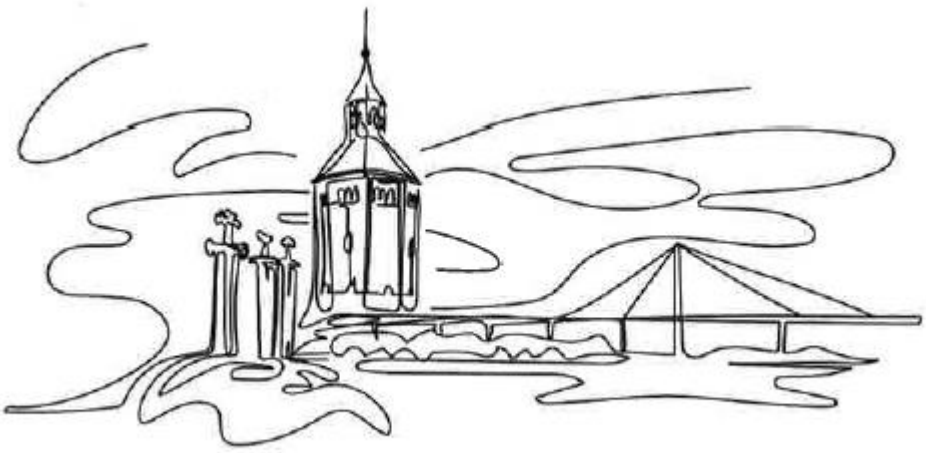
THE INTERNATIONAL SURGICAL GROUP

67th Meeting

Stavanger, Norway



THE INTERNATIONAL SURGICAL GROUP

67th Meeting

ANNUAL GENERAL MEETING

June 26, 2026, 2 PM EDT

AGENDA

1. The **minutes for the October 27, 2023, Annual General Meeting** which were distributed to the membership by e-mail (November 11, 2022) and printed in program book were approved.

2. The following apologies for absence were received

Arne Bakka, Raul Coimbra, David Berqvist, Christianne Bruns, O. James Garden, Tomas Gudbjartsson, Ulf Haglund, Miles Irving, Ari Leppäniemi, Ronald Maier, Neil Mortensen, Magnus Nilsson, Rowan Parks, Odd Søreide, Christian Toso, Stephen Wigmore, Norman Williams

3. Deaths & Eulogies

Edward M. Copeland, III, eulogy given by Hiram Polk, followed by a period of silence

4. The Treasurer's Report was given by Yuman Fong:

<u>Membership Dues</u>

Members are requested to pay their dues.

Active member dues $ 155 / year
Senior members $ 55/ year (voluntary)

Cash, check, bank transfer possible, payment by website preferred.

ISG has a Tax-exempt status as a 502(C3), Non-profit corporation organized for education.

Taxpayer ID: 47-2729803

For Bank Transfers:

Chase Bank
Swift number (routing number): CHASUS33

Account name: International Surgical Group, Inc.
Account Address: 5219 La Canada Blvd, La Canada, CA 91011
Account Number: 000000709623818
Branch routing number for domestic wires: 322271627

Account Balance

Balance 2023	36,352.88
Membership dues 2023	8090
Costs of meeting in Stavanger 2023	-8,000
ISG Pins	-633
Annual web update	-385
Attorney's fees (not for profit tax return, etc)	0.00
Corporate costs (Bank fee, tax return)	-585
Current balance	34,839.88

Review of Financial Status

Reserve as of :

September 1,	2009	$37,324.87
August 25,	2010	$35,247.77
August 1,	2011	$24,919.52
October 31,	2012	$33,159.52
August 1,	2013	$32,453.52
July 1,	2014	$29,774.15
July 1,	2015	$22,274.15
July 1,	2016	$34,870.35
September 24,	2017	$44,019.85
September 15,	2018	$48,193.96
October 22,	2019	$48,642.72
November 12,	2020	$42,807.88
August 26,	2021	$41,207.88
June 30,	2022	$40,507.88

October 27,	2023	$36,352.88
June 23,	2024	$34,839.88

5. Resignations / Non-attendance

Resignations: Liane Feldman (North America-Canada), Enders Ng (Rest of World -China/Hong Kong)

Missing 5 years: Christiane Bruns (Germany), Tomas Gudbjartsson (Iceland) [serious health concerns]. After a spirited discussion, it was decided to give **both members** one more opportunity to attend a meeting and maintain their membership status.

Missing 4 years in a row: - If these members do not attend next year's meeting, they forfeit their ISG membership.

Missing 3 years in a row (These members will be sent a "First warning" for low attendance):

Jeffrey Barkun (Canada)

Johanna Laukkarinen (Finland)

7. Composition of membership

Proposed Members:

The following individuals who had been elected (but not yet presented in a meeting) gave a presentation at the 2024 meeting and are now **active members**):

Stefan Fichtner-Feigl, Germany (proposed 2020)

Angus Watson, Scotland, (proposed 2023)

The following individual who had been elected as proposed member has not yet presented and needs to activate his membership at next year's meeting:

Magnus Nilsson, Sweden (proposed 2023).

New Membership Proposals:

Members were reminded regarding the importance of maintaining the "20 active members" from each of the three geographic regions. Every year active members who become 65 free up membership slots.

The secretary shared some quotations from the Group's founders taken from the "Red Book" of ISG history covering the "early years."

> "*a need for the **closer personal relationships** that could develop most satisfactorily, not in such large meetings, but in a **small group of surgeons** meeting to **share their ideas**, successes and failures* "

"*A special feature of the Group is that most* ***members' wives attend regularly, sometimes bringing members of their families with them and all know each other by their first names****."*

"*members of this group should be selected not only on the basis of their reputation as academic and clinical surgeons, but also on their willingness****, because of their belief in the validity of the concept, to travel at regular intervals to the meetings***."

For 2024, the following membership proposals were received, and the individuals shown in Green Font were elected as proposed members, the others will be carried over to next year:

North America: (1 ***free slot****)*

- **Marco Del Chiaro, USA, 51 yo,** 2022 nominated by Richard Schulick, supported by David Linehan and Kees van Laarhoven, 2023, nominated by Herbert Chen
- **Barish Edil, USA, 50 yo,** nominated by Herb Chen, supported by Rich Schulick, Nipun Merchant
- **Daniel Scott, USA, 54 yo,** nominated by Stanley Ashley, supported by Daniel Jones, Craig Kent, Aurora Pryor

UK, Ireland, Scandinavia: (4 ***free slots****)*

- **Mark Bremholm Ellebæk, Denmark, 44 yo,** nominated by Michael Achiam, supported by Eva Angenete, Magdalena Fossum and Niels Qvist

*Rest of the world: (****5 free slots****)*

- **Cherry Koh, Australia, 50 yo**, nominated by Michael Solomon, supported by Frank Frizelle, Alexander Heriot, Brendan Moran
- **Christoph Reissfelder, Germany, 48 yo,** nominated by Stefan Post, supported by Alfred Königsrainer, Norbert Senninger, Jens Werner
- **Tim Eglinton, New Zealand, 51 yo,** nominated by Frank Frizelle, supported by Michael Solomon, Alexander Heriot, Andrew Hill, Murray Brennan
- **Eduardo Montalvo-Javé, Mexico, 55 yo,** nominated by Carlos Pellegrini, supported by Daniel Jones, Ari Leppäniemi

8. New Member Gifts

ISG Ties are available for men or interested women. Treasurer Fong discussed remaking ISG scarves that previously were available.

ISG pins are now available upon request from the secretary. Due to the expense of mailing, these will be given out in person, at ISG meetings. The design is shown below.

9. Website-update

As I have had many request regarding this, the group website address is internationalsurgicalgroup.com and the password is:

ISG2023!

Please send me photos from the meeting to post to the site either by text or e-mail:

Phone: +1-502-724-9380

e-mail: susan.galandiuk@louisville.edu

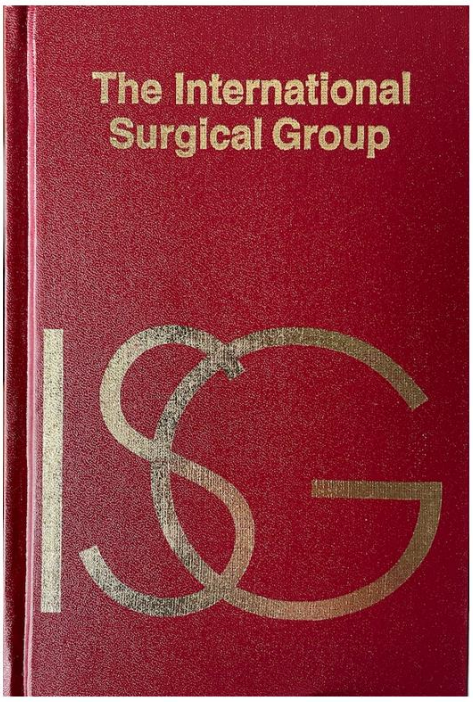
Photos can be found in the photo gallery which can be located from the drop-down menu under the banner, by clicking under “ISG members only.” Under this tab you can also find a tab to “Update your member information” if needed. If you click on some of the past meetings, you will see that for some past meetings, we have very few photos, we would like to correct this, and welcome any photos you would like to share.

