



Hva kjennetegner gode kliniske forskningsmiljø ?

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CAMPUS AHUS



UiO :

Litt om meg selv....



Fyrtårn 1: Dr. Ernest A. Codman

Thesis 1917 - The end result idea



Hospitals, if they wish to be sure of improvement

Must find out what their results are

Must analyse their results, and find their strong and weak points

Must compare their results with those of other hospitals...

The “Idea” was simply the premise that hospital staffs would follow every patient they treat long enough to determine whether or not the treatment was successful, then learn from any failures, and how to avoid those situations in the future.



Fyrtårn 2: Bill Heald

Introduction of the “holy plane” by Bill Heald: Total Mesorectal Excision (TME)

- Previous blunt technique
- Local recurrence of 15-50%
- 1982: “Holy plane”: sharp dissection between the visceral and parietal pelvic fascia
 - Decrease in local recurrence
 - Decrease in bladder and sexual dysfunction.
- Wibe et al 2003:
 - Local recurrence: 28% → 8%
 - Survival: 55 → 71%

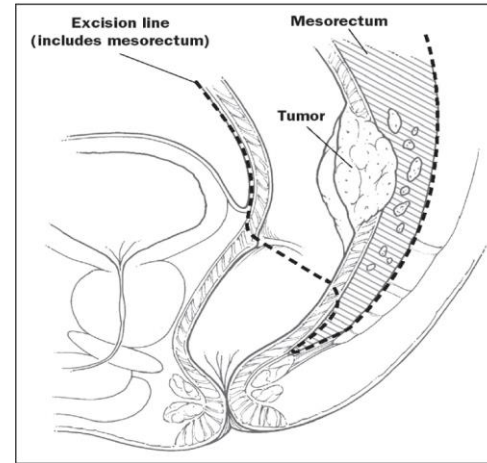


FIGURE 1: Mesorectal excision.

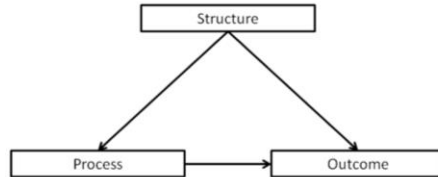
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Fyrtårn 3: Avedis Donabedian



FIGURE 1 – SYSTEMS-BASED FRAMEWORK FOR DEFINING QUALITY IN HEALTH CARE



Structure: Organizational factors that define the system

Process: Refer to the care that patients actually receive

Outcome: Consequences of care

EDUCATION

Measuring the Quality of Surgical Care: Structure, Process, or Outcomes?

John D Birkmeyer, MD, FACS, Justin B Dimick, MD, Nancy JO Birkmeyer, PhD

Theories adopted in surgery by Birkmeyer et al

Evaluating the Quality of Medical Care

AVEDIS DONABEDIAN

THIS PAPER IS AN ATTEMPT TO DESCRIBE AND evaluate current methods for assessing the quality of medical care and to suggest some directions for further study. It is concerned with methods rather than findings, and with an evaluation of methodology in general, rather than a detailed critique of methods in specific studies.

This is not an exhaustive review of the pertinent literature. Certain key studies, of course, have been included. Other papers have been selected only as illustrative examples. Those selected are not, for that reason, less worthy of note.

This paper deals almost exclusively with the evaluation of the medical care process at the level of physician-patient interaction. It excludes, therefore, processes primarily related to the effective delivery of medical care at the community level. Moreover, this paper is not concerned with the administrative aspects of quality control. Many of the studies reviewed here have arisen out of the urgent need to evaluate and control the quality of care in organized programs of medical care. Nevertheless, these studies will be discussed only in terms of their contribution to methods of assessment and not in terms of their broader social goals. The author has remained, by and large, in the familiar territory of care provided by physicians and has avoided incursions into other types of



What really matters for successful research environments? A realist synthesis

Rola Ajjawi,¹  Paul E S Crampton^{2,3}  & Charlotte E Rees³ 

Box 1 Characteristics of successful research environments¹

- 1 Clear organisational research goals
- 2 Research productivity as a priority and at least equal priority to other activities
- 3 A robust research culture with shared research values
- 4 A positive group climate
- 5 Participative governance structures
- 6 Non-hierarchical and decentralised structures
- 7 Good communication and professionally meaningful relationships between team members
- 8 Decent resources such as people, funding, research facilities and time
- 9 Larger group size, moderately established teams and diversity
- 10 Rewards for research success
- 11 Recruitment and selection of talented researchers
- 12 Research-oriented leaders with research expertise and skill



