



Royal Australasian
College of Surgeons
Te Whare Piki Ora o Māhutonga

CONFERENCE HANDBOOK

Surgery 2023: Surgical care in health system change

Thursday 31 August - Friday 1 September 2023

Te Papa, Wellington
Aotearoa New Zealand



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Convener's welcome

Dear colleagues,

Kia ora koutou and a very warm welcome to *Surgery 2023*.

We have put together a carefully crafted programme and are looking forward to some thought-provoking presentations and lively discussions.

We chose the theme *Surgical care in health system change* because we see the health reforms as a real opportunity for the involvement of surgical leadership to ensure we can provide better care to our communities into the future.

Our speakers include some of those driving the reforms, such as Manatū Hauora's Dr Diana Sarfati and Te Whatu Ora's Margie Apa. We'll also learn lessons from those involved in past health reforms both here and overseas, including former chair of NHS England Sir Malcolm Grant, and hear from surgeons who are leading change today, including Acting CMO Te Whau Ora Counties Manukau Dr Andrew Connolly and RACS President Associate Professor Kerin Fielding.

We also welcome presentations by our Trainees and Younger Fellows who are finalists in this year's Louis Barnett Prize. The quality of entrants' scientific research never fails to impress and it's fantastic for us "older" Fellows to have a chance to connect with the younger generations coming through.

As much as anything, we're looking forward to catching up with all of you, our colleagues and friends. The Aotearoa Annual Surgeons' Meeting (ASM) is always an enjoyable couple of days where we come together from across RACS' nine surgical specialties and from around the motu (country). There's no event like it.

We hope you enjoy it.

Ngā mihi nui,



Chris Adams
FRACS
2023 Convener



Nigel Willis
FRACS
2023 Convener



Sean Galvin
FRACS
2023 Convener





Table of contents

02	WELCOME
04	SPEAKERS
08	PROGRAMME
10	LOUIS BARNETT PRIZE 2023: ABSTRACTS
18	EXHIBITOR CATALOGUE
22	CONFERENCE INFORMATION

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Need help?

Whether you're joining us in person or online, we're here to help. Call (if urgent), text or email:

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Guest speakers



Margie Apa

Margie is Chief Executive of Te Whatu Ora - Health New Zealand, the government's new centralised national health organisation. She has more than two decades of health sector leadership experience, previously serving as CEO of what was then Counties Manukau District Health Board (DHB) (now Te Whatu Ora Counties Manukau).

Margie is the first Samoan to have led a DHB in Aotearoa New Zealand and has also served as Deputy Director-General Sector Capability and Implementation at the Ministry of Health.

Margie has been on the board of World Vision New Zealand since 2011 and has been Chair since 2019.

Margie is an active member of the Pacific Island Presbyterian community and carries the honorific title Fepulea'i from her family village of Sale'aula, Savai'i in Samoa.



Victoria Atkinson

Building on a career as a cardiothoracic surgeon practicing at Royal Melbourne Hospital for over a decade, Victoria now combines her clinical knowledge with an executive career as the National Chief Medical Officer (CMO) across the 40 hospitals in the Healthscope group.

With over 25 years' experience across the private, not-for-profit, aged care and public sectors of healthcare, Victoria brings both the macroscopic and microscopic views of health to the CMO role and acted as National Incident Commander for Healthscope's Covid-19 response.

Victoria has created programmes across culture in healthcare, clinical strategy, patient experience, afterhours hospital care and clinical information systems.

She has board experience in aged care, public hospitals, medical defence and education.



Vanessa Blair

Vanessa Blair is a general and breast surgeon and divides her working week between Whangārei and Auckland. She practices at Auckland City Hospital in the Acute Surgery Unit and at St Marks Breast centre, as well as running her own General Surgical practice in Whangārei. She is the current president of the New Zealand Association of General Surgeons.

Vanessa did two years of a law degree before switching to medicine. When she graduated from Auckland Medical School, she was awarded the Rotary Prize for the Most Distinguished Graduate.

In 2002, Vanessa interrupted her training in General Surgery to complete a PhD in hereditary diffuse gastric cancer.

Vanessa was co-first author on related papers in *Gut*, *Gastroenterology* and *Cancer research*. She has also written a book chapter on hereditary lobular breast cancer and was the first author on the latest guidelines for the management of hereditary diffuse gastric cancer, published in *Lancet Oncology* August 2020. These guidelines are the result of a collaboration which is a blueprint of how highly specialised healthcare for a rare condition can be delivered in a provincial centre. The collaboration has evolved into a network across the motu and has had a global impact.



Duncan Bliss

Duncan is Te Whatu Ora Group Manager for Planned Care, Hospital and Specialist Services.

Before that he was Director of Surgical Services, Te Whatu Ora Te Toka Tumai Auckland. He held senior leadership positions within Te Whatu Ora in Auckland from 2016.

Prior to that, Duncan worked at the Royal Cornwall Hospitals NHS Trust from 2010 and was Associate Director of Surgery



from 2015 until his move to Aotearoa New Zealand.



Andrew Connolly

Andrew is a general surgeon at Te Whatu Ora Counties Manukau where he is also the Acting Chief Medical Officer. He was Head of Department at Counties Manukau Health from 2003 to 2019.

Andrew was appointed to the Medical Council of New Zealand board in 2009 and served as Chair for the final five years, completing his tenure in February 2019.

He has served on various ministerial committees to review aspects of the health system including the 2015 capacity and capability review. In 2022 he chaired the Planned Care Taskforce and is currently a member of the ministerial advisory committee for the health reforms.

