



Prévention de l'hernie cicatricielle

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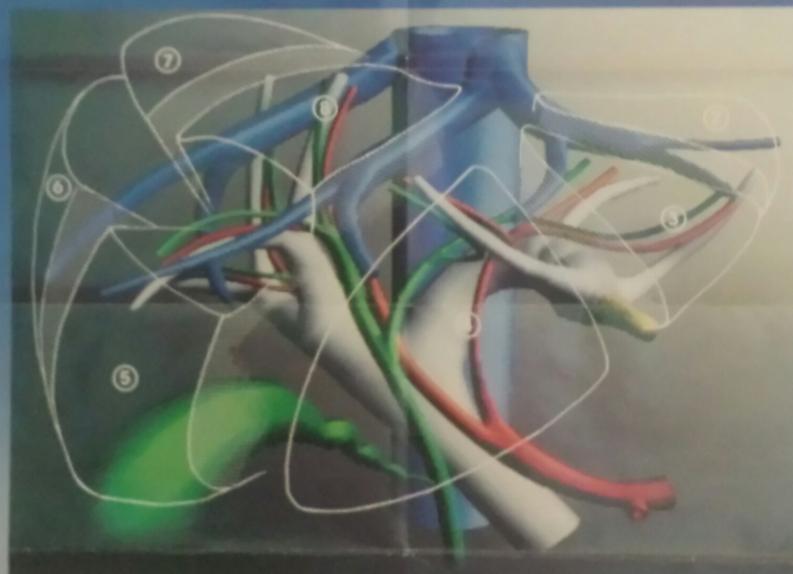
Rotterdam Pays Bas





PARIS 18/21 MAI 1988

XXVI^e JOURNEES
DE CHIRURGIE
HEPATO-BILIAIRE



HOTEL MERIDIEN. PORTE MAILLOT. 75017 PARIS.
ORGANISATION , SECRETARIAT:
SERVICE DE CHIRURGIE HEPATO-BILIAIRE.
HOPITAL PAUL BROUSSE, 94800. VILLEJUIF.
(1)46773292. (1)45593331.

Erasmus MC
erasmus

Medieval times in surgery.

Timmermans L, Deerenberg EB, Kleinrensink

GJ, Lange JF, Jeekel J.

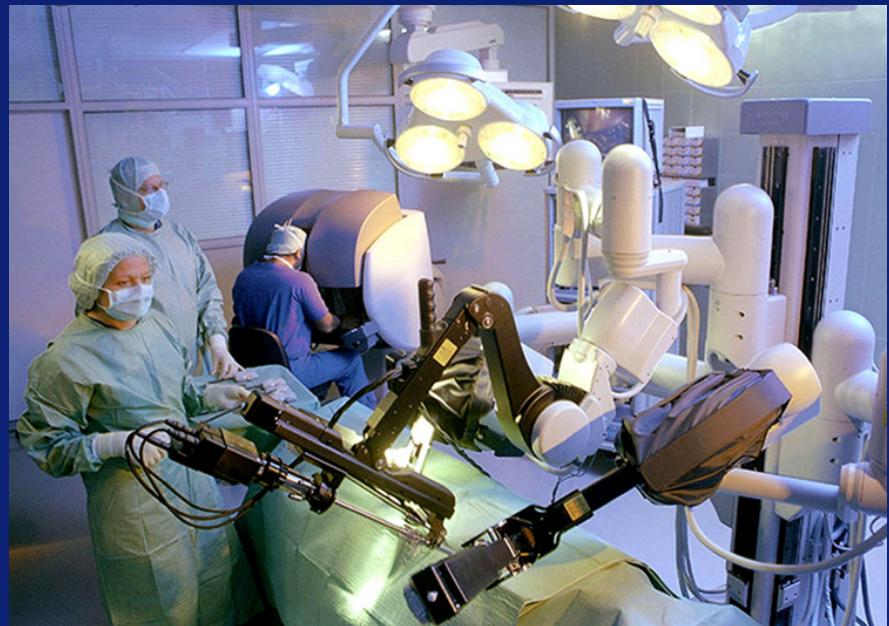
Surgery. 2012;152:939



‘La vraie méthode pour prévenir les hernies cicatricielles est d’effectuer des opérations laparoscopiques’