Uio 

Positive mechanisms

Organisation
(e.g. protected time,
efficient use of time)

Individual
(e.g. researcher
identity, strong
teaching–research
nexus)

Relationship
(e.g. trusting
relationships,
supportive
leadership)

Interventions

- Research strategy
- People
- Income, infrastructure and facilities
- Collaboration

Positive outcomes

- Subjective researcher benefits (e.g. identity development, competence, satisfaction)
- Objective research quantity (e.g. increased outputs, grants)
- Objective research quality increases

Negative outcomes

- Subjective researcher detriments (e.g. liminal identities, incompetence, dissatisfaction)
- Objective research quantity (e.g. decreased outputs, grants)
- Objective research quality decreases

Organisation
(e.g. lack of
protected time,
excessive and multiple
other workloads)

Individual
(e.g. first-career
practitioners, lack
of identification
as researchers)

Relationship
(e.g. lack of
mentoring,
unsupportive
leadership)

Negative mechanisms

Contexts

- **Individual** (e.g. type of researcher: practice-based versus university-based; level of researcher: PhD, ECR or senior)
- **Organisation** (e.g. university, health centre, school)

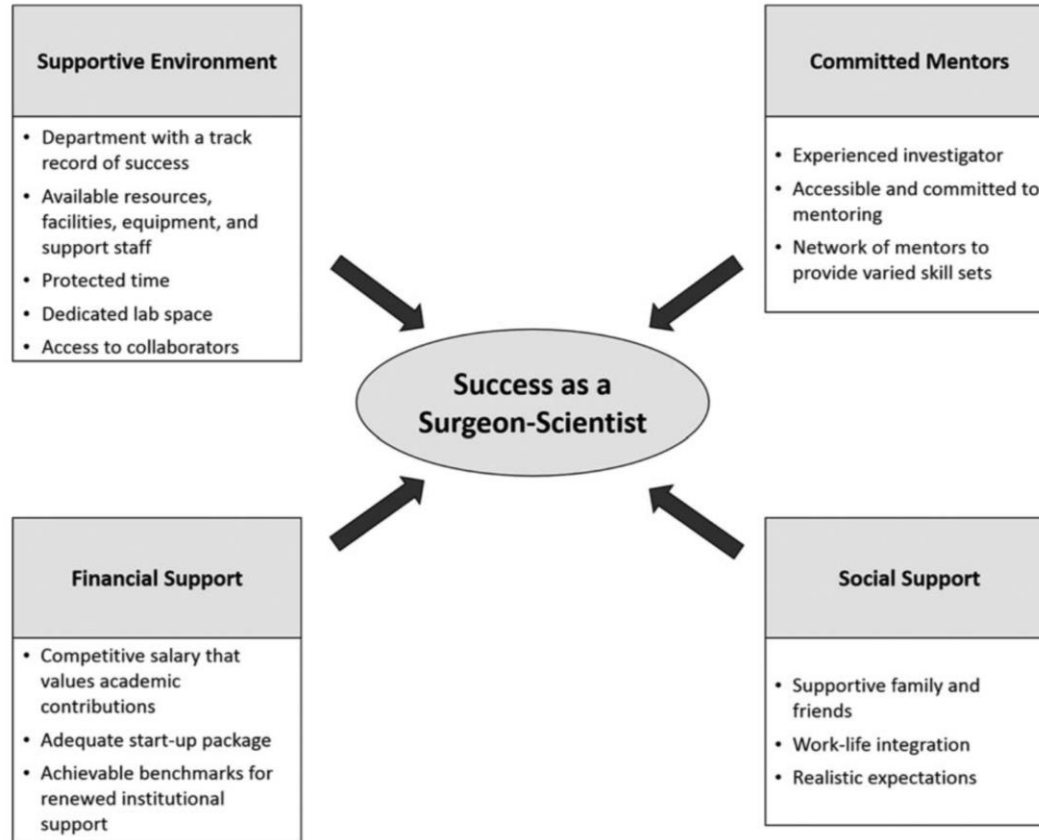


FIGURE 1. Essential components for achieving success as a surgeon-scientist.