Andrew has served on several Australian Medical Council vocational college accreditation teams, and in 2021 was seconded to the Ministry of Health as national Chief Medical Officer.



Elizabeth Dennett

Elizabeth works as a specialist colorectal surgeon at Wakefield Hospital in Wellington and is the Clinical Director at Te Aho o Te Kahu - Cancer Control Agency. She is also Associate Professor in Surgery at Otago University, the past Chair of the Aotearoa New Zealand national training board for General Surgery, past Chair Board in General Surgery and was the first New Zealand woman general surgeon appointed to RACS' Court of Examiners.

She is a member of the Colorectal Surgical Society of Australia and New Zealand, RACS' Section of Colorectal Surgery, the International Anal Neoplasia Society, the New Zealand Association of General Surgeons, the Pharmaceutical and Therapeutics Advisory Committee,

and the Infectious Diseases Specialist Advisory Committee. She is also Chair of the Nephrology and Diabetes Specialist Advisory Committees at PHARMAC.



Jim Duthie

Jim is a urologist based in both Tauranga and Wellington subspecialising in prostate cancer and men's health. He is a high-volume prostate cancer surgeon with 10 years' experience in robotic surgery, having completed a Fellowship in Robotic Surgery. He is also a surgical trainer and mentor in robotic surgery and was instrumental in acquiring New Zealand's first robotic surgery simulator.

With an interest in integrated cancer care, Jim has completed both a degree in Psychology, and a post-graduate certificate in human nutrition. Jim has been a medical advisor to the Prostate Cancer Foundation of New Zealand and Testicular Cancer New Zealand for nearly 10 years.

He has also designed two smartphone apps for men with prostate cancer and created resources for Prostate Cancer Foundation of New Zealand and the Australian Prostate Cancer Centre. He has been a writer on men's health for the *British Journal of Urology International*, the *European Medical Journal*, and *New Zealand Doctor* magazine. Jim is the only Southern Hemisphere urologist to be a contributor to the popular *Prostate Matters* UK website and has worked to build a New Zealand version of the site.



Elizabeth Eppel

Elizabeth has been working as a researcher since 2007 when she commenced her doctorate in which she examined policy processed in tertiary education. She is currently

Adjunct Research Fellow at the School of Government at Victoria University of Wellington.

She was previously a senior public servant with 20 years' experience in government agencies, twelve of those at deputy secretary level in the Ministry of Education. Prior to that she taught sciences in secondary schools.

With colleagues, and alone, Victoria conducts research into collaborative governance, responses to complexity in public policy processes and the incorporation of the digital into public administration. She is involved in ongoing research into sustainable responses to family violence in primary health care using Te Ao Māori perspectives, concepts and values blended with complexity theory.



Kerin Fielding

Kerin is President of RACS' governing Council.

She was the first woman orthopaedic surgeon in New South Wales (NSW) and has established a successful career in Wagga Wagga over the past 30 years working at the Wagga Wagga Base Hospital and Calvary Healthcare Riverina. Kerin has special interests in surgery of the hip, knee and spine and in trauma care.

She is a leader in surgical education and training and is the Chair of the NSW Clinical Surgical Training Council for the Health Education and Training Institute (NSW Health) and the Clinical Lead for Speciality Surgery Notre Dame University, Wagga Wagga Campus.

Kerin is also a senior course director for the Early Management of Severe Trauma course for RACS and serves on the College's National Early Management of Severe Trauma Committee.

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Frank Frizelle

Frank is Professor of Surgery at the University of Otago and Clinical Director of General Surgery for Christchurch and the West Coast. He has been Editor in Chief of the *New Zealand Medical Journal* for the last 21 years and is the longest serving editor on the International Committee of Medical Journal Editors (ICMJE).

Frank graduated from Otago Medical School in 1985 and obtained his Fellowship in General Surgery in 1992. Following a period overseas in the US and Scotland he returned to Christchurch in 1996 where he continues to live and work.

Frank has over 35 years of scientific research experience which has led to both national and international recognition including the RACS Award for Outstanding Research (2022) and the RACS Colin McRae Medal for excellence in the art of surgery.

He has been involved in numerous committees relating to surgery and is current Vice President of the Colorectal Surgical Society of Australia and New Zealand. He is an elected member of the elite International Surgical Group and has been a patron of the Canterbury Ostomy Society since 2015.

In the 2022 Queen's Birthday Honours list, Frank was appointed an Officer of the New Zealand Order of Merit (ONZM) for services to health.



Malcolm Grant

Sir Malcolm was born and educated in Aotearoa New Zealand and went originally to the UK as an academic lawyer, becoming a law professor at University College London (UCL) and then Cambridge.

He was elected Pro Vice Chancellor of Cambridge in 2001 and was then

appointed President and Provost (Vice-Chancellor) of UCL where he served for 10 years from 2003.

After his time at UCL, Sir Malcolm was appointed as the founding Chair of the Board of the NHS England, created as the independent commissioning system leader under the 2013 NHS reforms. He served for seven years.

Sir Malcolm has also served as Chancellor of the University of York, and Chair of the Russell Group, the Local Government Commission for England and the Agriculture and Environment Biotechnology Commission (UK). He is currently a senior adviser on higher education reform in the US and France.



Lester Levy

Lester is Professor of Digital Health Leadership at the Auckland University of Technology (AUT), Chair of the New Zealand Health Research Council, Chair and Director of several private healthcare companies and an independent advisor on healthcare, leadership and leadership development.