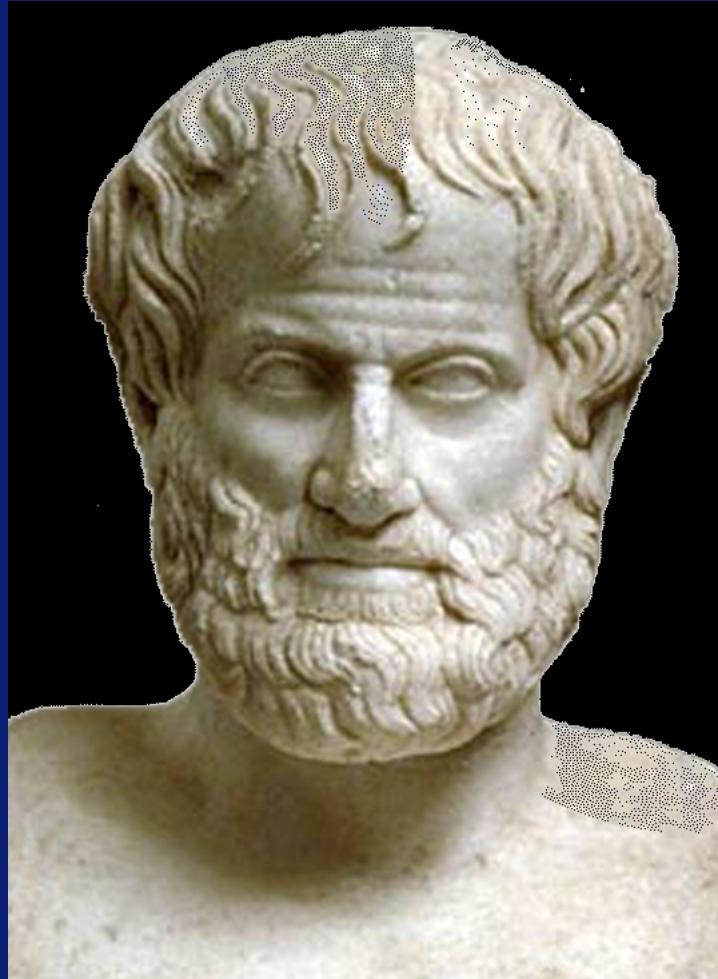
René Stoppa 1921-2006



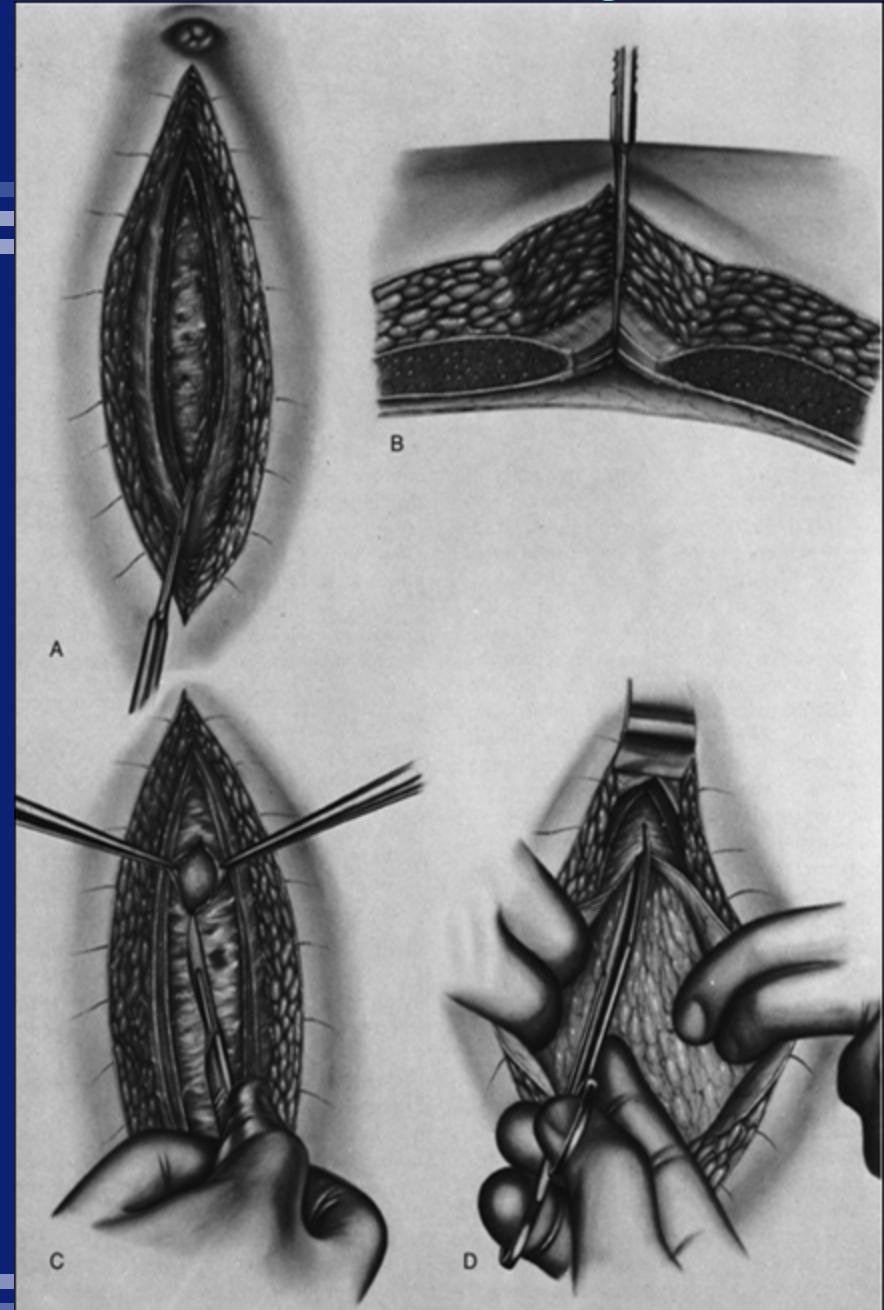
Directives-EHS pour fermeture de la paroi dans les laparotomies