10. New ISG history book-update and funding

The content of the previous ISG history book 1957-1990 (the “Red Book”) will be combined with meeting proceedings and group photos of the 1991-2023 ISG meetings. We are missing usable (high resolution) group photos from the following meetings:

1994	Mannheim
1995	Philadelphia
1997	Helsinki
2005	Stockholm & Uppsala
2011	Zurich
2014	Newport

I need help with identification of some members in photos and will send out a drop box link with the draft. I would greatly appreciate your help with this.



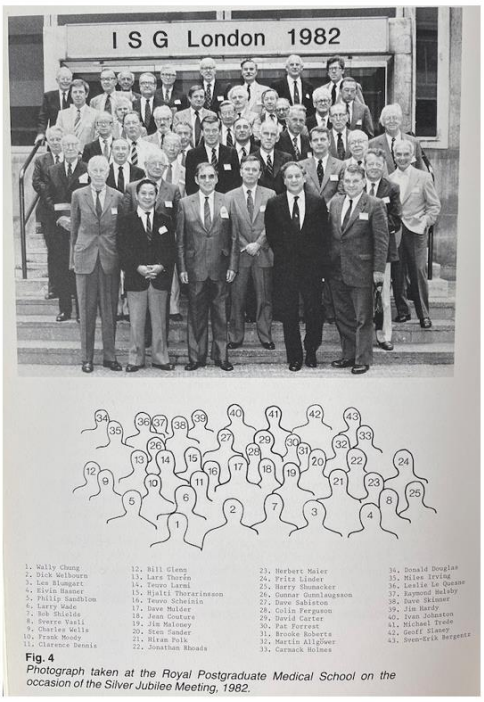


Fig. 4
Photograph taken at the Royal Postgraduate Medical School on the occasion of the Silver Jubilee Meeting, 1982.

Quotes from 3 publishers

Size 6 x 9 inches, Approximately 250 pages

Description/Title: **THE INTERNATIONAL SURGICAL GROUP 1956 – 2023**

- Proofreading of manuscript $2,100.00
- Design and page layout..... $2,500.00
- Publishers flat fee $2,500.00
- Assignment of ISBN and Library of Congress filing..... $ 800.00

Total Pre-Production **$7,900.00**

Cover/Text: Cover: full-color case laminate with matte film lamination
Text: full-color text on 70# white paper

Print On Demand PRINT COST: $25.00 per copy (ESTIMATED)

Initial Print Run: approximately 240 copies (final print run to be determined)

Total Estimate **$14,150.00**

After the proposal was presented Hiram Polk suggested that in order to be cost neutral, that new members be charged $ 100.00 initiation fee and be given an ISG history book and pin on induction of membership. There was general agreement with this proposal, especially if added with next year's registration fee, perhaps also to include current active or senior members a similar fee to include their copy of the new book.

11. Future Meetings

Both Utrecht and Melbourne were proposed as sites for the meeting in 2025. Although initially Melbourne was chosen as the site of the 2025 meeting, after realizing that Kees van Laarhoven would not be able to host in 2026, the decision was made to have Kees van Laarhoven host the ISG meeting in Utrecht in 2025 (**September 7-10**), and Alexander (Sandy) Heriot to host the ISG meeting in Melbourne in 2026. **Please note the Utrecht dates**. Additional, proposals were made for Chicago (Jeffrey Matthews), South Africa (Ken Boffard), Ankara, Türkiye (Susan Galandiuk on behalf of Mehmet Haberal) and Denver, Colorado (Richard Schulick). Meeting proposals from Munich (Jens Werner) were also discussed as a possibility. For your information, a list of meeting locations for the last several years is shown below.

Year	Location
2012	Hong Kong
2013	Ghent & Bruges
2014	Newport
2015	Berlin
2016	Edinburgh
2017	Johannesburg
2018	Reykjavik, Iceland
2019	Los Angeles
2020	Only Business Mtg, COVID
2021	Virtual Mtg, COVID
2022	Dublin
2023	Washington, DC
2024	Stavanger, Norway
2025	Utrecht, Netherlands
2026	Melbourne, Australia
2027	
2028	
2029	

I would like to determine the location of the 2027-2029 meetings at next year's AGM so that everyone can more easily make plans for their schedules.

12. Election of Officers for 2024/2025

Proposed composition of executive:

President	Pål-Dag Line
President-Elect	Kees van Laarhoven
Secretary	Susan Galandiuk
Treasurer	Yuman Fong

13. Other matters arising

Warmest thank you to **Pål-Dag & Eva Line**

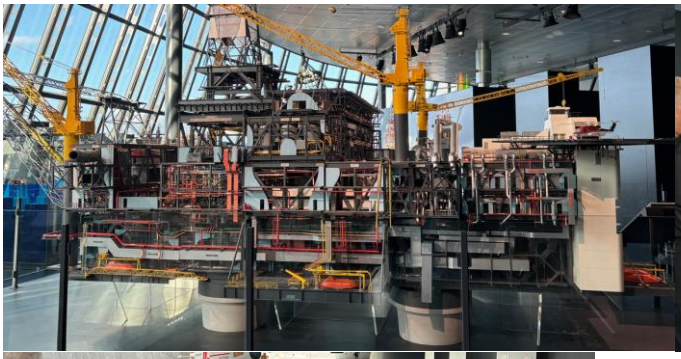
Kjetil & Annbjorg Søreide

as well as Jenna Carlin & Carol Nicol of ACS Global

for a wonderful meeting !

14. Adjourn

L to R on stairs, Eva & Pål-Dag Line and Annbjorg & Kjetil & Søreide greet ISG members at the welcome reception at the Norwegian Petroleum Museum



Welcome Reception at the Norwegian Petroleum Museum

Photos of Scientific Meeting at Hotel Victoria, courtesy of Catherine Teh




Beautiful views of Stavanger courtesy of Renzo Dionigi

An Unforgettable trip to Flor & Fjære






A memorable Gala Dinner at Hotel Victoria






For more photos from the meeting, please go to ISG website https://internationalsurgicalgroup.com password ISG2023! and go to "ISG members only" area, then to "photo gallery".

Special Thanks to Renzo Dionigi and Catherine Teh for their incredible photos.






Optional post meeting Fjord Cruise to Lysefjord and Preikestolen



Scientific Program Hotel Victoria

Monday, June 24, 2024

08:20 - 08:30 Welcome
Pål-Dag Line, Kjetil Søreide

08:30 - 08:40 Introduction of New Proposed Members
Susan Galandiuk

08:40 - 10:40 Scientific Session 1 – Moderator Pål-Dag Line

08:40 - 09:00 Advancements in minimally-invasive liver surgery - combining robotic surgery and fast track recovery protocol
Stefan Fichtner-Feigl (proposed 2020)

09:00 - 09:20 ScotCap: The introduction of a colon capsule endoscopy into a publicly funded health system
Angus Watson (proposed 2023)

09:20 - 09:40 Surgical mortality - How low can it go?
Paul BS Lai

09:40 - 10:00 Increased mortality rate in patients undergoing hemithyroidectomy for benign multinodular goitre without thyroid hormone replacement therapy
Anders Bergenfelz

10:00 - 10:20 The ISG meeting in 2011 (Zürich) gave inspiration to a hypothesis of the pathogenesis of long Covid
Knut Kvernebo

10:20 – 10:40 Neoadjuvant chemoradiotherapy followed by surgery versus active surveillance for oesophageal cancer (SANO-trial): a phase-III stepped-wedge cluster-randomised trial
J. Jan B. van Lanschot, on behalf of the Sano Study Group

11:10 - 12:30 Scientific Session 2, Panel: Surgeons & Diabetes, Moderator: Jeffrey Matthews