He is a medical doctor and MBA with a postgraduate professional qualification in medical administration. Prior to taking his current role Lester was at the University of Auckland where he was an Adjunct Professor of Leadership in the Graduate School of Management and Head of the New Zealand Leadership Institute. Leadership, innovation, culture and change have been the focus of his working and academic careers.

In the past 15 years he has held seven ministerial appointments and has been a seconded advisor to the Department of the Prime Minister and Cabinet, a lead reviewer for the State Services Commission's Performance Improvement Framework and an independent expert advisor to the Ministry of Health and the Ministry of Business, Innovation and Enterprise.

In the 2013 New Zealand New Year's Honours list he was appointed a Companion of the New Zealand Order of

Merit (CNZM) for services to health and education.



Riana Manuel

Riana is a leader within the Māori and health sectors and has extensive experience leading Kaupapa Māori organisations.

Before joining Te Aka Whai Ora – Māori Health Authority as its founding Chief Executive, Riana was CEO of Hauraki Primary Health Organisation and Te Korowai Hauora o Hauraki.

Hailing from Manaia in Pare Hauraki, Riana is a registered nurse by trade and has enjoyed a career that has seen her work across many parts of the health sector, developing strong relationships along the way.

Riana is deeply committed to improving the health and wellbeing of people and believes that in doing so, there will be a positive impact on the health and wellbeing of Aotearoa.



Samantha Murton

Samantha is President of the Royal New Zealand College of General Practitioners, a working Wellington GP, and Senior Lecturer and Post Graduate Convenor at the University of Otago, Wellington.

Samantha advocates for the GP profession at a national level, and does this while maintaining practical experience that keeps her advice relevant and realistic.

In the 2021 Queen's Birthday Honours, Sam was appointed as a Member of the New Zealand Order of Merit (MNZM) for her services to medical education, especially general practice.

She aims to represent the challenges that face GPs and their patients, bring GPs together nationally, and champion the



role of the expert general practitioner who works in the broader primary care team.



Lloyd McCann

Lloyd is the Chief Executive Officer of Tāmaki Health. He was previously the CEO of Mercy Radiology and Clinics and Head of Digital Health at Healthcare Holdings.

He is a Fellow of the Royal Australasian College of Medical Administrators and of Health Informatics New Zealand.

Lloyd worked as a Beachheads Advisor for New Zealand Trade and Enterprise. Whilst based in the UK, Lloyd worked as Medical Director for the Harris Corporation and Healthcare Solutions, and was an elected member of the TechUK Health and Social Care Board. He completed a mixed clinical and managerial Fellowship at the Oxford University Hospitals NHS Trust in Emergency Medicine and Performance Improvement.

Lloyd has worked across public and private health in Aotearoa in clinical, consultancy and leadership roles. He was a member of the expert panel that reviewed the health and disability system in 2018-2020. He is currently also a member of the ACC Health Services Strategy Advisory Board.

Lloyd is an equity advocate and an advocate for digitally enabled value-based care.



Maxine Ronald

Maxine is Ngāti Wai, Te Kapotai ki Ngā Puhī, Ngāti Hine and Ngāti Rangī, and a general surgeon working at Te Whatu Ora - Te Tai Tokerau. Her subspeciality interest is breast cancer.

Maxine is the first Indigenous RACS Councillor, a member of the Aotearoa New Zealand National Committee and past Chair of RACS' Indigenous Health

Committee. At RACS' inaugural Indigenous Hui in July 2023, Maxine was awarded the Māori Health Medal for significant contributions to Māori health advocacy and health outcomes in Aotearoa New Zealand.

Outside of RACS, she is a Clinical Advisor to Te Aka Whai Ora - Māori Health Authority, and a member of the Planned Care Taskforce, the Steering Committee for Medical Workforce, the National Māori Pandemic Group, and Hei Āhuru Mowai - Māori Cancer Leadership Group. She was previously a member of the Health Quality and Safety Committee Perioperative Mortality Committee (2017-2020).

Maxine has recently been appointed to Te Pae Whakatere – Breast Screen Aotearoa Review Committee.

Besides her clinical work, Maxine is an advocate for Māori health equity and increasing the Indigenous surgical workforce in Aotearoa New Zealand and Australia.



Diana Sarfati

Diana is a public health physician, cancer epidemiologist and health services researcher.

She was previously Tumuaki, Chief Executive and National Director of Te Aho o Te Kahu - Cancer Control Agency and prior to that she was National Director of Cancer Control at the Ministry of Health.

From 2015 to 2019, Diana was the co-Head and then Head of the Department of Public Health and the Director of the Cancer and Chronic Conditions (C3) research group at University of Otago, Wellington.

She is a former member of the National Cancer Programme Leadership Board, the National Screening Advisory Group, the National Ethics Advisory Committee, the Bowel Cancer Taskforce and the National Bowel Cancer Screening Advisory Committee.

She is currently a Lancet Commissioner for the Health Systems and Cancer Lancet Commission, and a member of the International Advisory Committee to

Lancet Oncology, the Advisory Committee to International Agency for Research on Cancer's (IARC) Pacific cancer hub, IARC's international expert group on social inequalities in cancer, and the board of the International Cancer Benchmarking Partnership.



Derek Sherwood

Derek is the current Clinical Lead for Planned Care, Hospitals and Specialist Services, Te Whatu Ora.

He trained in Medicine at Otago and in Ophthalmology in the UK before returning to Aotearoa New Zealand to work in Te Tai Tokerau - Northland. He eventually returned to his home town of Nelson where he continues to work as a paediatric ophthalmologist.