- Non-médiane
- Suture continue avec du matériel absorbable lent en couche singulière
- Technique de petits points avec suture/incision longueur (SL/WL ratio) 4/1 au moins
- Mesh prophylactique à considerer pour les malades à haut risque
- Petits troisquarts et fermeture des défauts fasciaux (>10mm)

Muysoms F et al. Hernia (2015) 19:1–24

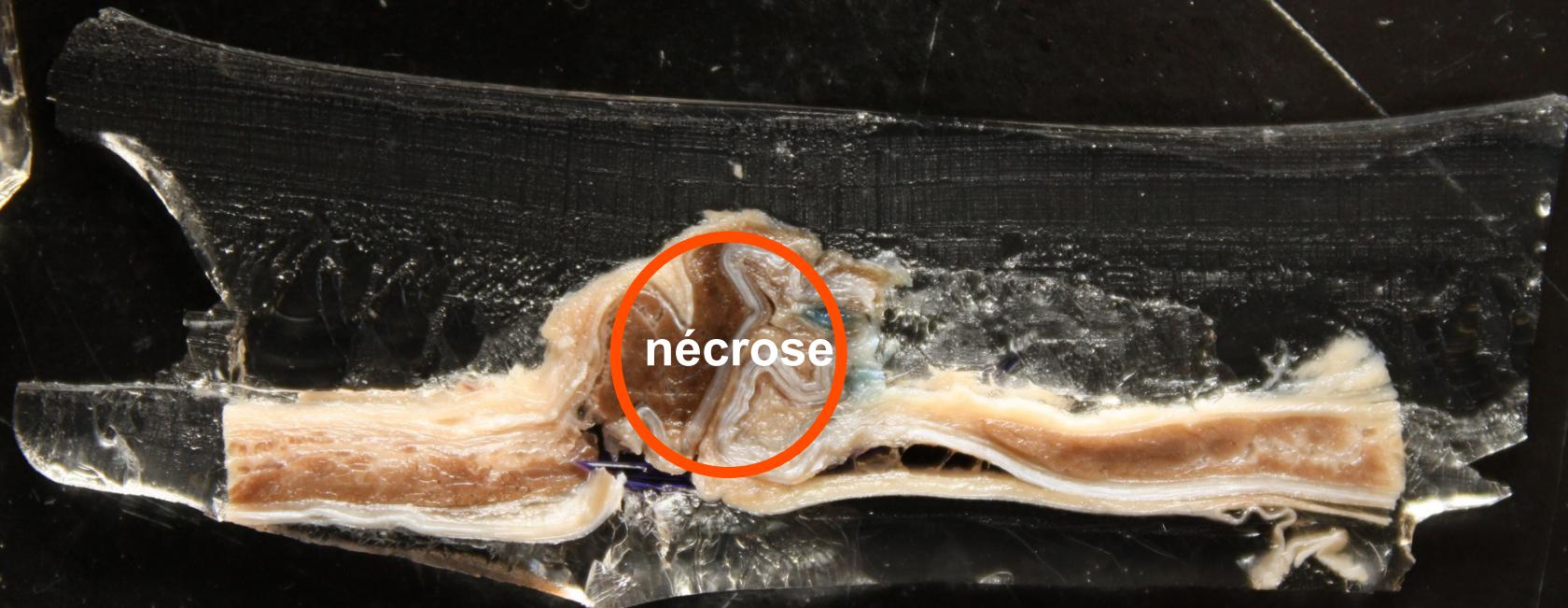


Bon début=travail à moitié fait
(Aristote)