Best practices for Surgeon Scientist Research: Program administration

Dedicated faculty research training program director

Dedicated personell to support infrastructure

Financial resources

Communicate a longitudinal perspective for professional development

Expose trainees to many types of research

Select mentor

Offer early fellowship – specific grant writing education

Plan in advance for enrollment in a PhD program

Barker JC et al. Facilitation Success of the Early Stage Surgeon Scientist Trainee: Growing the Surgeon Scientist Pipeline. Annals of Surgery 2021





Best practices for Surgeon Scientist Research- During the research years

- Provide protected time
- Develop a mentorship plan
- Offer formal coursework and skill building
- Plan career development activities
- Organize research in progress and programmatic group meetings
- Facilitate opportunities for scientific presentations and professional networking
- Set expectations to publish original research, review articles, case reports, editorials, book chapters
- Schedule individual director trainee meetings to assess research progress
- Engage trainees in program feedback and innovation



Defining the “Tipping Point” to Success as a Surgeon–Scientist

An Analysis of Applicants and Awardees of the American College of Surgeons Jacobson Promising Investigator Award

Juliet Emamaullee, MD, PhD, FACS,†✉ Tiffany Lian, BS,* Stacy Moroz, BS,*
Brian Zuckerbraun, MD, FACS,†‡ Jeffrey Matthews, MD, PhD, FACS,†§
and Ankush Gosain, MD, PhD, FACS†¶*

Forskningspørsmål: Hva kjennetegner kirurger som har akademisk suksess ?

TABLE 2. Evaluation of Research Impact, as Determined by Number of Publications, Mean Journal Impact Factor, *h*-Index, and *m*-Quotient Demonstrates That JPIA Awardees Had Significantly More Publications at the Time of Application

	Applicants (n = 86)	Awardees (n = 11)	<i>P</i>
No. Publications (at application) Median (IQR)	40 (22–67)	70 (55–100)	0.029
Journal IF (at application) Median (IQR)	4.4 (3.2–5.4)	4.6 (3.6–5.9)	0.135
No. First/Last Authored Publications (at application) Median (IQR)	<u>20 (11–32)</u>	42 (28–57)	<u>0.009</u>
First/Last Authored Publications Journal IF (at application) Median (IQR)	4.3 (3.1–5.1)	5.0 (3.5–6.0)	0.204
No. Publications (current) Median (IQR)	<u>103 (71–147)</u>	133 (108–271)	<0.001
Journal IF (current) Median (IQR)	5.1 (3.6–6.1)	5.4 (4.6–6.5)	0.177
No. First/Last Authored Publications (current) Median (IQR)	<u>49 (29–76)</u>	77 (61–149)	<u><0.001</u>
First/Last Authored Publications Journal IF (current) Median (IQR)	4.7 (3.6–5.9)	5.3 (4.0–6.3)	0.343
<i>h</i> -Index (current) Median (IQR)	19 (14–26)	28 (22–39)	<0.001
Average <i>m</i> -quotient (current) Median (IQR)	2.05 (1.28–2.51)	3.69 (2.07–5.12)	<0.0001

TABLE 3. NIH Grant Success Since Application Year

	Awardees	Remaining Applicants	<i>P</i>
Total Applicants, no.	11	86	
Persons who have received any NIH funding since application (all mechanisms), no. (%)	<u>11 (100.0)</u>	50 (58.2)	<u>0.007</u>
Total NIH grant funds (all funding mechanisms) received since application (\$)	48,986,776	76,165,103	0.15
Average NIH grant funds received since application per funded person, (\$)	4,453,343	3,808,255	0.30
Persons who have received an NIH R01 since application, No. (%)	9 (81.8) *	20 (23.3)	<0.0001
Mean time between JPIA and first NIH R01 amongst R01 recipients, y	2.6	2.7	0.88

*Includes 1 R35 grant recipient.