Derek has had a long interest and involvement in how to provide better healthcare, initially in the area of eye healthcare but over recent years through his role as Chair of the Council of Medical Colleges more broadly.

In the past he been involved in the development of private surgical facilities.



Curtis Walker

Curtis (Te Whakatōhea, Ngāti Porou) is a practising nephrologist in Palmerston North Hospital. He is Chair of Te Kaunihera Rata o Aotearoa - the Medical Council of New Zealand and also serves on the Board of Te Whatu Ora - the Crown Enterprise which manages and delivers most of the publicly funded healthcare in Aotearoa New Zealand.

Curtis is on the Board of Te ORA - Māori Doctor's Association and is passionate about health equity and quality in health care.

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Programme

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Thursday 31 August 2023

9 – 9:30AM | REGISTRATION

9:30-9:45AM | MIHI WHAKATAU

9:45-10:15AM | MORNING TEA, TRADE EXPO

10:15AM – 12:15PM:

SESSION ONE: NATIONAL HEALTH SERVICE: THE NEW PARADIGM

Chair: Chris Adams

Diana Sarfati

The Ministry of Health: Its role as health system steward

Margie Apa

Te Whatu Ora: Progress after a year

Riana Manuel

Te Aka Whai Ora: Progress after a year

Duncan Bliss

Planned care, hospital and specialist services: National systems

Panel discussion

12:15 – 1:15PM | LUNCH

1:15AM – 3:15PM:

SESSION TWO: SYSTEM CHANGE: EXPERIENCE AND LESSONS

Chair: Nigel Willis

Lester Levy

Major system change: How to achieve desired outcomes

Victoria Atkinson

I pivot, therefore I am

Sir Malcolm Grant

Major health system change: The NHS experience

Elizabeth Eppel

Factoring in the social complexity of achieving a desired change

Panel discussion

3:15 – 3:45PM | AFTERNOON TEA

3:45 – 5:30PM

SESSION THREE: ENABLERS OF CONTEMPORARY SURGICAL CARE

Chair: Ros Pochin

Lloyd McCann

It's got to be bionic: Blending the best of human and digital to enable surgical care

Jim Duthie

Robotic-assisted surgery: Resistance is futile

Derek Sherwood

Funding equitable access to surgical care

5:30 – 6:30PM | WELCOME FUNCTION

7 FOR 7:30PM | DINNER, WHAREWAKA FUNCTION CENTRE



Programme

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Friday 1 September 2023

8:30 – 10:15AM

**SESSION FOUR: IMPROVING ACCESS TO
SURGICAL SERVICES**

Chair: Sean Galvin

Curtis Walker

*The Surgical Workforce: Challenges and
opportunities*

Samantha Murton

*Improving equitable access to surgery: A
primary care perspective*

Vanessa Blair

*Will the Rural Health Strategy lead to fairer
access to surgery in rural Aotearoa New
Zealand?*

Maxine Ronald

*What Māori in Te Tai Tokerau want from
their bowel screening programmes:
Lessons in equitable screening and surgical
care*

Panel discussion

10:15 – 10:45AM | MORNING TEA

10:45AM – 12:15PM

SESSION FIVE: LOUIS BARNETT PRIZE PAPERS

Chairs: Spencer Beasley/Sarah Rennie

12:15 – 1:15PM | LUNCH

1:15 – 2:45PM

**SESSION SIX: SURGICAL LEADERS FORUM:
SURGEONS AS LEADERS IN THE WIDER HEALTH
SECTOR**

Chair: Sanjeev Naidu

Victoria Atkinson

*Leading outside the theatres: When worlds
collide*

Andrew Connoll

*Challenges and rewards of health
leadership as a surgeon*

Elizabeth Dennett

The surgeon as public policy leader

Frank Frizelle

*The surgeon as medical educator and
health system advocate*

Panel discussion

2:45 – 3:15PM | AFTERNOON TEA

3:15 – 4:30PM

SESSION SEVEN: LOOKING AHEAD

Chair: Nigel Willis/Sean Galvin

Kerin Fielding

*RACS update: Role in surgical service
leadership*

Victoria Atkinson

The red thread of healthcare

Sir Malcolm Grant

*The inevitability of change in health
systems around the world, and how to
anticipate, lead and make the most of it*

Louis Barnett Prize 2023 – Abstracts

Luminal delivery of oxygen microbubbles mitigates experimental intestinal ischaemia.

M Morreau^{1,4} (presenter), S Thakur², A Phillips^{1,3}, J Windsor^{1,5}

¹*Surgical and Translational Research Centre, Faculty of Medical and Health Sciences, University of Auckland, Auckland, New Zealand*

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³*Applied Surgery and Metabolism Laboratory, School of Biological Science, Faculty of Sciences, University of Auckland, Auckland, New Zealand*

⁴*Department of General Surgery, Christchurch Hospital, Te Whatu Ora Waitaha, Christchurch, New Zealand*

⁵*HBP/Upper GI Unit, Department of General Surgery, Auckland City Hospital, Te Whatu Ora Te Toka Tumai, Auckland, New Zealand*

Introduction

Gut injury is common consequence of critical illness that may present from ileus through to life-threatening non-occlusive mesenteric ischaemia. Key early mechanisms of gut injury include reflex splanchnic vasoconstriction to prioritise blood flow to vital organs. Gut injury impairs barrier function and contributes to systemic inflammation and multiorgan failure (MOF) due to toxic compositional changes in gut lymph (1). The hypothesis of this study was that the delivery of oxygen to the gut lumen will reduce the severity of gut injury. Our review (2) suggested that in the experimental setting oxygen microbubbles (OMB) might prove an effective means of luminal oxygenation. OMB are microscopic particles comprising an oxygen gas core within a phospholipid shell that can efficiently transfer oxygen but have yet to be tested in the setting of gut injury.