11:10 - 11:20 Machine learning for precision metabolic surgery
Francois Pattou

11:20 - 11:30 Autologous Islet Stem Cell
James Shapiro

11:30 - 11:40 Chronic Pancreatitis
Jens Werner

11:40 - 12:30 Panel Discussion

14:00 - 14:40 Equinor - from fossil fuel to renewables
Lars Troen Sørensen, Introduced by Kjetil Søreide

14:40 - 15:20 Scientific Session 3 – Moderator Kjetil Søreide

14:40 - 15:00 The History of Spectacles in Continental Europe
Renzo Dionigi

15:00 - 15:20 Surgical History: Early laparotomies in America
Per-Olof Hasselgren

Tuesday, June 25, 2024

08:00 - 09:10 Scientific Session 4 – Panel: Current Evidence, Moderator: Ronan O'Connell

08:00 - 08:10 Developing Clinical Guidelines
Stefan Post

08:10 - 08:20 Current Quality of Reporting of Outcome Research
Pierre-Alain Clavien

08:20 - 08:30 The Janus-Face of Artificial Intelligence in Medical Publishing
Susan Galandiuk

08:30 - 09:10 Panel Discussion

09:30 - 10:50 Scientific Session 5 - Moderator: Malin Sund

09:30 - 09:50 Multimodal Prehabilitation (Fit4Surgery) in High-impact Surgery to Enhance Surgical Outcomes: a Single Center Stepped Wedge Trial on 4500 patients
B van de Heuvel, D Strijker, L Drager, E van Daal, S Verlaan, J Rosenstok, F Atsma, K van Laarhoven

09:50 - 10:10 Complex Venous Reconstruction Strategies in Pancreatic Surgery
Jürgen Weitz

10:10 – 10:30 The Treatment of Bleeding is to stop the bleeding! Goal directed hemostasis in 2024
Ken Boffard

10:30 - 10:50 Does Lymphatic Fluid from the Primary Cutaneous Melanoma Contain Signals that Contribute to the Immunotolerant Microenvironment in the Sentinel Lymph Node (SLN)?
Kelly M. McMasters, Austin J. McMasters, Hongying Hao

11:10 - 12:30 Sci. Session 6, Panel: Surgeons & Personal Illness, Moderator: Thomas Lennard

11:10 - 11:20 Introduction - Being on the other side
Thomas Lennard

11:20 - 11:40	When the Tables are Turned *Hiram Polk*
11:40 - 11:50	PBC interrupting surgical activity *Hans D. Saeger*
11:50 - 12:30	Panel Discussion
14:00 - 14:40	Lærdal Medical - from childrens joy to helping save lifes *Tore Lærdal, Introduced by Kjetil Søreide*
14:40 - 15:20	Scientific Session 7, Moderator: Anna Martling
14.40 - 15.00	Re-thinking Anastomotic Leak in Colorectal Surgery *David Jayne*
15.00 - 15.20	Gene Surgery, Changing Phenotype by Operating on the Genome *Yuman Fong*
15:20 - 16:30	Annual General Meeting

Social/Partners Program

Sunday, June 23, 2024

14.30 onwards	Registration in Reception, Hotel Victoria
19:15 - 19:30	Walk to Norwegian Petroleum Museum
19:30 - 22:30	Welcome Reception & Buffet Dinner with Guides at Norwegian Petroleum Museum
22:30 - 22:45	Walk back to Hotel Victoria

Monday, June 24, 2024

09.00 - 10.00	Guided Stavanger City Walk
10:00 - 12:30	IDDIS Norwegian Printing Museum & The Norwegian Canning Museum
14:00 - 14:40	Equinor - from fossil fuel to renewables *Lars Troen Sørensen, Introduced by Kjetil Søreide*
17:30 - 18:00	Walk to Bekhuskaien (Flor & Fjære boat terminal)
18:00 - 18:30	Boat Trip to Flor & Fjære
18:30 - 19:30	Guided Tour of the Flor & Fjære Garden

19:30 - 22:30 Dinner at Flor & Fjære

22:30 - 23:00 Boat Trip back to Bekhuskaien

23:00 - 23:30 Walk back to Hotel Victoria

Tuesday, June 25, 2024

09.00 - 12.30 Viking Tour

14:00 - 14:40 Lærdal Medical - from childrens joy to helping save lifes
Tore Lærdal, Introduced by Kjetil Søreide

15:00 to 17:00 Optional Lysefjord Safari in RIB Boat

19.30 - 23:00 Gala Dinner at Hotel Victoria

Wednesday, June 26, 2024

09:00 - 12:00 Departures or optional Fjord Cruise to Lysefjord and Preikestolen

ISG 2024 Program Abstracts

1. Advancements in minimally-invasive liver surgery – combining robotic surgery and fast track recovery protocol

Stefan Fichtner-Feigl, Klinik für Allgemein- und Viszeralchirurgie, Department Chirurgie, Universitätsklinikum Freiburg

Background: Minimally-invasive liver surgery has witnessed substantial advancements with the integration of robotic-assisted techniques especially applied in complex major liver resections. One major beneficial factor is postoperative recovery and the reduction of complications.

Methods: A robotic program for liver surgery focusing on major resections (i.e. major hepatectomy, ALPPS, mesohepatectomy, resection of Klatskin tumors) was established and combined with a full fast track concept with external validation and auditing.

Results: Robotic surgery offers enhanced precision, dexterity, and visualization, overcoming limitations of conventional laparoscopic approaches. Utilizing robotic platforms, surgeons can perform complex hepatic procedures with greater precision, reducing blood loss, and minimizing tissue trauma. Moreover, fast track recovery strategies aim to expedite postoperative rehabilitation, enabling patients to resume normal activities swiftly while ensuring optimal clinical outcomes. These protocols encompass multimodal perioperative care, including preoperative counselling, tailored anesthesia, optimized pain management, and early mobilization. By minimizing perioperative stress and complications, fast track recovery facilitates shorter hospital stays and reduces healthcare costs.

Conclusion: The synergistic combination of robotic-assisted techniques and fast track recovery protocols represents a paradigm shift in modern liver surgery. Clinical studies have demonstrated the safety, efficacy, and feasibility of these approaches, leading to improved patient satisfaction and reduced morbidity rates. As the field continues to evolve, ongoing research endeavors aim to refine surgical techniques, optimize perioperative care pathways, and further enhance patient outcomes in minimally-invasive liver surgery.

2. ScotCap: The introduction of a colon capsule endoscopy into a publicly funded health system.

Angus J M Watson. Chair of Surgery, University of Aberdeen.

Introduction: Colorectal Cancer (CRC) is the third most common malignancy. It is principally diagnosed by optical colonoscopy (OC). In many health systems demand for OC outstrips its supply, this was worsened by the COVID-19 pandemic. Colon Capsule Endoscopy (CCE) is an alternative lower gastrointestinal (GI) diagnostic test[1]. The aim of this presentation is to chart the introduction and deployment, at scale, of this innovation in a publicly funded national health system[2].

Methods: CCE was introduced into NHS Scotland with qualitative[3], quantitative[4] and health economic assessments[5]. Its deployment was accelerated by the COVID-19 pandemic and supported by a national outcome registry and a central image library. All patient outcome data was collated prospectively into the globe's largest repository of CCE demographic and imaging data.

Results: Over 6000 patient's data have been collated in the registry. This has facilitated publication of test completion, sensitivity, specificity, and complication rates. The data has expediated continuous improvement[6,7] and assisted in the exploration of Artificial Intelligent (AI) reading and reporting of CCE images[8,9,10,11]. The ScotCap programme has contributed to the

debate about thresholds for Faecal Immunochemistry Testing (FIT)[12] and removal of diminutive polyps[13]. It has also led to the initiation of the largest CCE diagnostic accuracy study, to date.

Discussion: CCE is a disruptive innovation in GI diagnostics. With new-entrant cheaper capsules, facilitated by AI reading and the ability for the test to be delivered at a patient's home, CCE is likely to be utilised more in the future. Significant doubts about its utility remain amongst the clinical community but CCE could have a significant impact on CRC diagnosis[14,15].