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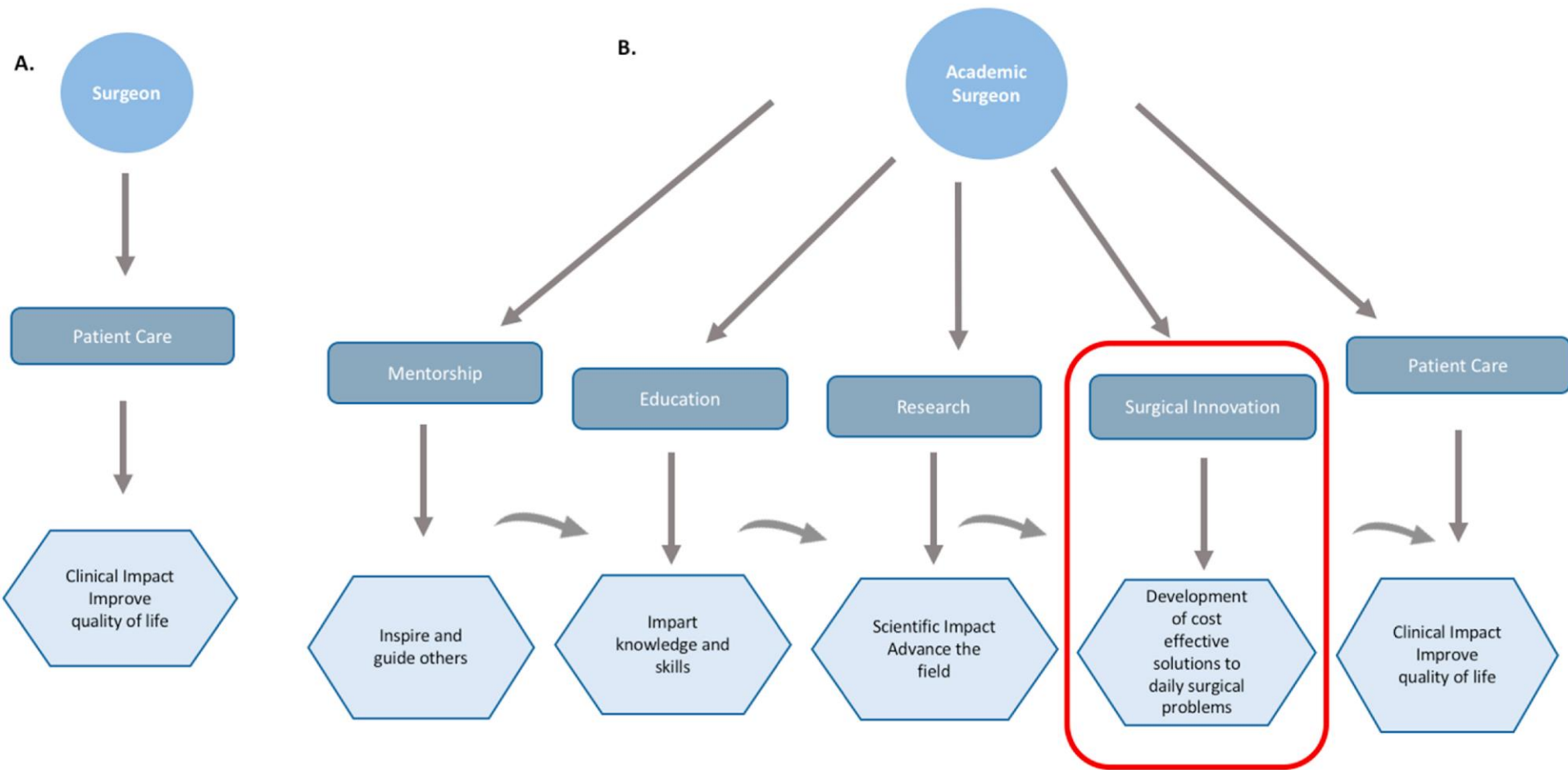
My Thoughts / My Surgical Practice

Re-discovering surgical innovation - An essential component of the academic surgeon

Surgical innovation depends on creativity and initiative to progress, developing a unique culture of continuous innovation.

There are no accepted definitions for surgical innovation but can be defined as the introduction of new concepts, technologies, techniques, approaches, processes, politics or combinations with each other.

The new component of the Academic Surgeon



Hvordan øke antall publikasjoner og ekstern finansiering ?



Forskningsnettverk – det er fremtiden!

Surgical site infection after gastrointestinal surgery in high-income, middle-income, and low-income countries: a prospective, international, multicentre cohort study



GlobalSurg Collaborative*

Summary

Background Surgical site infection (SSI) is one of the most common infections associated with health care, but its importance as a global health priority is not fully understood. We quantified the burden of SSI after gastrointestinal surgery in countries in all parts of the world.

Methods This international, prospective, multicentre cohort study included consecutive patients undergoing elective or emergency gastrointestinal resection within 2-week time periods at any health-care facility in any country. Countries with participating centres were stratified into high-income, middle-income, and low-income groups according to the UN's Human Development Index (HDI). Data variables from the GlobalSurg 1 study and other studies that have been found to affect the likelihood of SSI were entered into risk adjustment models. The primary outcome measure was the 30-day SSI incidence (defined by US Centers for Disease Control and Prevention criteria for superficial and deep incisional SSI). Relationships with explanatory variables were examined using Bayesian multilevel logistic regression models. This trial is registered with ClinicalTrials.gov, number NCT02662231.