Purpose

The aims of this study were to improve an existing OMB formulation, establish a rodent model of ischaemic gut injury and determine whether luminal delivery reduces histologic gut injury.

Methods

Adult Sprague-Dawley rats (n=24) were randomly allocated to three groups:

sham-control (Group A), intestinal ischaemia (Gp B), and ischaemia plus intraluminal delivery of optimised OMB (Gp C). Intestinal injury was induced by superior mesenteric artery (SMA) occlusion for 45 minutes and reperfusion for 30min. The primary endpoint was the validated histological score of gut injury (Park-Chiu) with H&E stain. Macroscopic mucosal injury, physiological responses and plasma biomarkers of gut injury were secondary outcomes.

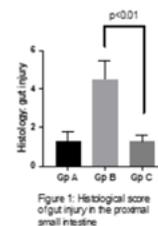


Figure 1: Histological score of gut injury in the proximal small intestine

Results

Microscopic and macroscopic gut injury score was significantly lower in the treatment arm (Gp C) compared with Gp B ($p < 0.01$) in the proximal small intestine (Figure 1). No significant effect was noted in the rest of the bowel. No differences were observed in systemic variables.

Conclusion

This proof-of-concept study demonstrates that luminal OMB protects against ischaemic injury in the proximal small bowel in a rodent model. There is broad potential for clinical application. The next steps are to test two innovative strategies to improve oxygen delivery across the length of the affected gut and to design a safety and feasibility clinical study.

References

1. Windsor JA, Trevaskis NL, Phillips AJ. The Gut-Lymph Model Gives New Treatment Strategies for Organ Failure. *JAMA Surg.* 2022;157(6):540-1.
2. Joh D, Morreau M, Lee A, Pendharkar S, Stokes B, Warren R, et al. Intraluminal oxygen mitigates acute mesenteric ischaemia: a systematic review of methods and outcomes in animal studies. *ANZ Journal of Surgery.* 2022.



Louis Barnett Prize 2023 – Abstracts

Servant, Ethical, and Rangatira models of Health Leadership in Aotearoa New Zealand

Divyansh Panesar (Te Whatu Ora Te Pae
Hauora o Ruahine o Tararua MidCentral,
Department of General Surgery)

Jamie-Lee Rahiri (Te Whatu Ora
Tairāwhiti, Department of General
Surgery)

Jonathan Koea (Te Whatu Ora Waitematā,
Department of General Surgery)

Introduction

This article explores the potential of integrating Māori and Western knowledge systems in healthcare leadership to address health inequities in Aotearoa. The study hypothesis is that incorporating Mātauranga Māori (Māori knowledge), servant, and ethical leadership models can lead to more equitable healthcare outcomes for the indigenous Māori population.

Purpose

The purpose of the study is to examine the role of Te Tiriti o Waitangi (The Treaty of Waitangi), Tino Rangatiratanga (Māori self-determination), and various leadership models in achieving health equity for Māori in Aotearoa.

Methods

Qualitative and narrative analysis of existing literature on Māori health and leadership, focusing on the frameworks of servant and ethical leadership, Western and Indigenous epistemologies, and the historical context of Te Tiriti o Waitangi. The concept of shared and distributive leadership is explored in the context of Māori health, examining how ethical and servant leadership models can be integrated with Māori epistemologies to foster a more inclusive and equitable healthcare system.

Results

Shared, distributive leadership models that integrate Mātauranga Māori, servant leadership, and ethical leadership can foster a more inclusive and equitable healthcare system. The emphasis is on involving Māori in healthcare leadership and decision-making for cultural authenticity and flexibility in implementing these approaches. Western frameworks have begun to acknowledge a necessary paradigm shift away from

traditional hierarchical systems to lead equitable initiatives.

The convergence of Indigenous Māori leadership, servant leadership, and ethical leadership in healthcare can better align with Māori values and holistic approaches, promoting health equity and improving outcomes for Māori. Te Tiriti o Waitangi may be used as a guiding principle for co-governance alongside incorporating mātauranga Māori into Aotearoa's health models.

Conclusion

The integration of Māori and Western knowledge systems in healthcare leadership, guided by Te Tiriti o Waitangi and incorporating Mātauranga Māori, servant, and ethical leadership models, can promote health equity and improve outcomes for Māori in New Zealand. Adopting these leadership models requires robust stakeholder analysis, system-wide education, and a wider cultural change that focuses on collectivism, altruism, empathy, stewardship, and cultural authenticity.

Louis Barnett Prize 2023 – Abstracts

Volatile Organic Urinary Compounds in the Diagnosis of Prostate Cancer

O Yassaie, H Lazarowicz, P Cornford, C Probert

University of Liverpool

Introduction

PSA and MRI are the gold-standard means of selecting patients to undergo prostate biopsy (PB) for suspected prostate cancer (PC). PB is invasive and costly. There is a need for better biomarkers to optimize this selection.

Volatile organic compounds (VOC) arising from bodily secretions including sweat, breath, feces and urine have been investigated in a range of disorders including inflammatory bowel disease, cancers of the bladder, lung and ovary. A canine study suggested that dogs can “sniff” out PC with greater accuracy than PSA.