1. Macleod C, Monaghan E, Banerjee A, Jenkinson P, Falconer R, Ramsay G, Watson AJM. Colon Capsule Endoscopy. The Surgeon March 2020; 18(4): DOI 10.1016/j.surg.2020.01.008
2. Macleod C, Wilson PMJ, Watson AJM. Colon capsule endoscopy: an innovative method for detecting colorectal pathology during the COVID-19 pandemic? Colorectal Dis. 2020; 22 (6): DOI: 10.1111/codi.15134
3. Jamieson M, Maquire R, McCann L, Watson AJM, Brogan M, Lennon M. Evaluation of an innovative Colon Capsule Endoscopy Service in Scotland from the perspectives of patients: Mixed Methods Study. Journal of Medical Internet Research. April 2023. DOI. 10.2196/45181
4. Macleod C, Hudson J, Brogan M, Cotton S, Treweek S, Maclennan G, Watson AJM. ScotCap – a large observational cohort study, Colorectal Disease December 2021 DOI 10.1111/codi.16029
5. Colon capsule endoscopy (CCE-2) for the detection of colorectal polyps and cancer in adults (shtg.scot)
6. Macleod C, Foxton A, Wilson P, Treweek S, Watson AJM. Associations between patient factors and successful colon capsule endoscopy – A prospective cohort study. Colorectal Disease October 2023 DOU: 10.1111/codi.16771
7. Macleod C, Oliphant R, Richards, Watson AJM. An evaluation of a novel bowel preparation regimen and its effects on the utility of colon capsule endoscopy: a prospective cohort study with historical controls. Techniques in Coloproctology December 2022. DOI: 10.1007/s10151-022-02745-03
8. Laiz P, Vitria J, Gilabert P, Wenzek H, Malagelada C, Watson AJM, Segui S. Anatomical landmarks localisation for capsule endoscopy studies. Computerised Medical Imaging and Graphics May 2023. DOI: 10.1061/j.compmedimag.2023.102243
9. Lei I, Tompkins K, White E, Watson AJM, Parson N, Noufally A, Segui S, Wenzek H, Badreldin R, Conlin A, Arasradnam R. Study of capsule endoscopy delivery at scale through enhanced artificial intelligence-enabled analysis (the CESCAIL study). Colorectal Disease April 2023. DOI. 10.1111/codi.16575
10. Lei I, Nia G, White E, Wenzek H, Segui S, Watson AJM, Koulaouzidis A, Arasaradnman R. Clinicians'' guide to artificial intelligence in Colon Capsule Endoscopy – technology made simple. Diagnostics 8; 13 (6) 1038, March 2023.DOI 10.3390/diagnostics13061038
11. Gilabert P, Vitria J, Laiz P, Malagelada C, Watson AJM, Wenzek H, Segui, S. Artificial Intelligence to improve Polyp Detection and Screening Time in Colon Capsule Endoscopy. Preprint January 2022 DOI: 10.21203/rs.3.rs-1278962/v1
12. Johnstone MS, MacLeod C, Digby J, Al-Azzawi Y, Pang G, Watson AJM, Strachan J, Mowat C, McSorley ST. Prevalence of repeat faecal immunochemistry testing in symptomatic patients attending primary care. Colorectal Dis. 2022 Jul 1. doi: 10.1111/codi.16240. Online ahead of print
13. The ScotCap Clinical Leads Collaboration. Follow up of small and diminutive polyps – how to balance the risks in the COVID-19 era. Colorectal Disease September 2021 DOI 10.1111/codi15907
14. MacLeod C, Oliphant R, Docherty JG, Watson AJM. A colorectal cancer missed by colon capsule endoscopy: a case report. BMC Gastroenterol. 2022 May 21;22(1):258. doi: 10.1186/s12876-022-02332-8.

15. Thomas Bjørsum-Meyer, Cristiano Spada, Angus J.M. Watson, Anastasios Koulaouzidis What holds back colon capsule endoscopy from being the main diagnostic test for the large bowel in cancer screening. Gastrointestinal Endoscopy September 2021 DOI: 10.1016/j.gie.2021.09.007

3. Surgical mortality – How low can it go?

Prof. Paul BS LAI, Department of Surgery, The Chinese University of Hong Kong, Hong Kong SAR

Background: Surgical audit has been proven to be an effective means to improve surgical outcomes. In 2008, the Surgical Outcomes Monitoring and Improvement Programme (SOMIP) was launched in the Hospital Authority of Hong Kong.

Methods: SOMIP covers all major and ultramajor surgical operations in general surgery in both elective and emergency settings. Clinical data are collected by: (1) automated extraction from the electronic patient records and (2) a team of trained nurse reviewers. Risk-adjusted analysis is used to compare hospital performance based on post-operative morbidities and mortalities.

Results:
(1) Significant reductions of 30-day mortality and 30-day morbidity for both elective and emergency operations.
(2) Decreased performance variation between hospitals in terms of post-operative outcomes.
(3) While some ultra-major procedures like oesophagectomy and radical cystectomy have undergone centralization, centers performing Whipple operations and major hepatectomy with lower volumes may still experience wide outcome variations of annual outcome.
(4) Development of an in-house surgical risk calculator for emergency operations.
(5) SOMIP facilitates collaboration among surgeons from different hospitals, enabling the exchange of knowledge and expertise, and enhancing patient care.

Conclusions: Upcoming challenges:
(1) How can the league-table effect created by the risk-adjusted analysis be avoided?
(2) Should we disclose our data based on the performance of hospitals to the public?
(3) In addition to patient profiles and presenting conditions, should process indicators also be captured for risk adjustment?
(4) How to apply the risk score in patient counselling and surgical decision-making?

4. Increased mortality rate in patients undergoing hemithyroidectomy for benign multinodular goitre without thyroid hormone replacement therapy

Anders Bergenfelz, MD, PhD, Department of Clinical Sciences-Lund, Lund University, Sweden

Background: Thyroid surgery for benign non-toxic nodular goitre is a very common endocrine surgical procedure. It is not known whether thyroid hormone replacement therapy following surgery for benign thyroid disease influences mortality or morbidity.

Methods: A retrospective observational study was conducted by using national registries in Sweden. Overall mortality and morbidity were compared for patients with or without thyroid hormone replacement therapy in patients operated with hemithyroidectomy or total thyroidectomy and with a diagnosis of benign non-toxic nodular goitre.

Results: Between July 1, 2006, and December 31, 2017, 5573 patients were included. Some 1644 (29.5 per cent) patients were operated with total thyroidectomy and 3929 patients with hemithyroidectomy. In the hemithyroidectomy group, 1369 (34.8 per cent) patients were prescribed thyroid hormone replacement therapy.

The patients operated with hemithyroidectomy without thyroid hormone replacement therapy had a standard mortality ratio (SMR) of 1.31 (95 per cent confidence interval (CI), 1.09-1.54). The mortality ratio was not increased in patients who underwent total thyroidectomy and hemithyroidectomy with thyroid hormone replacement therapy. The risk for mortality analysed by multivariable Cox regression for patients operated with hemithyroidectomy, adjusted for age and sex, showed an increased hazard ratio (HR) for patients without thyroid hormone replacement therapy, HR 1.65 (1.19-2.30).

Conclusion: Patients subjected to hemithyroidectomy without thyroid hormone replacement therapy had a 30 per cent higher risk of death compared to the normal Swedish population and a 65 per cent increased risk for death compared to patients operated with hemithyroidectomy with postoperative thyroid hormone replacement therapy.

5. The ISG meeting in 2011 (Zürich) gave inspiration to a hypothesis of the pathogenesis of long Covid

Knut Kvernebo, Professor Emeritus. Thoracic Surgery, Institute of Clinical Medicine, University of Oslo
Founder and CMO of ODI Medical AS.

Introduction: In Zürich, the Nobel prize laureate in chemistry, Jean-Marie Lehn give a lecture called “From the big bang to the creation of chemistry”. He described a hierarchy of laws of nature developing during the evolution of the universe. In my communication with him, I argued and got support for claiming that laws of nature of vertebrate physiology were also organized hierarchically with mechanisms related to O2 delivery to cells at the top: Without O2 supply – cells die! This understanding and the lack of clinical useful biomarkers for tissue oxygenation resulted in funding of ODI Medical and development of the non-invasive technology ODI-Tech for assessing microvascular function and O2 delivery. Our late ISG honorary member, Ron Tomkins, initiated this study.

Material: 40 patients hospitalized for Covid-19 infection at Mass Genal Brigham, Boston, and 23 controls were examined with skin ODI-Tech®.

Results: Capillary densities were reduced, and microvascular heterogeneity increased in Covid-19 patients ($p<0.01$), showing peripheral microvascular dysregulation. Reduced microvascular oxygen saturation (SmvO2)/increased O2 extraction, and increased heterogeneity of tissue oxygenation in Covid-19 patient was demonstrated ($p< 0.01$). Applying Fick´s law of gas diffusion for extraction of O2 molecules across the capillary membrane, we argue that the SmvO2 findings are indicative of tissue hypoxia in Covid-19 patient, and that ODI-Tech® is a non-invasive biomarker of tissue oxygenation.