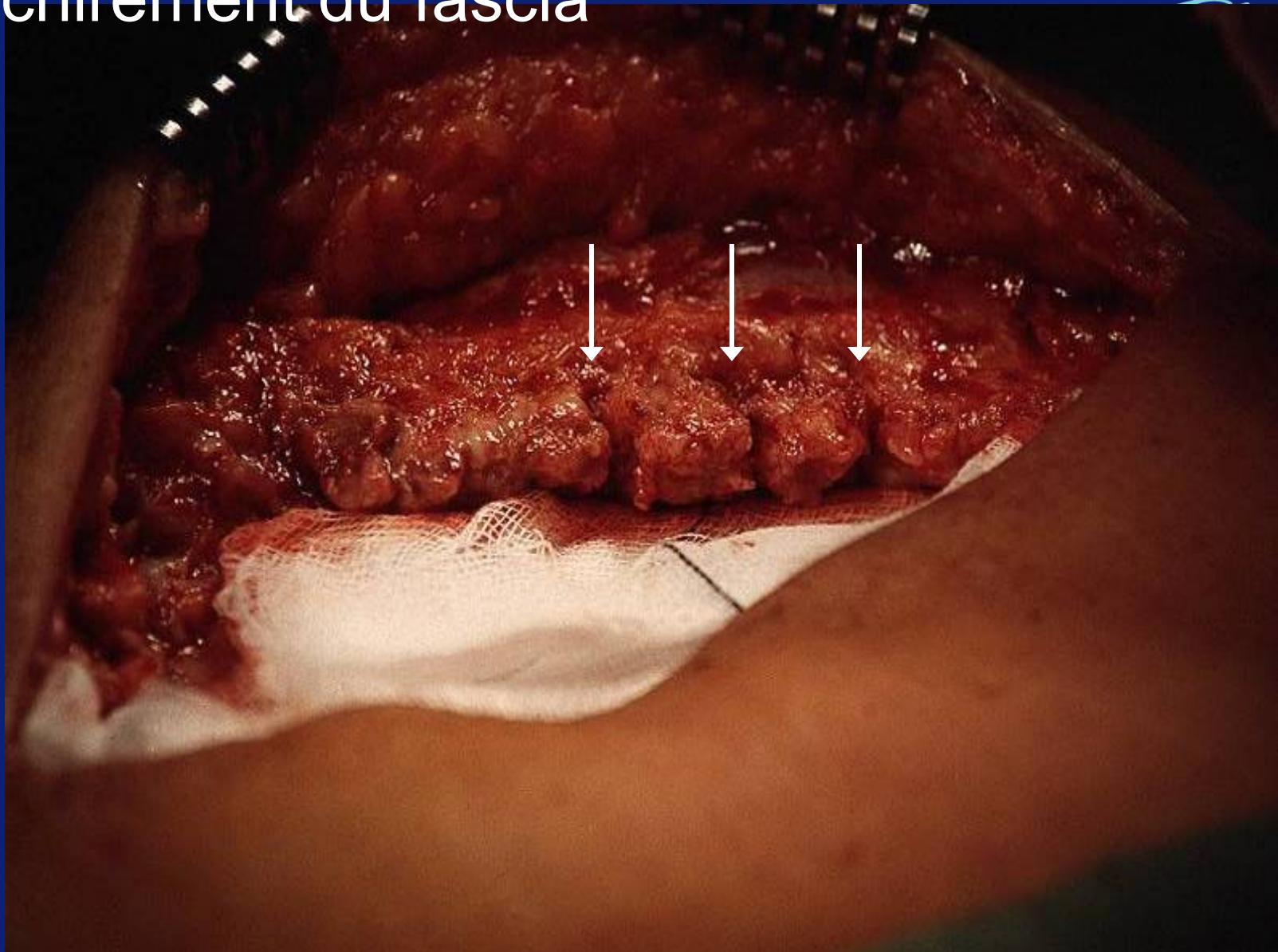
Fermeture de la ligne blanche (section transversale)





nécrose

Déchirement du fascia



Courtesy of Dirk van Geldere, Isala Klinieken, Zwolle, The Netherlands

Sex Exposure
Without Prophylaxis

PROPHYLAXIS

VENEREAL DISEASE HELPS THE ENEMY

Second Air Force

Prophylaxie: mesh augmentation

Ann Surg. 2015;261:876-81

Randomized Controlled Trial of the Use of a Large-pore Polypropylene Mesh to Prevent Incisional Hernia in Colorectal Surgery.

García-Ureña MÁ¹, López-Monclús J, Hernando LA, Montes DM, Valle de Lersundi AR, Pavón CC,
Ceinos CJ, Quindós PL.

OBJECTIVE:

To reduce the incidence of incisional hernia (IH) in colorectal surgery by implanting a mesh on the overlay position.
wed up clinically and radiologically for 24 months.