Findings Between Jan 4, 2016, and July 31, 2016, 13265 records were submitted for analysis. 12 539 patients from 343 hospitals in 66 countries were included. 7339 (58.5%) patients were from high-HDI countries (193 hospitals in 30 countries), 3918 (31.2%) patients were from middle-HDI countries (82 hospitals in 18 countries), and 1282 (10.2%) patients were from low-HDI countries (68 hospitals in 18 countries). In total, 1538 (12.3%) patients had SSI within 30 days of surgery. The incidence of SSI varied between countries with high HDI (9.1% [9.4%] of 7339 patients), middle (5.9% [4.9%] of 3918 patients), and low (2.9% [2.2%] of 1282) HDI ($p < 0.001$). The highest SSI incidence in each HDI group was after dirty surgery (102 [17.8%] of 574 patients in high-HDI countries; 74 [31.4%] of 236 patients in middle-HDI countries; 72 [39.8%] of 181 patients in low-HDI countries). Following risk factor adjustment, patients in low-HDI countries were at greatest risk of SSI (adjusted odds ratio 1.60, 95% credible interval 1.05–2.37; $p = 0.030$). 132 (21.6%) of 610 patients with an SSI and a microbiology culture result had an infection that was resistant to the prophylactic antibiotic used. Resistant infections were detected in 49 (16.6%) of 295 patients in high-HDI countries, in 37 (19.8%) of 187 patients in middle-HDI countries, and in 46 (35.9%) of 128 patients in low-HDI countries ($p < 0.001$).

Interpretation Countries with a low HDI carry a disproportionately greater burden of SSI than countries with a middle or high HDI and might have higher rates of antibiotic resistance. In view of WHO recommendations on SSI prevention that highlight the absence of high-quality interventional research, urgent, pragmatic, randomised trials based in LMICs are needed to assess measures aiming to reduce this preventable complication.

Funding DFID-MRC-Wellcome Trust Joint Global Health Trial Development Grant, National Institute of Health Research Global Health Research Unit Grant.

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[http://dx.doi.org/10.1016/S1473-3099\(18\)30051-4](http://dx.doi.org/10.1016/S1473-3099(18)30051-4)

*Collaborating members are listed in the appendix.

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www.global-surg.org

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See Online for appendix

See Online for appendix

REDCap

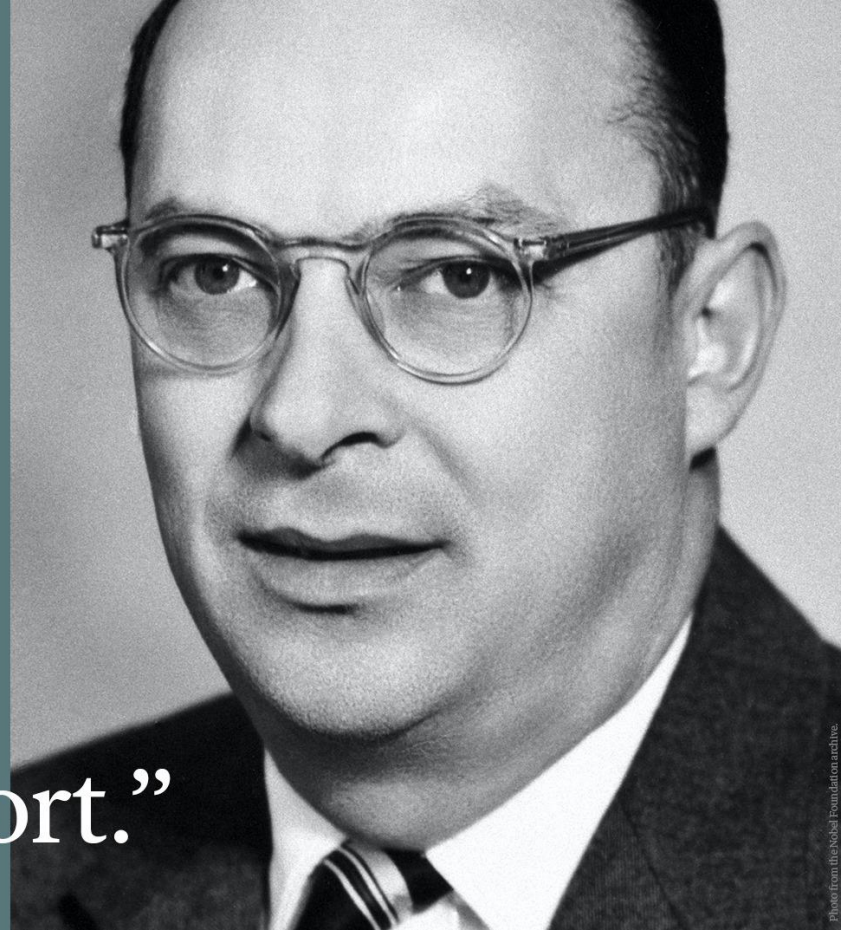
Formal Research Training – An Essential Aspect for Surgical Residency?