Conclusion: Hospitalized COVID-19 patients have peripheral microvascular dysregulation causing low SmvO2 and high microvascular O2 extraction. We hypothesize that tissue hypoxia is a cause of reversible and non-reversible long COVID-symptoms and a cause of mortality.

6. Neoadjuvant chemoradiotherapy followed by surgery versus active surveillance for oesophageal cancer (SANO-trial): a phase-III stepped-wedge cluster-randomised trial

J. Jan B. van Lanschot, on behalf of the *SANO Study Group*

The following Dutch hospitals participated in the SANO trial:

- Erasmus University Medical Center, Rotterdam
- Radboud University Medical Center, Nijmegen
- Maasstad Hospital, Rotterdam

- Reinier de Graaf Gasthuis, Delft
- Elisabeth Tweesteden Hospital, Tilburg
- ZGT Hospital, Almelo
- Catharina Hospital, Eindhoven
- Medical Center Leeuwarden, Leeuwarden
- Leiden University Medical Centre, Leiden
- The Netherlands Cancer Institute, Amsterdam
- Zuyderland Medical Center, Heerlen
- Gelre Hospital, Apeldoorn

Background: One-third of patients with oesophageal cancer have a pathologically complete response after neoadjuvant chemoradiotherapy (nCRT) plus oesophagectomy. Therefore, active surveillance may be an alternative for patients with clinically complete response (CCR).

Methods: A noninferiority stepped-wedge cluster-randomised trial was performed. Patients with CCR (*i.e.* no residual disease six and twelve weeks after nCRT) underwent active surveillance (surgery only when locoregional regrowth was detected) or standard surgery. Primary endpoint was overall survival (OS) from day of CCR. Noninferiority was defined as Hazard Ratio (HR) ≤1.77 for overall survival in active surveillance after two years. Secondary endpoints were operative outcomes, disease-free survival (DFS), distant-dissemination rate and quality of life (HRQOL, EORTC QLQ-C30).

Results: In total, 198 patients underwent active surveillance and 111 patients underwent standard surgery. Median follow-up was 34 months in active surveillance and 50 months in standard surgery. During active surveillance, 69 patients (35%) maintained CCR, 96 patients (48%) developed locoregional regrowths, and 33 patients (17%) developed distant metastases. Of the 96 patients with locoregional regrowths , 83 underwent postponed surgery with comparable postoperative complications and radicality compared to standard surgery. OS in active surveillance was noninferior to standard surgery (HR 0.88, 95% upper boundary 1.40, p = 0.007). Median DFS for active surveillance was 35 (95% CI 31 – 41) versus 49 months (95% CI 38 – NA) for standard surgery (HR 1.35, 95% CI 0.89 – 2.03, p = 0.15). At 30 months after nCRT, 43% of patients with active surveillance versus 34% with standard surgery developed distant metastases (OR 1.45, 95% CI 0.85 – 2.48, p = 0.18). HRQOL was statistically significantly better at six (p = 0.002) and nine months (p = 0.007) for active surveillance.

Conclusions: After a minimal follow-up of two years, patients undergoing active surveillance had noninferior OS and improved short-term HRQOL compared to standard surgery. Postponed oesophagectomy for locoregional regrowth was safe. Extended follow-up is required to assess long-term efficacy of active surveillance. Active surveillance can be introduced as alternative treatment option, using these data in shared decision making and patient counseling.

7. Machine learning for precision metabolic surgery

Francois Pattou, Universitéde Lille, Inserm, CHU Lille, Institut Pasteur de Lille, Lille, France

Background: Weight loss trajectories after bariatric surgery vary widely between individuals, and predicting weight loss before the operation remains challenging. We aimed to develop a model using machine learning to provide individual preoperative prediction of 5-year weight loss trajectories after surgery.

Methods: In this multinational retrospective observational study we enrolled adult participants (aged ≥18 years) from ten prospective cohorts (including ABOS [NCT01129297], BAREVAL [NCT02310178], the Swedish Obese Subjects study, and a large cohort from the Dutch Obesity Clinic [Nederlandse Obesitas Kliniek]) and two randomised trials (SleevePass [NCT00793143] and SM-BOSS [NCT00356213]) in Europe, the Americas, and Asia, with a 5 year followup after

Roux-en-Y gastric bypass, sleeve gastrectomy, or gastric band. Patients with a previous history of bariatric surgery or large delays between scheduled and actual visits were excluded. The training cohort comprised patients from two centres in France (ABOS and BAREVAL). The primary outcome was BMI at 5 years. A model was developed using least absolute shrinkage and selection operator to select variables and the classification and regression trees algorithm to build interpretable regression trees. The performances of the model were assessed through the median absolute deviation (MAD) and root mean squared error (RMSE) of BMI.

Results: 10 231 patients from 12 centres in ten countries were included in the analysis, corresponding to 30 602 patient-years. Among participants in all 12 cohorts, 7701 (75·3%) were female, 2530 (24·7%) were male. Among 434 baseline attributes available in the training cohort, seven variables were selected: height, weight, intervention type, age, diabetes status, diabetes duration, and smoking status. At 5 years, across external testing cohorts the overall mean MAD BMI was 2·8 kg/m² (95% CI 2·6–3·0) and mean RMSE BMI was 4·7 kg/m² (4·4–5·0), and the mean difference between predicted and observed BMI was –0·3 kg/m² (SD 4·7). This model is incorporated in an easy to use and interpretable web-based prediction tool to help inform clinical decision before surgery.

Conclusion: We developed a machine learning-based model, which is internationally validated, for predicting individual 5-year weight loss trajectories after three common bariatric interventions.

8. Autologous islet stem cell transplantation for diabetes

A.M. James Shapiro, University of Alberta, Edmonton, AB

Background: An estimated 537 million people live with diabetes, and if this disease were a country it would be the third largest by population. Every 6 seconds someone dies from a complication of this disease. Insulin is a band-aid, but falls short of a cure. Improvements in 'wearable technologies' (pumps, closed loop sensors, predictive algorithms), novel insulins and a cadre of insulin sensitizer drugs are making impact but are insufficient. GLP-1 analogues are in high demand, must be taken life-long but with unknown long-term risk, and Novo Nordisk (maker of Ozempic and Wegovy) have stock valued at $560 million – more than the GDP of Denmark where Novo is based. Cell transplantation has advanced over the past 25 years – are own centre has processed almost 3000 human pancreases for islets, and carried out almost 800 intraportal transplants with excellent short-term and durable impact (78% of patients come off insulin initially, most have to go back on small supplemental amounts over time, but 70% continue to produce sufficient endogenous insulin to prevent hypoglycemia and correct HbA1c over 20 years of follow up. The big barriers to more widespread adoption are need for full immunosuppression, scarcity of organ donor supply, and acceptance by regulatory authorities (in the US). To address these challenges, Viacyte, Vertex and other companies have manufactured allogeneic (and now CRISPR-edited) embryonic stem cell (ESC) islets that have been injected intraportally and reversed diabetes in patients. Our own approach has been to generate autologous islets from peripheral blood of patients with diabetes through generation of inducible pluripotent stem cell (iPSC) manufacture, differentiation and scale up. A group in Shanghai, China recently carried out a first-in-human transplant of similar autologous cells in a patient with Type 2 diabetes with remarkable success.

Method: iPSC-derived islets were generated from patients with T1D, T2D and post pancreatectomy status using Yamanaka Factors, then differentiated in planar and in vertical wheel bioreactors through a 7-stage protocol of serial growth factors, tested in vitro and transplanted into diabetic mice.

Results: Diabetes reversal was achieved in mice with high human c-peptide levels. Reduced off target risk of cyst formation was achieved by optimization of the differentiation protocols, and through addition of the AKT inhibitor AT7867. 5x increase in bioreactor capacity resulted in 12x increase in differentiated SC islets, making first-in-human trials tangibly within reach.

Conclusions: Remarkable progress has occurred in cell-based therapies for diabetes. Moving these through first-in-human to scaled-up phase 2-3 trials will likely change the landscape of hope and tangible therapy for this disease, without need for immunosuppression.