Purpose

- 1) To identify a urinary VOC biomarker to diagnose PC
- 2) To determine whether alkali or acidic conditions improve VOC detection

Methods

All patients scheduled for trans-perineal PB from August 2022 were invited to participate in the study. Urine samples were collected and frozen. Patient demographics, diagnostic work-up and disease characteristics were collected. Subsequently samples were defrosted and paired aliquots made and treated with sulphuric acid or sodium hydroxide. Samples underwent processing by gas chromatography mass spectrometry and VOCs identified using AMDIS software and the NIST Mass Spectral Library.

The presence of VOC was compared between acidic and alkali conditions and for patients with and without PC.

Results

242 patients provided samples: 120 had PC, 122 had benign diagnoses.

Acidified urine samples contained significantly more VOC species than alkaline samples. Irrespective of disease status.

Median number of compounds present per urine sample

	Cancer	Benign
Acid	91	92.5
Base	43	44.5
	p<0.05	p<0.05

We identified 189 compounds in the whole cohort. On chi squared analysis of the acidified samples, 18 VOCs were present significantly more commonly in patients with PC. In the alkalized samples, 4 VOCs were significantly more common in the samples from PC cancer patients. ROC curve analysis, however, did not identify any compounds which would be strong biomarker for PC.

Conclusion

Acidic urine is favorable compared to alkali for detection of VOC in urine. There are no VOCs in this preliminary study which are suitable as biomarkers for PC diagnosis.



Louis Barnett Prize 2023 – Abstracts

Obesity Impairs Entesis Healing After Rotator Cuff Repair in a Rat Model

S.M. Bolam^{1,2}, Y.E. Park¹, S. Konar¹, K.E. Callon¹, J. Workman¹, A.P. Monk^{1,2}, B. Coleman³, J. Cornish¹, M.H. Vickers^{1,4}, J.T. Munro^{1,2}, D.S. Musson¹

1. University of Auckland, Auckland, New Zealand, 2. Auckland City Hospital, Auckland, New Zealand, 3. Middlemore Hospital, Auckland, New Zealand, 4. Liggins Institute, Auckland, New Zealand

Introduction

Being overweight or obese is associated with poor outcomes and increased risk of failure after rotator cuff (RC) surgery. However, the effect of obesity on entesis healing has not been well characterized. We hypothesised obesity would result in inferior entesis healing in a rat model of RC repair, and a dietary intervention in the perioperative period would improve entesis healing.

Purpose

This study aimed to understand: [1] the effect of obesity on entesis healing after RC repair in a rat model, and [2] the independent pathogenic role of obesity in altering RC healing outcomes

Methods

Male Sprague-Dawley rats were divided into 3 weight-matched groups (n = 26 per group): control diet (CD), high-fat diet (HFD), or HFD until surgery and then CD thereafter (HF-CD). After 12 weeks, the left supraspinatus tendon was detached, followed by immediate repair. Animals were sacrificed, and RCs were harvested at 2- and 12-weeks after surgery for biomechanical and histological evaluations. Metabolic end points were assessed using dual-energy X-ray absorptiometry and plasma analyses.

Results

Obesity was established in the HFD and HF-CD groups before surgery and subsequently reversed in the HF-CD group after surgery. Histologically, the appearance of the repaired enteses was poorer in both the HFD and HF-CD groups compared with the CD group at 12-weeks after surgery, with semiquantitative scores of 6.2 (P<0.01), 4.98 (P<0.01), and 8.7 of 15, respectively. The repaired enteses in the HF-CD group had a

significantly lower load to failure (P=0.03) at 12-weeks after surgery compared with the CD group, while the load to failure in the HFD group was low but not significantly different (P=0.10). Plasma leptin were negatively correlated with histology scores and load to failure at 12-weeks after surgery.

Conclusion

Obesity impaired entesis healing in this rat RC repair model, with inferior biomechanical and histological outcomes. Restoring normal weight with dietary change after surgery did not improve healing outcomes. Circulating levels of leptin significantly correlated with poor healing outcomes. This pre-clinical rodent model demonstrates that obesity is a potentially modifiable factor that impairs RC healing and increases the risk of failure after surgery.

Surgery 2023: Surgical care in health system change

Thursday 31 August - Friday 1 September 2023

Te Papa, Wellington, Aotearoa New Zealand

Louis Barnett Prize 2023 – Abstracts

Interval colorectal cancers after negative faecal immunochemical test in the New Zealand Bowel Screening Pilot

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INTRODUCTION

Faecal immunochemical tests (FIT) are widely used in bowel screening programmes, but FIT diagnostic performance is influenced by various factors and not directly applicable across different populations.(1) We hypothesise that FIT sensitivity for colorectal cancer (CRC) in the New Zealand Bowel Screening Pilot (BSP) is comparable to international data.

PURPOSE

Evaluate the diagnostic performance of FIT, identify risk factors for “missed” or interval colorectal cancers (FIT-IC) and describe long term outcomes of participants with CRC in the BSP.

METHODS

From 2012 to 2017, the BSP offered eligible individuals aged 50-74 years, biennial screening using quantitative FIT with positivity threshold of 15µg Hb/g faeces. Retrospective review of prospectively maintained data extracted from the BSP Register and New Zealand Cancer Registry identified any CRC reported in participants with a definitive FIT result. Further details were obtained from hospital records. FIT-IC were

primary CRC diagnosed within 24 months of a negative FIT. Factors associated with FIT-IC were identified using logistic regression.