Richard Wagner, MD,†✉ Louise Montalva, MD,‡§ Augusto Zani, MD, PhD,‡
Richard Keijzer, MD, MSc, PhD†*

«More than ever, it is now undeniable that surgeons should invest more in basic science – a formal research training such as PhD fellowships is the best starting point to exactly this»

JOHN BARDEEN
Nobel Prize in Physics 1956
Nobel Prize in Physics 1972

“Science is a
collaborative effort.”





Spørsmål ?

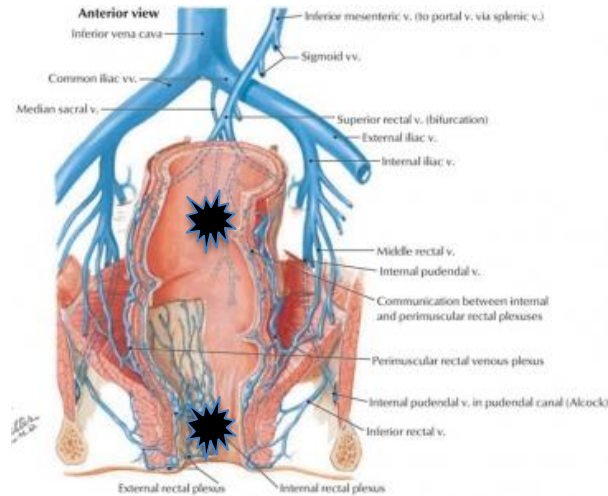
Richard Feynmans (forsknings) teser

- Never stop learning
- Assume nothing, question everything
- Teach others what you know
- Practice humility
- Respect constructive criticism
- Take initiative
- Give credits where its due
- Love what you do



KULTUR

Kvalitetsregister - Metastasespredning



The impact of rectal cancer tumor height on recurrence rates and metastatic location: A competing risk analysis of a national database^a

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- ^d Department of Epidemiology & Biostatistics, Case Western Reserve University, Cleveland, OH, USA
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- ^h Digestive Disease and Surgery Institute, Cleveland Clinic, Cleveland, OH, USA

Talbot IC, Ritchie S, Leighton M, Bussey HJ, Morson BC. The clinical significance of invasion of veins by rectal cancer. British Journal of Surgery 1980 Nov 16;67:439–42.

50% of rectal cancers
have invasion of veins

Forskning ved Klinikk for Kirurgiske Fag AHUS

Hvordan øke antall publikasjoner og bedre samarbeid på tvers ?

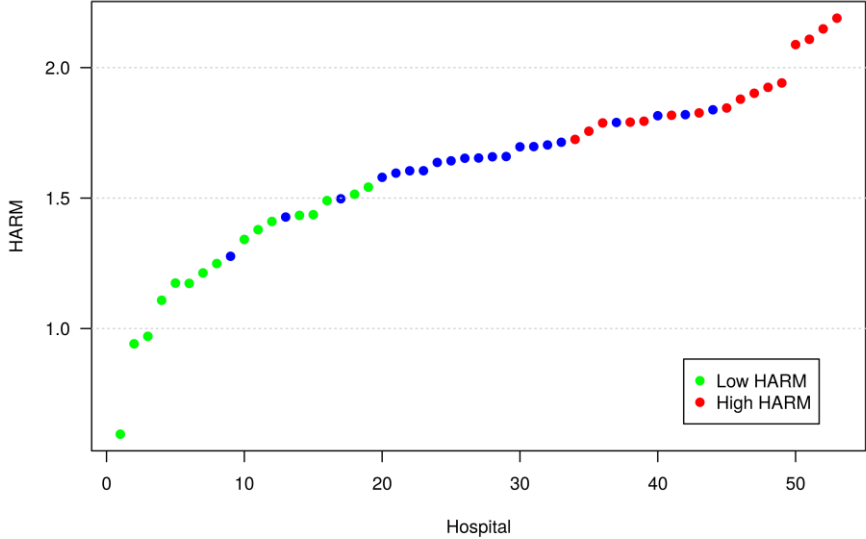
Knut Magne Augestad MD, PhD



UiO 

Kvalitetsregister – HARM Score

400 000 pasienter



De er de små ting som teller.....