9. Diabetes and Pancreatic Surgery

Jens Werner, LMU Munich

Background: Primary pancreatic disorders damage the islets of Langerhans, leading to poor glycemic control and type 3c diabetes. It occurs in 5-10% of all patients with diabetes and is frequently misdiagnosed. The prevalence of diabetes among patients with pancreatic cancer exceeds that of the general population. On the one hand, long-standing diabetes type 2 and obesity increase the risk for the development of PDAC, on the other hand new onset diabetes may resolve after pancreatic resection in some cases. Thus, there is some overlap of type 2 and type 3c diabetes in patients with PDAC. The most common cause of type 3c diabetes is chronic pancreatitis, accounting for about 80% of the cases.
Results: In addition to the underlying disease, pancreatic resections can induce type 3 c diabetes, especially if the preoperative ß-cell function was impaired. Today, many pancreatic cases are operated on for chronic pancreatitis, as well as benign or premalignant tumors and cysts; and all these patients have prolonged survival. Thus, the postoperative diabetes gains importance. In acute necrotizing pancreatitis the timing of necrosectomy and the treatment algorithm have an impact on the development of diabetes.

Conclusion: When formal resections are performed, development of postoperative diabetes is dependent on the extent of pancreatic resection (percentage of pancreatic volume), type of resection (total pancreatectomy, pancreatic head or tail, organ preserving), the need for reconstruction of the gastrointestinal tract, and the degree of postoperative exocrine insufficiency and malabsorbtion.

10. The History of Spectacles in Continental Europe

Renzo Dionigi, Varese, Italy

Background: Scattered evidence exists for use of visual aid devices in Greek and Roman times, most prominently the use of an emerald by Emperor Nero as mentioned by Pliny the Elder.
The earliest pictorial evidence for the use of eyeglasses is Tommaso da Modena's 1352 portrait of the cardinal Hugh de Saint-Cher reading in a scriptorium. Another early example would be a depiction of eyeglasses found north of the Alps in an altarpiece of the church of Bad Wildungen, Germany, in 1403. These early glasses had convex lenses that could correct both hyperopia, and the presbyopia that commonly develops as a symptom of aging.
What is very astonishing is that most historians, predominantly of the Medieval science and medicine, over the past three centuries have mainly been concerned with identifying 'the inventor of spectacles'. This is an arduous, pretentious and, to say the least, irrational task. I am personally convinced that, originally, spectacles are a kind of handcrafted prototypes, which appeared at the same time in different Laboratory glassware, often blindly produced, born of occasional events, chance and random experiences.
The most recent historiography therefore believes that the invention of spectacles was made by chance, by empirical means, by someone (or simultaneously by several people in different European regions) handling glass lens-shaped objects and looking through them and observing the effect. These humble medieval craftsmen, who were almost certainly illiterate, even though they were the authors of this prestigious innovation, will remain unknown forever.
Results: This presentation will show a preliminary study of Nordic (Flemish and German) engravings in which depictions of spectacles have been found to trace the characteristics that

allow us to recognize some of their functions, their external forms, their frames, their possible symbolic use, and their trade.
During the Middle Ages and in the Renaissance, artists depicted Church doctors and Evangelists wearing a pair of spectacles a millennium before their invention, which is certainly anachronistic, but which can be interpreted as a sign of respect, recognition, wisdom, knowledge and authority. The depiction of spectacles can have a symbolic meaning, as a metaphor for keen eyesight, depth of spirit, i.e. insightful scientific observation of knowledge and science, depth of spirit, but also penetrating mystical insight.
Spectacles appear frequently in depictions of the seven deadly sins (gluttony, lust, avarice, wrath, sadness, sloth, vainglory, pride), but also in the personification of ignorance, imbecility, madness, concupiscence, cunning, the devil and, certainly, death.

Conclusion: Art, in fact, popularized spectacles as suitable tools for expressing this symbolism. Ancient and modern scholars and scientists are depicted wearing spectacles as an expressive image of their wisdom, sometimes at the expense of the character's aesthetics. Since then, many have continued to put their spectacles on their noses, to hold a lens in their hands, to look through scissor glasses, monocles or spectacles with a nose clip even if their vision was perfect. This widespread habit became, especially from the end of the 18th century, the target of caricaturists.

11. Surgical History: Early laparotomies in America

Per-Olof Hasselgren, Department of Surgery, Beth Israel Deaconess Medical Center, Boston, MA

An operation performed in 1809 by Dr. Ephraim McDowell in Danville, KY, is often quoted as the first laparotomy in America, but examination of historic documents suggests that several abdominal surgeries had been performed before Danville.

In 1759, John Bard (1716-1799), a well-known surgeon in New York, reported “A case of an extra-uterine fœtus” for which he had performed a laparotomy. He described the operation in a letter to the famous London physician John Fothergill dated on Christmas Day, 1759. The remarkable case was published in Medical Observations and Inquiries by a Society of Physicians in London (1762). The operation was successful and the patient “quickly recovered good health.”

Twenty-four years after Bard’s operation, John Warren (1753-1815) of Boston reported a second laparotomy. In a paper, “A History of a Large Tumour, in the Region of the Abdomen, Containing Hair,” published in the Memoirs of the American Academy of Arts and Sciences (1783), Warren described how a huge ovarian mass containing “a large quantity of short hair or wool” was excised. The patient, who recovered “perfect health,” became somewhat of a celebrity and was visited by “many of the practitioners in the town of Boston.”

William Baynham (1749-1814) was a surgeon-anatomist who after sixteen years of training in England returned to Virginia to establish a successful surgical practice, specializing in surgeries for bladder stones, cataract, and extra-uterine pregnancies. In 1791 and 1799, Baynham performed two successful operations for ectopic gravidities. He reported the operations in the New York Medical and Philosophical Journal Review in 1809.

The history of laparotomies in America may need to be re-written, taking into account several abdominal surgeries performed before the famous case of McDowell in 1809.

12. Developing Clinical Guidelines

Stefan Post, Mannheim, Germany

Background: In order to facilitate and optimize application of medical knowledge in patient

care clinical guidelines have been crucial for decades. Coming from expert consensus the methodology of evidence-based guidelines has become more and more demanding and expensive.

Methods: This presentation will provide an overview on the German oncological guideline project including one example of a recently published guideline on perioperative care.

Results: Since 2008 the German Cancer Aid has been financing an oncologic guideline program with more than 14 million Euro. This has resulted in publication of 34 clinical guidelines which usually include a short version, a long version, a methods report, an evidence report, as well as a patient guideline and regular updates. The program aims for the highest standards of transparency, independence, evidence retrieval and valuation. All relevant specialty societies and patient advocacy groups are involved. Within this program we started the guideline project on “Perioperative management of gastrointestinal malignancies” which led to the publication of the guideline in December 2023 with 46 evidence-based recommendations and 30 consensus-based recommendations. It covers issues like prehabilitation, anesthesia, surgical drains, ileus prevention, and multimodal perioperative management programs. The patient guideline is soon to be finalized.

Conclusions: Clinical guideline development is challenging and expensive, but an essential component of evidence-based patient care. More international cooperation is desirable.

13. **Current Quality of Reporting of Outcome Research**

Pierre-Alain Clavien, University of Zürich, Zürich, Switzerland

Background: The interest in measuring, comparing, and improving the quality of health care is enormous. In surgery, quality is often measured by complications, which are not only a clinical challenge, but also a significant global health issue.

To prevent complications after an intervention and allow for credible comparisons of competing therapies or care providers standardized assessment tools are essential. In 2004 the assessment and reporting of surgical complications was revolutionized with the introduction of the “Clavien-Dindo Classification” (CDC)[1]. This 5-scale system grades complications based on the invasiveness of therapy used to manage the specific complication. The CDC offers a simple and reliable way of ranking complications by severity and remains the most cited publication in the surgical literature.

A limitation of the CDC is that it requires extensive tabulation of complication details, which makes this metric difficult to use in comparing outcomes. In addition, many studies tend to focus only on the most severe complications, omitting those of lesser severity[2]. In response to this limitation, the Comprehensive Complication Index (CCI®), based on the CDC, was developed in 2013[2]. It is a metric that reflects the overall morbidity of a patient. The development of the CCI® explicitly considered the patients’ perspective by allowing the patient to assign weights to the respective CD grades. The CCI® provides a single measure, normalized on a scale from 0 (no complication) to 100 (death), that captures both the number and severity of complications.

Methods: Meanwhile the CDC and CCI® were used in many centers and surgical disciplines worldwide for 20 and 10 years, respectively, and in 2024 the pioneers developed recommendations to improve guidance on how to use the CDC and CCI® in scenarios, that proved challenging over the years[3].