RESULTS

Of 387,215 individuals invited, 57.4% participated with 6.1% returning positive FIT results. Māori and Pacific populations had the lowest participation. Final analysis included 520 CRC, of which 111 (21.3%) met FIT-IC definition. Overall FIT sensitivity for CRC was 78.7% (95%CI=74.9-82.1), specificity was 94.1% (95%CI=94.0-94.2). In 78 (70.3%) participants with FIT-IC, faecal haemoglobin was reported as undetectable. There were no significant associations between FIT-IC and age, sex, ethnicity, and deprivation. FIT-IC were significantly associated with proximal tumour location, late stage at diagnosis, high-grade tumour differentiation and subsequent round screens. Median follow-up time was 74 (Range=2-124) months. FIT-IC had significantly poorer overall survival.

CONCLUSION

FIT sensitivity in BSP compared favourably to published data. Most FIT-IC had undetectable faecal haemoglobin levels at time of screening and were more likely to be proximal tumours with poor long-term outcomes. Further lowering of FIT positivity threshold would have minimal impact on FIT-IC.

REFERENCES

1.Fraser CG, Rubeca T, Rapi S, et al. Faecal haemoglobin concentrations vary with sex and age, but data are not transferable across geography for colorectal cancer screening. Clin Chem Lab Med. 2014;52(8):1211-6



Louis Barnett Prize 2023 – Abstracts

The Surgical Sisterhood - The Experiences of wāhine Māori and Pasifika Aspiring Surgeons

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Introduction

The Royal Australasian College of Surgeons has recently implemented policies advocating for a diverse, fit for purpose surgical workforce. However, there are currently less than 15 Māori and Pasifika wāhine surgical trainees over all surgical specialties and recent research shows that Māori medical students and junior doctors frequently experience workplace racism. In 2021, there were no dedicated support systems for wāhine Māori and Pasifika vying for surgical training and as such, the surgical sisterhood was formed to meet this void. We hypothesised that wider systemic barriers for Māori and Pasifika women pursuing advanced surgical training exist related to cultural unsafety and racism.

Purpose

This study explored the experiences of wāhine Māori and Pasifika registrars in Aotearoa, who formed a surgical sisterhood to support them towards applying for surgical training.

Methods

Utilising mana wāhine and Masi methodologies, semi-structured interpersonal interviews with five wāhine Māori and Pasifika registrars were subjected to inductive thematic analysis.

Results

Four themes were identified: mana wāhine, unity, our why and change on the horizon illustrating the complex layers of discriminant wāhine in the surgical sisterhood negotiated whilst meeting the requirements towards applying for surgical training.

Conclusion

Despite multiple layers of discrimination, the surgical sisterhood provided a safe vehicle to enable all wāhine in the sisterhood to successfully meet the requirements needed to interview for surgical training.

Louis Barnett Prize 2023 – Abstracts

Non-invasive Mapping Of Post-Pancreaticoduodenectomy Gastric Function Using Gastric Alimetry®

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Introduction

Pancreaticoduodenectomy (PD) is a procedure performed for pancreaticobiliary malignancies. A common post-operative complication is delayed gastric emptying (DGE). Procedural variations have sought to reduce the incidence of DGE, however the underlying pathophysiology is still poorly understood. Emerging evidence suggests that gastric myoelectrical abnormalities may contribute to post-operative gastric motility disorders. A non-invasive medical device for body surface gastric electrical mapping was recently developed to evaluate gastric electrical activity and function.

Purpose

This world's first study aims to assess the feasibility of the Gastric Alimetry device on the stomach following PD, to identify any changes in gastric activity and their correlation with symptoms.

Methods

PD patients from Auckland between 2017-2022 were recruited. Patients with known mechanical obstructions or recurrent malignancies were excluded. Gastric Alimetry® (Auckland, New

Zealand) was employed, comprising a stretchable array and cloud-based analytics platform. Following an overnight fast, 30 minutes of baseline recording was performed, followed by a meal challenge and 4 hours of post-prandial recordings. Symptoms were regularly logged. Spectral analysis was performed, with quantitative analysis including Principal Gastric Frequency, BMI-adjusted amplitude and Gastric Alimetry Rhythm Index (GA-RI, a measure of rhythm stability). Adverse events were recorded.

Results

16 patients were recruited; all had a pylorus-resecting PD; 15/16 a gastrojejunostomy and 1/16 had a Roux-en-Y reconstruction. Gastric Alimetry spectral abnormalities were more common in patients with moderate-severe symptom burdens (3/5 patients) vs mild-minimal symptom burdens (1/11); $p=0.029$. Abnormalities in symptomatic patients encompassed low GA-RI (<0.25) in 2 patients; and low amplitude ($<22\mu V$) in 1 patient indicating gastric neuromuscular dysfunction. Gastric Alimetry symptom phenotypes in symptomatic patients were variable; sensorimotor (3), post-gastric (2) and continuous (2); 2 had mixed profiles. There were no adverse events.

Conclusion

Gastric Alimetry is a feasible technique to non-invasively assess the gastric function following PD. A third of patients had moderate to severe gastric symptoms after PD with higher rates of gastric neuromuscular dysfunction. A range of symptom phenotypes were noted, indicating gastric sensory, post-gastric (i.e. dumping) and continuous (likely neuropathic) contributions. These data indicate a role for Gastric Alimetry testing in evaluating the causes of chronic gastric symptoms after PD.



Louis Barnett Prize 2023 – Abstracts

Ethnic differences in outcomes from Acute Scrotum: 10-year experience from a regional New Zealand center.

