines) CGH and EGH Clinical Lead, Medical Board, CGH; and all participants who took time and effort to attend the physical event.

The first presentation on "SingHealth's approach for EPIC and its potential" was by Dr Goh Min Liong, Group Chief Medical Informatics Officer (GCMIO), SingHealth. He shared the three key principles of "One Digital SingHealth" and the Digital SingHealth Steering Committee (DSSC). He emphasised the importance of training and customisation for optimal performance and touched on the timelines, implementation methodology and role of ACPs/SDDCs.

The presentation was followed by Dr Aung Myint Oo @ Ye Jian Guo, Assistant Chief Clinical Informatics Officer, Tan Tock Seng Hospital (TTSH), who provided insights to "EPIC and the surgeon". He shared his experiences on surgeons as end users, the importance of clinician engagement for early design, good clinical governance, fast decision-making, and that change management is key to success.

Clin Asst Prof Mok Chi Wei, Consultant, Department of Breast Surgery, CGH, shared the last presentation on "How Breast SDDC proposes to implement EPIC". He shared the experiences and challenges of the SDDC Breast EPIC Team, its EPIC journey, guiding principles and six areas of priority.



Q&A Panel (Left to Right):
Dr Goh Min Liong, Group Chief Medical Informatics Officer, SingHealth;
Dr Aung Myint Oo @ Ye Jian Guo, Assistant Chief Clinical Informatics Officer, Tan Tock Seng Hospital;
Clin Assoc Prof Adrian Chiow, Chief of Surgery, CGH;
Clin Assoc Prof Andrew Wong, Vice Chair (Clinical), Surgery ACP;
Clin Asst Prof Mok Chi Wei, Consultant, Breast Surgery, CGH;
Clin Assoc Prof Henry Ho, Academic Chair, Surgery ACP



Moderated by Clin Assoc Prof Adrian Chiow, Senior Consultant and Chief, Department of Surgery, CGH, the Forum Q&A session saw engaging and lively discussions. The speakers shared relevant insights and experiences and discussed some challenges during EPIC implementation.

In his closing, Clin Assoc Prof Ho presented the EPIC Surgery ACP Leads and Institution Workgroups and encouraged collaboration between SingHealth institutions' surgical faculties for a more synergistic and harmonised approach to building the new EPIC system. He thanked the participants for their active participation, the speakers for their insightful presentations and the Guest VIPs for gracing the event.




The event concluded with joyful Lunar New Year's Lo Hei and celebrations, tossing to good health and prosperity in the new year.

We look forward to sharing and updating on the areas of priorities in the Surgery ACP and strengthening our network across institutions with this annual event. Do join your fellow colleagues at the next Family Meeting in 2025 at KKH!

EPIC Surgery ACP Leads & Institution Workgroups

EPIC Surgery ACP Leads:

	A/P Benita Tan Chair, Division of Surgery, SKH		Dr Beatrice Koh Consultant, General Surgery, SGH		Designated stand-in reps: Dr Wong Neng Wei Dr Sim Siam Wee
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Department/SDDC	 SGH	 CGH	 SKH	 KKH	
General Surgery	 Dr Beatrice Koh (SGH Overall Lead)	 Dr Wong Neng Wei (CGH Overall Lead)	 Dr Alvin Tan Yang Hui	 Dr Sim Siam Wee (KKH Overall Lead)	
ENT - H&N Surgery	 Dr Tay Kaijun	 Dr John Loh	 Dr Andy Chua Jian Kai	 Dr Victor Alarva	
Urology	 A/Prof Kenneth Chen	 Dr Joshua Lee	 Dr Alvin Low Wei Xiang	 Dr Sim Siam Wee	
Breast SDDC	 Dr Tan Si Ying	 Dr Mok Chi Wei	 Dr Faith Leong Qi Hui	 Dr Jinjie Pang	
Head & Neck SDDC	 Dr Kimberley Kiong	 Dr Kao Nien Hoang	 Dr Andy Chua Jian Kai	 Dr Victor Alarva	
Vascular SDDC	 Dr Adrian Chia	 Dr Derek Ho	SKH will align with SGH & CGH vascular reps' decision		 Dr Michael Hsieh
Secretariat (Admin Rep)	 Mr Jason Tan (also for Surgery ACP)	CGH secretariat (admin rep) is to be confirmed		 Ms Lyn Ang Bee Leng	 Ms Vivien Wong