Results: A Jury-based consensus conference, recently reported in Nature Medicine, highlighted both the CDC and CCI® as standard metrics to us in surgical outcome assessment[4]. From the conference, there was a suggestion to evaluate the current quality of outcome reporting in the surgical literature and to test whether the "humiliating" editorial (surgery as a comic opera) published in the Lancet in 1996 [5] has improved over years. Unfortunately, the current quality of reporting remains gloomy as demonstrated in an article labeling surgery as a move from a "comic" to a "tragic" opera[6].

Conclusion: Additionally, complications as a marker for quality reflect primarily the physicians' perspective and are often interpreted by some arbitrary thresholds for statistical significance[7]. In an era in which the patients' perspective is more important than ever, such p-value based interpretations are no longer sufficient, and often misleading. Stakeholders need "real-world evidence", meaning data of clinically relevant treatment effects, to make informed decisions and check and improve health care quality[8]. This implies a good understanding and reporting of changes in important outcomes such as patient-reported outcome measures (PROMs)[4]. The concept of real-world significance (a change that constitutes an important effect from the patients' and/or clinicians' perspective) should be implemented in research and practice[8].

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14. The Janus-Face of Artificial Intelligence in Medical Publishing

Susan Galandiuk, Hiram C. Polk Jr. MD Department of Surgery, University of Louisville, Louisville, KY, USA

Background: Although simple forms of artificial intelligence have been used in medical publishing for years, since November 2022 with the release of ChatGPT, there has been widespread use of

generative AI by authors. This has led to challenges with respect to permitting its use to benefit those using it for constructive purposes, while limiting harmful applications.

Methods: AI methods currently in use by publishers will be described, and developing consensus statements of various organizations regarding the role of AI in authorship discussed.

Results: Detection of AI generated content will become increasingly difficult. Categorization of both helpful and harmful applications of AI is needed. Publishers and editors need to assume use. AI calls into question issues of confidentiality, and copyright. New expertise is needed both from publishers, editors, reviewers, authors and readers.

Conclusion: The status of artificial intelligence in publishing is undergoing constant change. Editors, publishers and readers will need to adapt.

15. Multimodal Prehabilitation (Fit4Surgery) in High-impact Surgery to Enhance Surgical Outcomes: a Single Center Stepped Wedge Trial on 4500 patients.

B van de Heuvel, D Strijker, L Drager, E van Daal, S Verlaan, J Rosenstok, F Atsma, **C van Laarhoven**, Radboud University Medical Center, Nijmegen, Netherlands
Department of Surgery

Background: High-impact surgery imposes a significant physiological and functional burden and is associated with substantial postoperative morbidity. Multimodal prehabilitation has demonstrated a reduction in postoperative complications and enhanced functional recovery, mainly in abdominal cancer surgery. Common preoperative risk factors shared among patients undergoing high-impact surgery, extending beyond abdominal cancer surgery procedures, suggest the relevance of multimodal prehabilitation to a broader patient population. This stepped wedge trial primarily aims to examine the hospital-wide effect of multimodal prehabilitation, compared to standard preoperative care, on the occurrence and severity of postoperative complications. Secondary and tertiary endpoints include length of hospital stay, physical fitness, nutritional status, mental health, intoxications, and cost-effectiveness of the intervention.

Methods: The Fit4Surgery (F4S) PREHAB trial is a monocenter stepped wedge trial in an academic hospital. Adult patients, divided into 20 health clusters based on specific diagnoses, will be assessed for eligibility and receive usual preoperative care or multimodal prehabilitation. Patient enrollment commenced in March 2021 and continues up to and including April 2024. The intervention consists of a high-intensity exercise program, a nutritional intervention, psychological support, and smoking and alcohol cessation. The primary outcome will be measured by the Clavien-Dindo classification (grade II or higher) and the Comprehensive Complication Index (CCI).

Discussion: Multimodal prehabilitation potentially reduces postoperative complications and enhances functional recovery. This is the first study to determine the hospital-wide effect and cost-effectiveness of multimodal prehabilitation in patients across various surgical specialties.

Results: An expected number of patients included in this single center study is 4500 patients. Until now this will be the largest study on multimodal prehabilitation. Data collection will be complete this Spring and preliminary qualitative and quantitative data will be ready to present at the time of conference.

Trial registration: The study is registered in the International Clinical Trials Registry Platform, NL8699. Registered on 05-06-2020.

16. Complex Venous Reconstruction Strategies in Pancreatic Surgery

Prof. Dr. J. Weitz, MSc, Department of Visceral-, Thoracic and Vascular Surgery, University Hospital Carl Gustav Carus, Technical University Dresden, Fetscherstr. 74, D-01307 Dresden, Germany

Introduction: Pancreatic cancer is a highly malignant disease with a dismal prognosis. Only a fraction of patients will undergo potential curative resection, as pancreatic cancer is a systemic disease in the majority of patients. In patients undergoing surgery, complete tumor resection should be achieved. Infiltration of portal venous branches poses a significant technical surgical challenge and is the reason for local irresectability in many patients. The objective of this talk is to give an overview of the strategy and possible technical solutions in patients with complex venous vascular challenges due to tumor infiltration.

Methods: Presentation of a structured approach to complex venous reconstruction strategies on pancreatic cancer surgery.

Results: Reconstruction of the portal venous system depends on the presence of a patient superior mesenteric vein and portal vein. Depending on the extent of tumor infiltration in these vessels and the presence of venous collateral branches, different strategies need to be applied in order to achieve an adequate venous drainage of the intestine and a portal venous supply to the liver. The use of alloplastic prostheses is not necessary in most patients. Prolonged venous outflow obstruction with subsequent congestion of the small bowel has to be avoided intraoperatively, different options of mesentericocaval shunts can be applied to achieve this goal.

Conclusions: Complete resection is the objective in pancreatic cancer surgery. Tumor infiltration of the portal venous branches can be surgically managed in many patients using a structured approach offering a chance for potentially curative complete tumor resection.

17. The Treatment of Bleeding is to stop the bleeding! Goal directed hemostasis in 2024

Ken Boffard. Professor Emeritus, Department of Surgery, University of the Witwatersrand, and Trauma Director, Milpark Hospital, Johannesburg.

Background: Transfusion of blood and blood components is a fundamental part of trauma management; approximately 40% of the 13 million units of blood transfused in the United States each year are used in emergency resuscitation. The principles of resuscitating a patient in haemorrhagic shock are governed by damage control resuscitation principles. However, the principles of massive hemorrhage control. and the monitoring of all transfusions are now goal directed.

Methods: Damage control resuscitation is designed to normalize physiology by restoring intravascular volume and oxygen carrying capacity while normalizing coagulation with the components that have been lost. This is best done with fresh whole blood or components including either liquid cold-stored whole blood or RBCs, plasma and platelets given in a 1:1:1 ratio. Calcium Administration is an integral part of the “Deadly Diamond.” The use of new thresholds, and goal-based therapy has reduced the average amount of blood required should more than four Units be transfused, from an average of 20 Units to 8 Units.

Monitoring: Monitoring is no longer haemoglobin, INR or Factor Xa. Dynamic monitoring of the phases of coagulation using thromboelastography (TEG) or rotational thromboelastometry (ROTEM), and oxygen delivery at cellular level, have replaced previous protocols. Interpretation of these new tests, and application of new transfusion policies will be discussed.

Conclusions: A modern transfusion protocol (indications / thresholds / components / monitoring) is now a critical driver of all transfusions. Use of these has halved the volume of blood previously required following massive blood loss.

18. Does Lymphatic Fluid from the Primary Cutaneous Melanoma Contain Signals that Contribute to the Immunotolerant Microenvironment in the Sentinel Lymph Node (SLN)?

Kelly M. McMasters, MD; PhD, Austin J. McMasters, BA, MS; Hongying Hao, PhD
Divisions of Surgical Oncology and Immunotherapy, the Hiram C. Polk, Jr., MD Department of Surgery, University of Louisville School of Medicine

Introduction: The sentinel lymph node (SLN) is the first node to receive afferent lymphatic drainage from the site of the primary melanoma and thus plays an important role in directing the anti-tumor immune response. We and others have previously shown that the SLN of patients with nodal metastasis is characterized by a markedly immunotolerant environment. We hypothesized that signaling from the primary tumor to the SLN via lymphatic fluid in the afferent lymphatic channels may modulate the SLN immune microenvironment to favor metastasis.