Case Report

A Littre bleed

Knut Magne Aagaard, Trond Døllé, Lu Thy, Jonas Nygren

Received 2010; 28th March
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In November, 2010, a 1-year-old twin girl presented to us with a 1-day history of fresh blood in her stool. 2 days earlier she had two episodes of vomiting black and tar like fluid. On 3 occasions in the previous 2 months her parents had not been able to stop her crying for several hours. The pregnancy and birth were normal and the child had no other illnesses. On physical examination she was pale, with no other signs. She had no abdominal pain or palpable tumours, but she did have a non-tender 7 cm protruding umbilical hernia, which was easily reducible. Haemoglobin concentration was 90 g/L (normal range for children 3 months–6 years 110–150 g/L). She continued to pass fresh blood per rectum. 24 h later her haemoglobin was 81 g/L, and she required a blood transfusion.

Scintigraphy of the abdomen showed no invagination or other pathology. Endoscopy showed no source of bleeding in the stomach or duodenum. Meckel's diverticulum was suspected, and a technetium-99m (99mTc) pertechnetate scintigraphy showed distinct uptake of isotopes in a Meckel's diverticulum (ectopic gastric mucosa) protruding through her umbilical hernia (figure A). Treatment with a proton-pump inhibitor was given until the surgical procedure the following day. A 4 cm transverse incision above the umbilicus allowed repair of the hernia as well as small bowel resection because the diverticulum was located at the umbilical hernia. An ulcerated diverticulum embedded in the umbilical hernia (Littre hernia) was dissected free from the hernial sac (figure B). The diverticulum was resected with a 1–2 cm free margin on both sides and the intestine was anastomosed end-to-end. Her postoperative course

was unremarkable and our patient was discharged after 2 days. At last follow-up in May 2011, she was doing well. Her twin sister also had a protruding umbilical hernia and one episode with fresh blood in the stool. In June, 2011, her sister had a 99mTc pertechnetate scintigraphy, but no ectopic gastric mucosa was identified. The blood was most probably related to constipation and anal fissures. Her umbilical hernia was asymptomatic and conservative management was taken.

Our patient had a Littre hernia, a protrusion of a Meckel's diverticulum through an abdominal opening, first described by Alexis de Littre (1658–1726).^{1,2} In the embryo, Meckel's diverticulum is the persistent intestinal part of the omphaloenteric duct through which the midgut communicates with the umbilical vesicle until the fifth week after gestation.³ A spectrum of anomalies can result dependent on the stage of arrest of normal involution. Meckel's diverticulum is present in 1–3% of the general population, though its clinical presentation as a bleeding Littre hernia in children is rare.⁴ A Littre hernia along the entire surface of the abdominal wall is theoretically possible, usual hernia sites are inguinal (50%), umbilical (20%), and femoral (20%).⁵ The most usual complications are haemorrhage, intestinal obstruction, diverticulitis, and ulceration.⁶ Diagnosis is with CT, ultrasonography, or scintigraphy. Radioscintigraphy with 99mTc pertechnetate is a well-established diagnostic technique.⁶ The recommended treatment of Littre hernia is surgical, with resection of Meckel's diverticulum and closure of the fascia defect.⁶ The diagnosis of Littre hernia should be considered in a patient with unexplained abdominal complaints, nausea, vomiting, and gastrointestinal bleeding.

Contributors
All authors were involved in managing the patient and writing the report. Written consent to publish was obtained from our patient's parents.

- References**
- 1 Zorrigi G, Pagnani B. Littre hernia. *JAMA* 1975; 237: 1390.
 - 2 Dixon TM, Maggard WJ. Littre hernia—incarcerated Meckel's diverticulum. *Am J Surg* 1982; 144: 46.
 - 3 Skandalakis PN, Zervas O, Skandalakis JE, et al. Littre hernia: surgical anatomy, etiopathology, and technique of repair. *Am Surg* 2000; 72: 738–43.
 - 4 Park JJ, Wolf DC, Sullivan MK, et al. Meckel diverticulum: the Mayo Clinic experience with 167 patients (1936–2002). *Ann Surg* 2003; 244: 129–33.
 - 5 Krawitz PG, Aloney T, Buckwalter JF, et al. Detection of ectopic gastric mucosa using 99mTc pertechnetate: review of the literature. *Ann Surg* 1989; 210: 305.

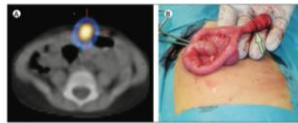


Figure 1 Littre hernia
(A) Technetium-99m pertechnetate scintigraphy. Technetium shows obvious isotope uptake in large gastric mucosa in the umbilical hernia. (B) Meckel's diverticulum dissected free from the umbilical hernia.