RESULTS:

A total of 107 patients were included: 53 in the study group and 54 in the control group. Both groups were homogeneous, except for a higher incidence of diabetes in the mesh group. There were 20 emergency procedures in the study group and 17 in the control group. There were no statistical differences in surgical site infections, seromas, or mortality between the groups (33.3%, 13.8%, and 3.7% in the control group and 18.9%, 13.2%, and 3.8% in the study group). No mesh rejection was reported. The incidence of IH was 17 of 54 (31.5%) in the control group and 6 of 53 (11.3%) in the study group ($P = 0.011$).

CONCLUSIONS:

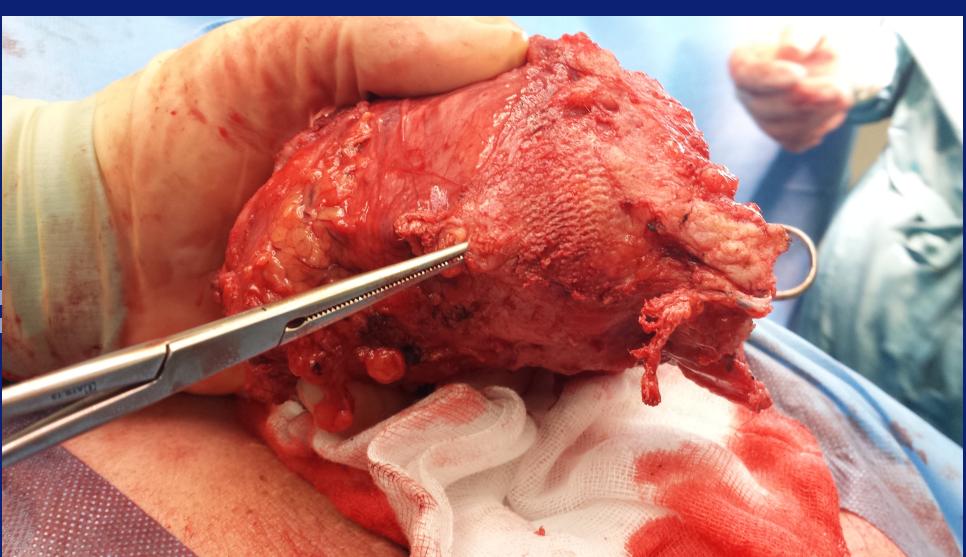
The incidence of IH is high in patients undergoing elective or emergency surgery for colorectal diseases. The addition of a prophylactic large-pore polypropylene mesh on the overlay position decreases the incidence of IH without adding morbidity