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Introduction

Acute scrotum is a common complaint among young males. It requires prompt medical evaluation since testicular torsion is time critical diagnosis that needs urgent operative intervention. In New Zealand (NZ), ethnic discrepancies in various aspects of health have been studied. No published data however on acute scrotum.

Purpose

This study aims to investigate the presence of ethnic differences in outcomes among young males presenting to the emergency department with acute scrotum in a regional NZ centre.

Methods

The study cohort consisted of all males aged 30 years or younger, who presented to the emergency department at Northland district with acute scrotum (sudden onset of acute non-traumatic testicular pain) between January 2012 – December 2021. The presence or absence of testicular torsion was ascertained with either Duplex Ultrasound or surgical exploration of the scrotum. The outcome of interest was the difference in rates of testicular torsion and infarcted testicles between Māori (indigenous NZ people) and non-Māori. This was measure with binary logistic regression model and reported as odds ratio (OR) with 95% confidence interval (CI).

Results

Over the 10-year study period, 530 young males were included in the analysis. Of these, 216 (40.8%) were Māori. Median age from the entire cohort was 17 years with no significant difference identified between the ethnic groups ($p=0.795$). A higher proportion of Māori males presented later than 24 hour of pain onset; however, this was not statistically significant (57.9% vs 50.5%, $p=0.094$). Testicular torsion was identified in 88 cases (10.8%). There was no significant difference in the rate of torsion between the ethnic groups (Māori vs non-Māori, OR = 1.49 [CI: 0.85 – 2.63], $p=0.167$). On the other hand, Māori participants had significantly higher rates of infarcted testicles (OR = 2.43 [CI: 1.58 – 5.41], $p=0.048$).

Conclusion

In our population of young males with acute scrotum, Māori men had similar rates of testicular torsion to non-Māori, but significantly higher rates of infarcted testicles.

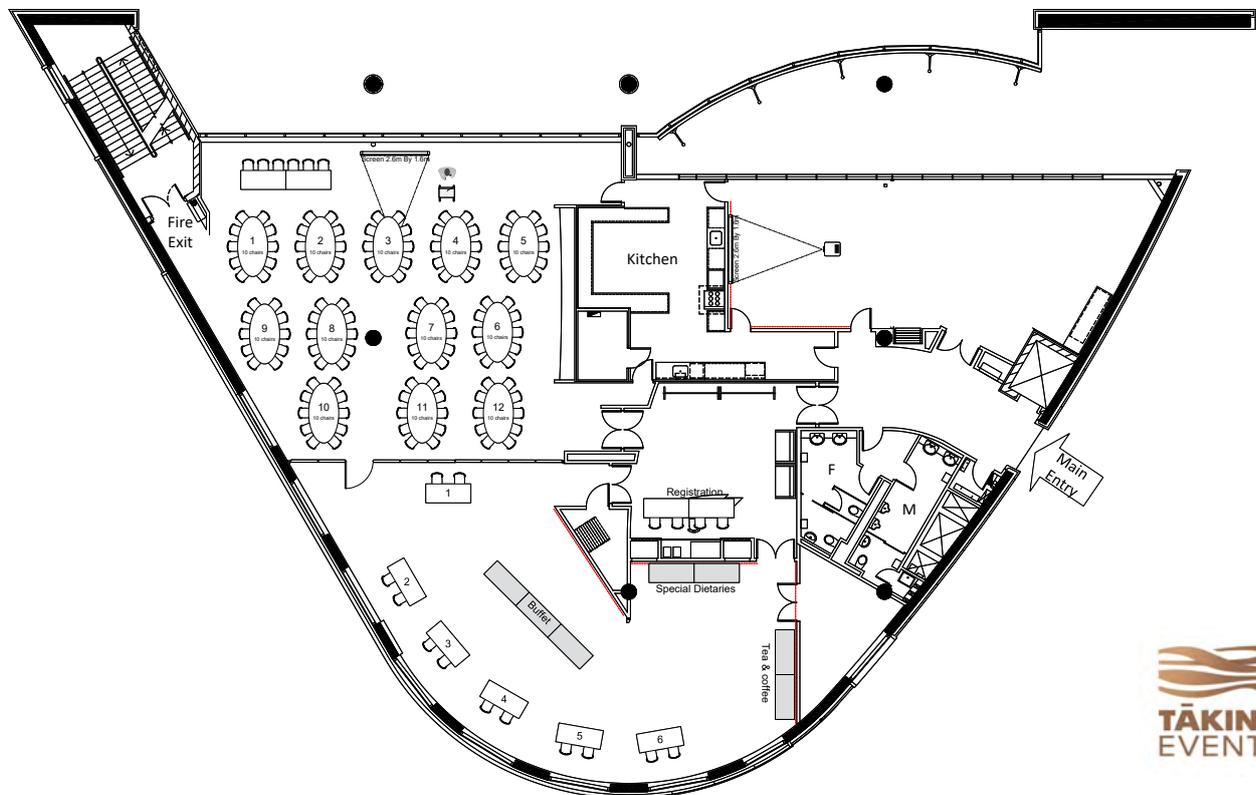
Surgery 2023: Surgical care in health system change

Thursday 31 August - Friday 1 September 2023
Te Papa, Wellington, Aotearoa New Zealand

Booth listing

Stand Number	Company
1	Medtronic New Zealand Ltd
2	Mölnlycke
3	Royal Australasian College of Surgeons
4	EBOS Healthcare
5	Johnson & Johnson
6	Aroa Biosurgery

Te Huinga Centre
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Friday 1st September





Exhibitor listing

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