12:30



Tweet



Max Temmesfeld
@MTemmesfeld

First SLA print @3DLbab
[@Ahus_no](#) . Mirrored contralateral
scapula model for prebending
plate osteosynthesis of a
comminuted scapular fracture.

[Oversett tweeten](#)



2:04 pm · 5/14/21 · [Twitter Web App](#)

1 Retweet 2 liker

La deg inspirere av en av våre gode undervisere på Ahus!

Studentene skryter av undervisningen til klinisk stipendiat Jakob Vangen Nordbø. I tillegg til gode forberedelser bruker Nordbø «ferskvaredisken» på Ahus flittig.

Jakob Vangen Nordbø er klinisk stipendiat ved Klinikk for kirurgiske fag ved UiO og Ahus.

Han underviser på modul 3 og 8 i ortopedi, som er en del av kirurgien som håndterer skader, deformiteter og sykdommer i bevegelsesapparatet.

Nordbø holder både kliniske smågrupper og kurs for studentene.

Bli mer lagt merke til av studentene

Nordbø er opptatt av at studentene skal få variert og god undervisning som gir dem forståelse for faget. Dette har studentene lagt merke til.

På midtevalueringen med studentene og modulutvalget i modul 8, fikk han mye skryt fra studentene for undervisningen sin. Studentene mente at Nordbø gjør en kjempejobb som underviser og har et veldig godt undervisningsopplegg. Det var tydelig for studentene at han planlegger timene godt.



Jakob Vangen Nordbø forbereder undervisningen godt og bruker "ferskvaredisken" på Ahus flittig.
Foto: Privat.



UiO

Teknologi forskning – er kult!

SCIENTIFIC REPORTS

OPEN

Analysis of free text in electronic health records for identification of cancer patient trajectories

Received: 17 October 2016
Accepted: 13 March 2017
Published: 07 April 2017

Kasper Jensen^{1,3}, Cristina Soguero-Ruiz¹, Karl Oyvind Mikalsen³, Rolv-Ole Lindsetmo¹, Irene Kouskoumvekaki¹, Mark Girolami^{1,2,4}, Stein Olav Skrovseth^{1,3} & Knut Magne Augestad^{1,5}

With an aging patient population and increasing complexity in patient disease trajectories, physicians are often met with complex patient histories from which clinical decisions must be made. Due to the increasing rate of adverse events and hospitals facing financial penalties for readmission, there has never been a greater need to enforce evidence-led medical decision-making using available health care data. In the present work, we studied a cohort of 7,741 patients, of whom 4,080 were diagnosed with cancer, surgically treated at a University Hospital in the years 2004–2012. We have developed a methodology that allows disease trajectories of the cancer patients to be estimated from free text in electronic health records (EHRs). By using these disease trajectories, we predict 80% of patient events ahead in time. By control of confounders from 8326 quantified events, we identified 557 events that constitute high subsequent risks (risk > 20%), including six events for cancer and seven events for metastasis. We believe that the presented methodology and findings could be used to improve clinical decision support and personalize trajectories, thereby decreasing adverse events and optimizing cancer treatment.

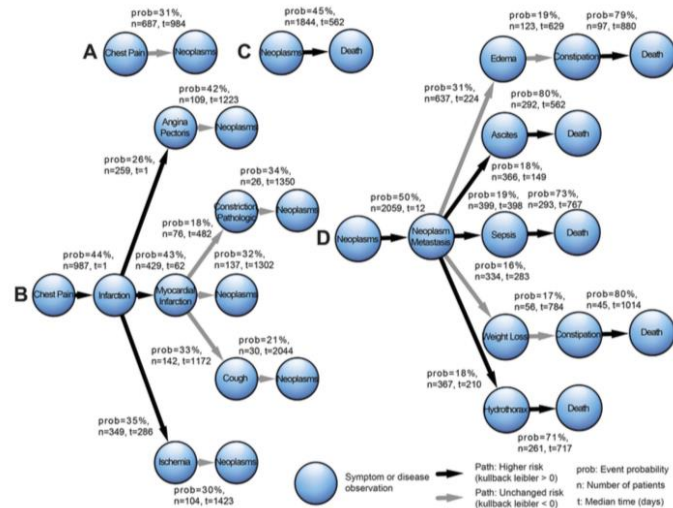


Figure 4. The most common symptoms and diseases reported prior to cancer diagnoses and from cancer to death. (A) The path from chest pain to cancer (neoplasms). (B) The paths from chest pain to cancer with intermediate events. (C) The path from cancer to death, and (D) the paths from cancer to death with intermediate events.