PRIMA-trial attendu: EHS Rotterdam 2016

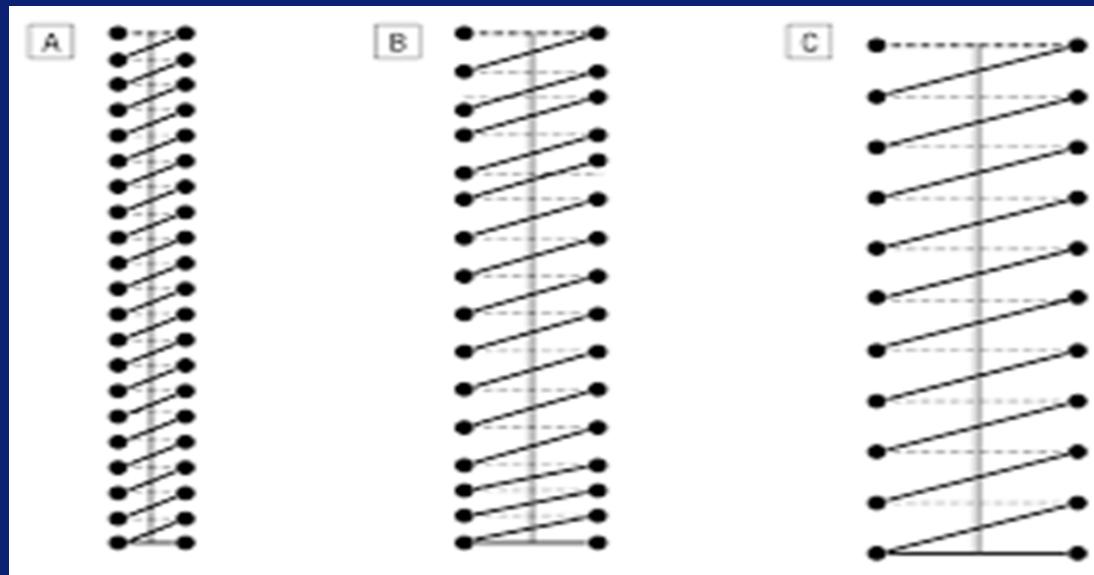


PRIMA Trial: résultats à court terme

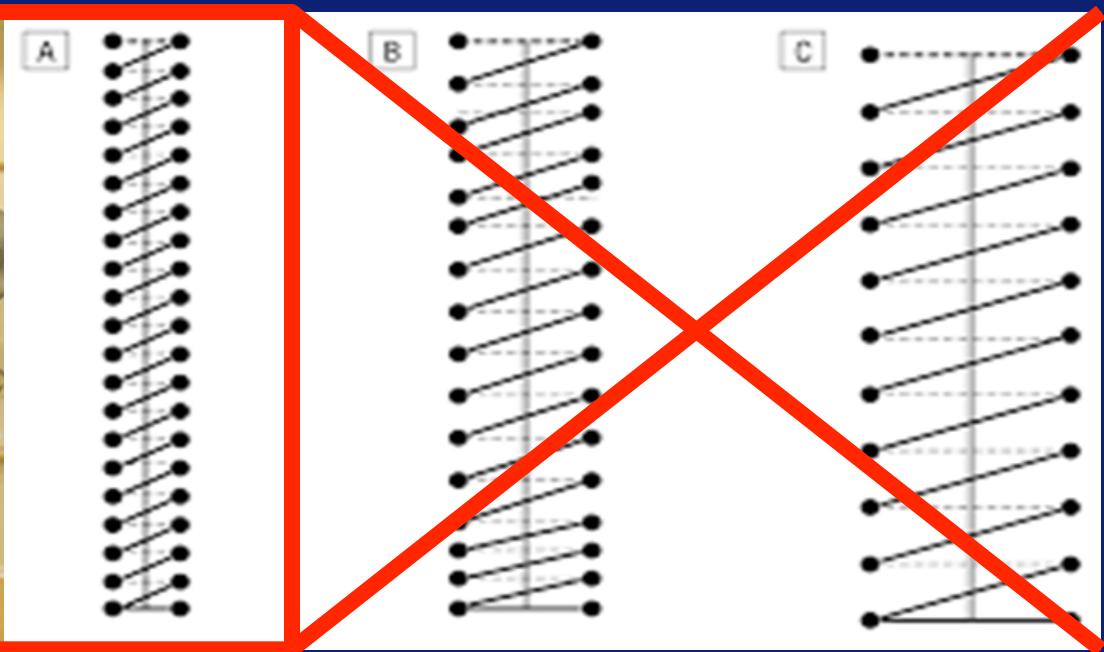
- PMA est sûr sans augmentation d'infection de plaie
- Augmentation de collections liquidiennes après onlay mesh
- Absence d'augmentation d'autres complications dans les trois groupes



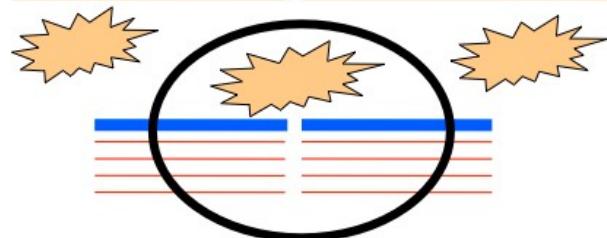
Jenkins: $SL:WL \geq 4:1$



Leif Israelsson: petits points

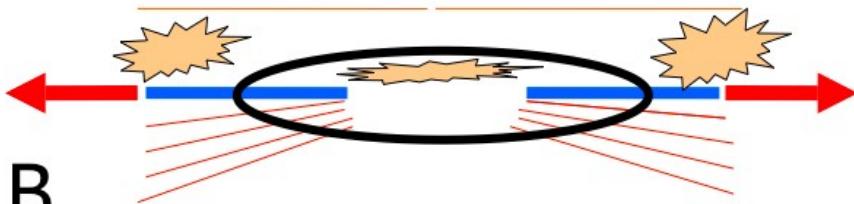


MASS CLOSURE STITCH



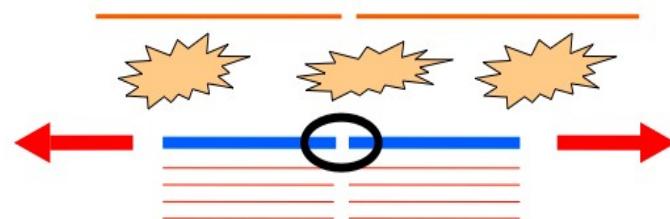
A

Cengiz: Eur J Surg 2001;167:60-3



B

APONEUROYSIS ONLY



No Separation of Wound Edges



**Randomized Controlled Trial comparing suture
techniques for closure of median laparotomy:**

STITCH-trial
(Lancet (acceptée))