Surgical International Training Experience (SITE) Sharing Event on 24 November 2023 - South Korea, Canada and Scotland

Since our inaugural event in July 2022, this bi-annual event aims to share and connect faculty within the Surgery ACP. Clinicians returning from overseas skills attachment are invited as speakers to share their learning experiences and provide valuable insights and tips on making the best of their overseas skills attachment training programmes. To date, we have completed four events with positive feedback from participants.

Held at One Farrer Hotel on a Friday evening, our 4th SITE event was attended by over 20 participants from departments across SGH-NCCS, CGH, SKH and KKH, including residents and clinical fellows (new invitees).

The evening opened with a warm welcome by Clin Assoc Prof Andrew Wong, Event Host, Vice Chair (Clinical), Surgery ACP. Clin Asst Prof Lim Sue Zann, Clin Asst Prof Raj Vikesh Tiwari and Clin Asst Prof Beatrice Koh then shared their stories and memorable fellowship experiences from South Korea, Canada and Scotland respectively. Clin Assoc Prof Lee Lui Shiong, Senior Consultant and Head, Department of Urology, SKH, moderated the session, facilitating interactions and discussion between the speakers and attendees. It was a great opportunity for participants to mingle and interact across institutions and disciplines, to build networks and grow relationships within the ACP.

We look forward to enhancing learning exchanges and strengthening our connectivity within the ACP with more of such events. Do join your fellow colleagues at the next sharing event in May 2024!

Post-Event Survey Results (89% responded)

- 100% - Event was well-structured and met its objectives
- 100% - Happy with the venue and food
- 100% - Event duration was just right
- Encouraging feedback among the written comments:
 - Adventures and learning experiences were very interesting. Topics were very relatable.
 - Very happy to learn new things from fellows.
 - More should be organised in future. A great learning and sharing session.



More fond memories can be found at this link (internet access required):
<https://www.dropbox.com/scl/fo/1944nub2o2ptwn4m6uafp/h?rlkey=onqzwy83emtewb5txdx0hivkm&dl=0>

Highlights of speakers' presentations



Speaker

Clin Asst Prof Lim Sue Zann
Consultant, Breast Surgery, SGH

Topic

My journey in tailoring breast surgery for patients

Fellowship

Asan Medical Center, Seoul, South Korea, 2022

Highlights of Presentation

"My fellowship journey focused on the minimally invasive breast surgery procedures, such as endoscopic and robotic mastectomy. These techniques allow mastectomy to be performed through smaller and distant incision which provides better aesthetic outcome. I learned new techniques in oncoplastic breast surgery including volume displacement, replacement, and reduction methods. I also learned new adjuncts in the operating theatre which made breast surgery more accurate and efficient."



Speaker

Clin Asst Prof Raj Vikesh Tiwari
Consultant, Urology, SKH

Topic

My Canadian Journey through Urologic Oncology

Fellowship

Society of Urologic Oncology Fellowship, University of Toronto, Toronto, Canada, 2023

Highlights of Presentation

"My 2 years as a SUO fellow have been some of the most enriching in my life so far, from standing on the shoulders of giants learning advanced robotic and open surgical skills to performing novel procedures and being supported by large grants in a thriving well-funded research eco system. Mentors who were more like family, always willing to guide and inspire me. Grateful to all who made it possible!"



Speaker

Clin Asst Prof Beatrice Koh
Consultant, General Surgery, SGH

Topic

My Wee Trip to the Highlands

Fellowship

Glasgow Royal Infirmary, Oesophagogastric Surgery, Glasgow Royal Infirmary, Scotland, 2022

Highlights of Presentation

"Acute Care Surgery (ACS) is a relatively new concept and specialty in Singapore. It was first started in KTPH and since then the ACS model has been adopted by several other institutions. ACS is a training paradigm shift that requires graduating general surgical trainees to be well equipped with skills that encompasses trauma, critical care, and emergency surgery."