Methods: Mass cytometry by time-of-flight (CyTOF) and T-cell receptor immunosequencing were conducted to analyze the immune cells in the SLN of melanoma patients. NanoString was performed to identify the immune pathways in the SLN that are associated with recurrence. Metabolic analyses were performed on lymphatic fluid (LF) from high-risk patients with nodal metastasis vs. low-risk node-negative patients by two-dimensional liquid chromatography coupled with mass spectrometry (2D LC-MS). Protein arrays were used to compare the cytokine levels in plasma and LF samples from high- versus low-risk patients.

Results: Patients with metastasis in the SLN (SLN+) had a profoundly immunotolerant environment indicated by reduced and impaired NK cells and increased levels of cells with low melanoma killing capabilities. Platelet activation factor (PAF) levels in LF were 3-fold greater in high- versus low-risk patients ($p=0.0039$). Anticancer cytokine IL-2 levels in LF were significantly lower in high- versus low-risk melanoma ($p<0.01$). CCL23 levels were lower in the high-risk group (p-0.02), while M-CSF levels were greater ($p<0.01$).

Conclusion: These results suggest that lymphatic fluid drainage from the primary melanoma may contain potent signals that contribute to an immunotolerant microenvironment in the SLN, which may contribute to nodal metastasis and tumor progression.

19. Being on the other side. Reflections and observations

Emeritus Professor Tom Lennard, Newcastle, UK

October 2023. Left total reverse shoulder replacement for pain and immobility following sports injury as a teenager ,which in 1970 had required a putti plat procedure with coracoid screw to prevent recurrent dislocation.

The decision to go ahead. When and why? Why delay and put it off? I did. Consequences of that.

Informed consent. Does your list of FAQs have my questions on it? Nurse with a checklist or face to face with you the surgeon?

Confidentiality or disclosure? Strategies and reasons for both. Is it possible to be confidentially ill in your own hospital?

Impact on colleagues friends and family. Are you selfish?

Ideas concerns and expectations . Are you getting consistent information from all of the team?

Do you know what happens on the wards after you've left and completed your rounds? Do you really believe/expect everything will be done s you wish ? Some insights from a patient!

Rehabilitation and recovery. Short cuts or do as you're told?

20. When the Tables are Turned

Hiram Polk, Emeritus Chair, Hiram C. Polk Jr. MD Department of Surgery, University of Louisville, Louisville, KY

Background: When a physician becomes a patient, numerous factors become challenging and require understanding, i.e., an arm's length doctor or surgeon, communication with others' family obviously, but colleagues and co-workers if in a supervisory role. As with one of your own patients, many factors are also to be considered:

1) Acute or chronic: inevitably time matters for everything including life itself
2) Family history, evermore valid and now better informed
3) Accuracy of diagnosis; by which pathologists and by which radiologists?
4) Prognosis: short and long-term. Admit to being frightened to yourself and to your spouse
5) Accumulation of illnesses and miles on the speedometer; co-morbidities?
6) Some relatively quick assessment of your own financial status, obligations, and assets
7) What diagnostic studies are available and when and why are they warranted?
8) As soon as these largely private decisions are made, inform accurately and personally everyone who needs who needs to know; be blunt but not unrealistically optimistic
9) Value and validity of "second opinions"

Personal Experiences:

a. Acute Cholecystitis, retained common duct stone ± cholangitis
b. Atrial fibrillation, ablations (multiple) or pacemaker; which anticoagulant?
c. Old athletic injury leads to current issues. A long past wedge fracture of the body of L2 led to back pain, where one carefully chose surgeons; (three operations) wrong the first time,
right the second two, none since 2004
d. Prostatic cancer 1993 and the promise of a valid marker (PSA)
    1. Old drugs
    2. New drugs, impossible costs: the land of co-pays

Conclusion: Informed and sensible advice: Be honest with yourself and appreciate your doctors and their time and compassion. This process makes you very much more informed and helpful; as a surgeon to patients facing similar situations.

21. PBC interrupting surgical activity

Hans D. Saeger, Emeritus Professor, Dresden

Primary biliary cholangitis (PBC, formerly primary biliary cirrhosis) is an autoimmune liver disease mostly occurring in 35- to 70-year-old women (95%). A genetic disposition and exogenous factors very probably are leading to an attack by T-cells on the epithelium of the small biliary ducts until complete destruction. The intrahepatic cholestasis causes liver cell inflammation, liver fibrosis and finally cirrhosis.

Why do I refer on this disease?

In the mid-1990s my personal lab tests showed unexpectedly elevated liver enzymes, primarily of unknown origin. I remembered an event during a portocaval shunt operation I had performed on a patient with Hepatitis B. My assistant accidentally stuck my hand with a needle. According

to the lab results I had been infected. But the hepatitis caused no symptoms and healed spontaneously. Afterwards I never had any complaints and soon forgot about the event. A hepatologist concluded: If you were a woman, this constellation would resemble a PBC. He suggested that I test regularly for liver enzymes. About 15 years later, typical symptoms of PBC became evident and from then on increased continuously: fatigue, pruritus, ascites and jaundice. Despite these symptoms I continued my surgical work, gave talks at conferences, passed a period of three years as dean of our faculty and was president of the German Surgical Society. Until my first esophageal bleeding occurred. My general weakness distinctly increased, I needed a weekly drainage of up to 10 liters of abdominal ascites, I became unable to stand up from a chair without help, and I refused nearly all meals except soups. As I was waiting for an organ donation, I felt my life was going to end. And I was more and more willing to die.
But about one year later, nearly exactly 16 years ago, I got a telephone call. It was an offer of a potential liver donation and the chance for transplantation. Both the anonymous donor and my surgeon Peter Neuhaus from Berlin gave me this chance. I restarted surgery just three months after my surgery and I have been living a wonderful new life to this day.

22. Re-thinking Anastomotic Leak in Colorectal Surgery

David Jayne, University of Leeds, UK

Introduction: Anastomotic leak (AL) is the most feared complication in colorectal surgery, causing mortality, adding to hospital costs, and affecting patients' physical, psychological, and financial well-being. Despite advances in perioperative care, the incidence of AL remains at 5% - 15%.

Methods: Historically, it was considered that an anastomosis had to have good tissue approximation without tension, an adequate blood supply, and be performed in the absence of infection, disease, or distal obstruction for it to heal. More recently, other factors have emerged that might explain why AL still occurs when all the above criteria are met. Early studies in dogs showed that devascularized bowel failed to become necrotic when it was perfused with antibiotics, suggesting that the gut microbiome might play a causative role in AL. Several studies investigating mechanical bowel preparation and selective gut decontamination have reported significant reductions in AL. Laboratory and animal experiments have implicated certain bacteria in AL, specifically collagenase producing species. Further evidence that the microbiome is involved in AL is provided by the IntAct study, which evaluated changes in the gut microbiome following rectal cancer surgery, and the Seal-G study that evaluated sealants with anti-microbial properties to prevent AL.

Results: Several systematic reviews and meta-analyses have reported a benefit for mechanical bowel preparation and oral antibiotics in reducing AL. A recent RCT has shown a significant reduction in AL in rectal cancer patients receiving oral antibiotics in addition to mechanical bowel preparation (5.8% vs 13.5%; OR 0.39, 95%CI 0.21-0.72). The IntAct trial has shown significantly reduced gut microbial diversity in post- as compared to pre-operative rectal samples, with predominance of collagenase producing Enterobacter and Pseudomonas species. The Seal-G study has shown that an alginate sealant with bacteriostatic properties reduces the incidence AL to 1.6% in patients undergoing colorectal surgery with only 0.6% of patients requiring a return to theatre.

Conclusions: There is growing evidence that the gut microbiome plays a causative role in colorectal AL. Modification of the gut microbiome might open new opportunities to reduce this serious complication.

23. Gene Surgery, Changing Phenotype by Operating on the Genome

Yuman Fong MD
Department of Surgery, City of Hope Medical Center, California, USA

Background: The 21st Century has brought a robust understating of genomics and epigenetics, and also major technical advances for manipulating the human genome. Gene surgery has moved from theory to animals and now to human medicine. We now have medicines approved for genetic blindness and for sickle cell disease.

Methods: Some of the most promising areas of gene surgery will be discussed. Gene editing and gene therapy is poised to transform the treatment of many diseases including cancer, inborn errors of metabolism, diabetes, heart disease, and infectious diseases. Trials are underway for gene editing to correct diseases such as thalassemia, hemophilia, phenylketonuria, muscular dystrophy, and many more. There will be a discussion of how some of the technologies work and how this has evolved well beyond CRISPR. Major logistic, financial, and ethical obstacles facing the future of gene surgery and genetic manipulation will be discussed.