EB Deerenberg, JJ Harlaar, EW Steyerberg, J Jeekel, JF Lange

STITCH-study group

STITCH-trial: Disclosure of speaker's interests

(Potential) conflict of interest	See below
Potentially relevant company relationships in connection with event	Ethicon Inc (Johnson & Johnson)
Sponsorship or research funding	Efficiency Research Grant ErasmusMC
<i>Clinicaltrials.gov NCT01132209</i> <i>Nederlands Trial Register: 2052</i>	

STITCH group

Suture Techniques to reduce the Incidence of The inCisional Hernia

- Multicenter RCT
- The Netherlands
- 8 hospitals, 10 departments (surgical and gynaecological)
- Inclusion 2009-2012



Intervention

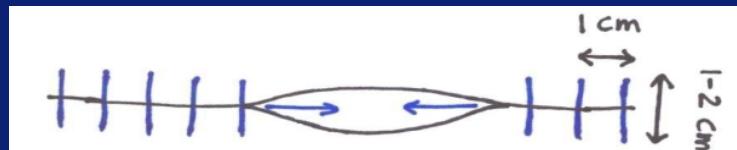
Continuous running suture

SL:WL \geq 4:1

2 sutures knot middle

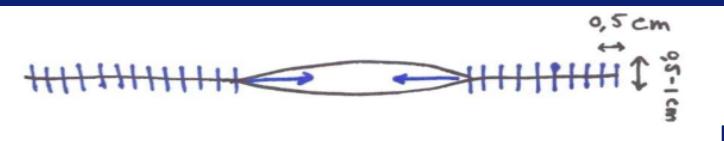
Large bites:

- Mass closure technique, PDS plus loop 1, 48mm needle
- Stitch every 1 centimeter
- Tissue bite >1cm



Small bites:

- Approximation fascia, PDS plus 2-0, 31mm needle
- Stitch every 5mm
- Tissue bite 5mm



Outcomes

Primary outcome:

- Incisional hernia **at 1 year**
- **Radiological and/or clinical** incisional hernia
- Logistic regression adjusted for baseline covariates

Abdominal aneurysm aorta (AAA)

Diabetes mellitus

Body Mass Index (BMI)

Smoking

Corticosteroid usage

Age

Preoperative chemotherapy

Collagen disorders

Preoperative radiotherapy

Hernia's

Chronic Obstructive Pulmonary Disease (COPD)

Cardiovascular disease

PRISMA-flowchart

Assessed for eligibility and informed consent (n= 609)

Exclusion (n=49)

- Not meeting inclusion criteria (n=20)
- Withdraw consent (n=3)
- Perioperative death (n=2)
- Other (n=24)

Randomized (n=560)

Large bites (n=284)

Small bites (n=276)

Baseline characteristics

	Large bites	Small bites
Gender (% male)	48	49
Age (years)	63	62
ASA-classification (%)		
▪ 1	20	22
▪ 2	64	58
▪ 3	15	19
Surgical procedure (%)		
▪ Upper GI	31	26
▪ Lower GI	46	50
▪ Vascular	7	7
▪ Gynaecology	14	14

Baseline characteristics

	Large bites	Small bites
Body Mass Index (kg/m ²)	24	24
Smokers (%)	22	27
Diabetes Mellitus (%)	13	10
COPD (%)	9	15
Hernia (%)	12	13
Aneurysm (%)	4	4
Previous laparotomy (%)	15	17

Suture technique

	Large bites	Small bites	p
Length incision (cm)	22	22	0.98
Number sutures	25	45	<0.001
Length used sutures (cm)	95	110	<0.001
Suture length / Wound length (SL:WL ratio)	4.3	5.0	<0.001
Closure time (min)	10	14	<0.001
Skin closure			0.49
▪ Staples	36	40	
▪ Intracutaneous suture	64	60	

Short-term results

	Large bites	Small bites	p
Admission (days)	14	15	0.58
Overall complications (%)	45	45	1.00
▪ Pneumonia (%)	14	12	0.71
▪ Ileus (%)	11	10	0.59
▪ SSI (%)	23	20	0.41
▪ Burst abdomen (%)	0.7	1.4	0.44

Follow up

Follow-up:

- 62% clinical and radiological examination
- 14% radiological examination
- 24% physical examination

Diagnoses incisional hernia:

- 44% physical examination and radiological examination
- 47% radiological examination
- 9% physical examination

Long-term results

Incidence of incisional hernia at 1 year postoperatively:

- **Large bites group: 21% (57 out of 277)**
- **Small bites group: 13% (35 out of 268)**
- **Chi-square p=0.005**

Logistic regression (fully adjusted):

- OR 0.52 (95% CI 0.31-0.87; p=0.013).
- No subgroup effects were identified (p-values >0.20)

QOL not different

Conclusions STITCH-trial

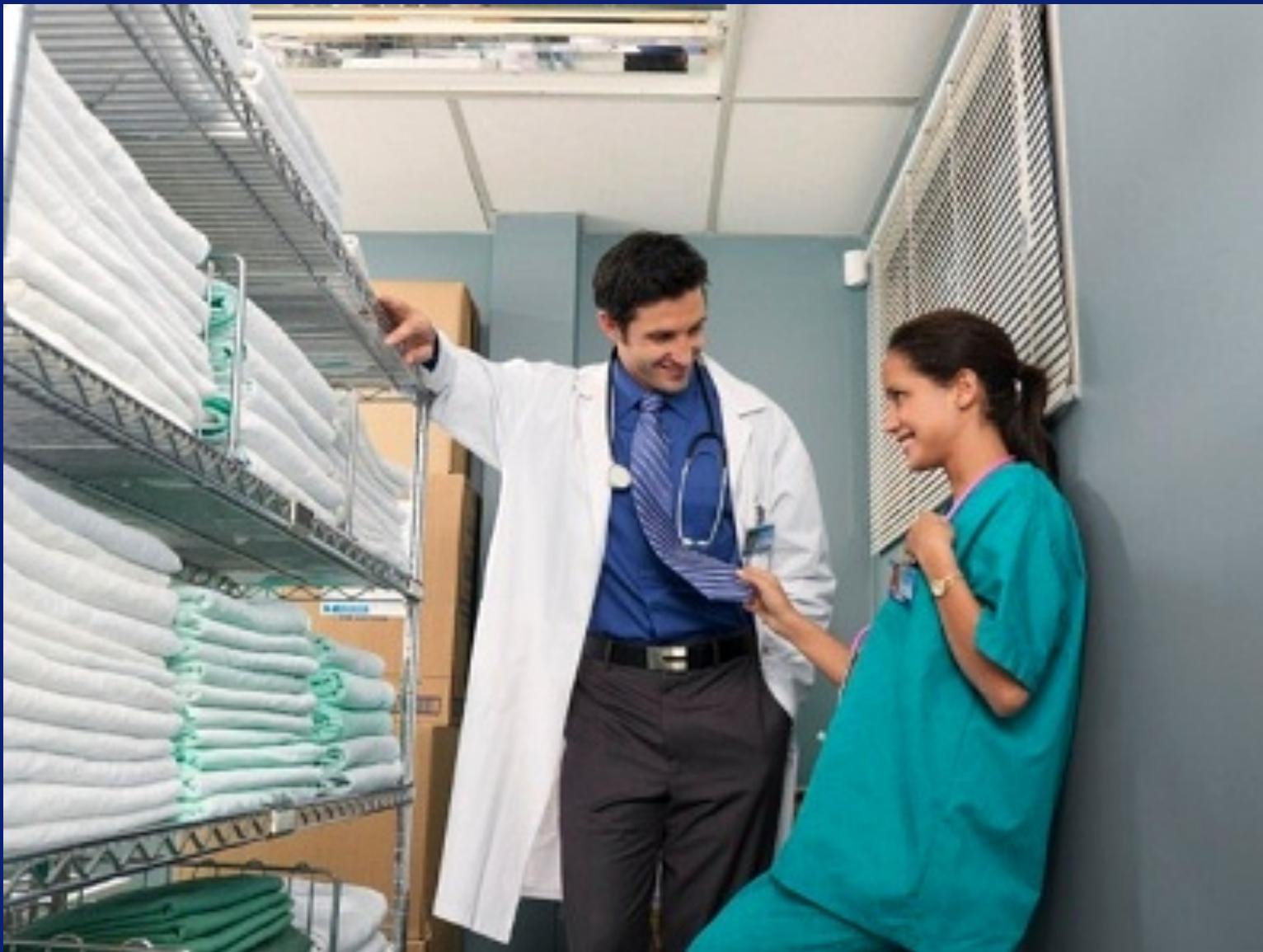
- Petits points sont supérieurs, comparés avec grands points et doivent devenir la technique standard
- Ultrason/scanner est obligatoire pour le diagnostic d'une hernie cicatricielle



Conclusions générales sur la fermeture de la paroi

- Petits points sont supérieurs, comparés avec grands points
- Groupes à haut risque: mesh augmentation
- 13% (petits points) est encore trop élevé
- **Et, ‘last but not least’:**.....

**Fermeture de la paroi ceci n'est pas un détail:
meetings importants APRÈS clôture!**





38th International Congress
European Hernia Society

5-8 June 2016
Rotterdam, the Netherlands

www.EHS2016.eu