September 12-14
2018
Les Comtes de Méan
Liège, Belgium

6th International Meeting on Aortic Diseases

New insights into an old problem CHU Liège, APF

www.chuliege-imaa.be

Endovascular repair is effective in emergency but definitive excisional graft removal is the aim for all infected aortic grafts and endografts

Colin D Bicknell

Imperial College London

CHU de Liège

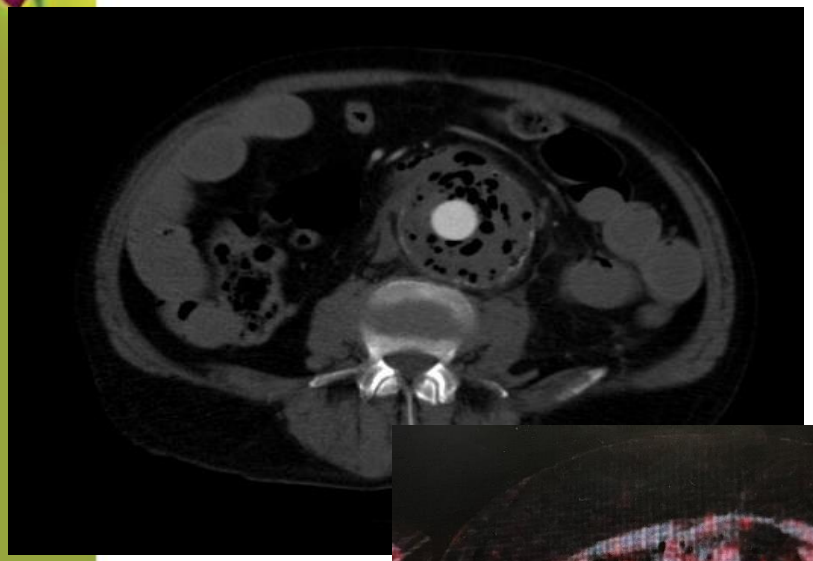
Disclosure of Interest

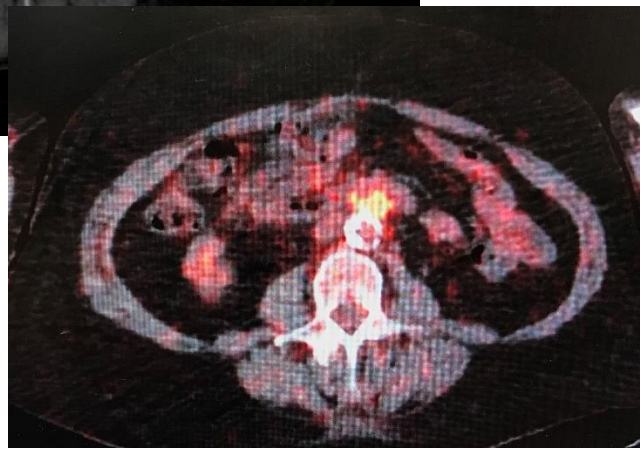
Speaker name: Colin Bicknell

I have the following potential conflicts of interest to report:

- Medtronic: Consultancy, Speakers fees, travel and conference fees
- Orzone: Institutional level capital funding
- Bolton Medical / Vascutek: Consultancy, speaker, travel and conference fees
- Gore: Travel and conference fees

INFECTED AORTIC STENT GRAFTS





A significant clinical issue

Incidence increasing

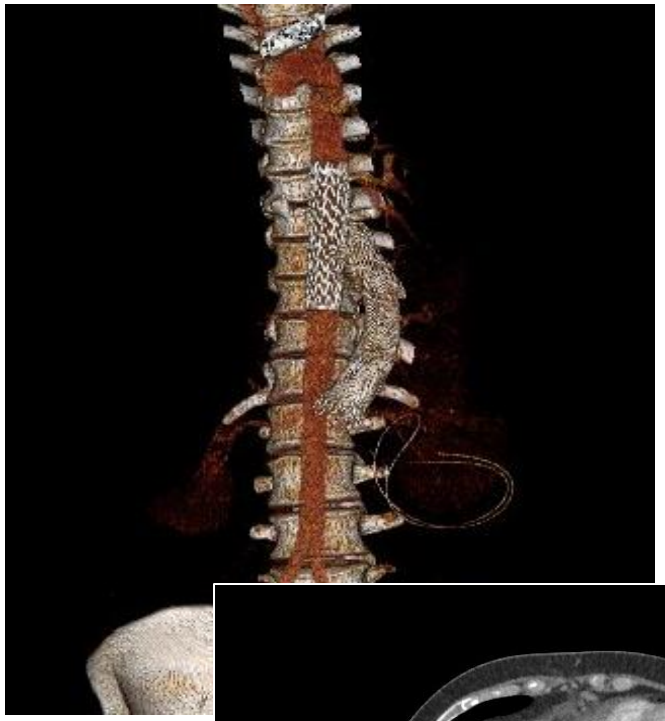
Difficult management

Present (or are diagnosed) late, often significant co-morbidity and malnourished

OPTIONS FOR TREATING GRAFT INFECTION

Options:

- **EMERGENCY**
  - **ENDOVASCULAR SALVAGE**
- Graft excision
  - In situ bypass
    - Vein
    - Dacron
    - Bovine or similar
    - Human aorta
  - Extra-anatomical
- Conservative measures
  - Antibiotics
  - Drainage of sac



STENTING FOR EMERGENCY TREATMENT

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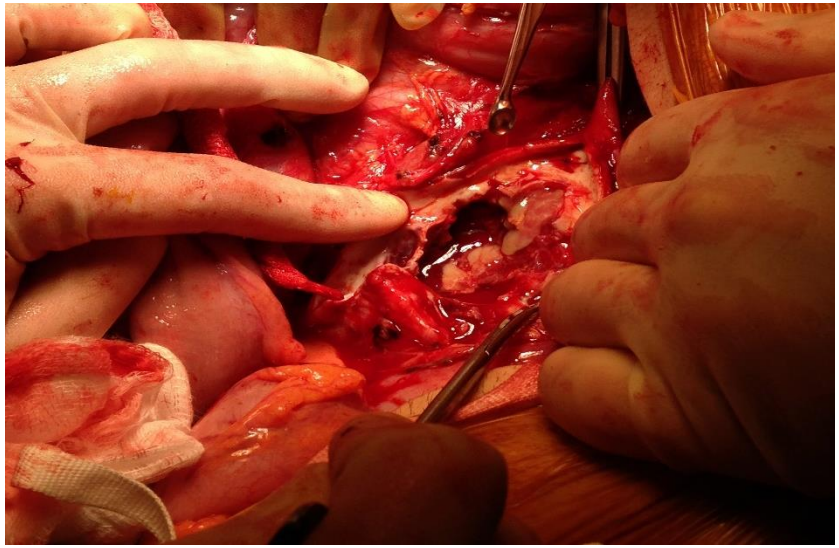

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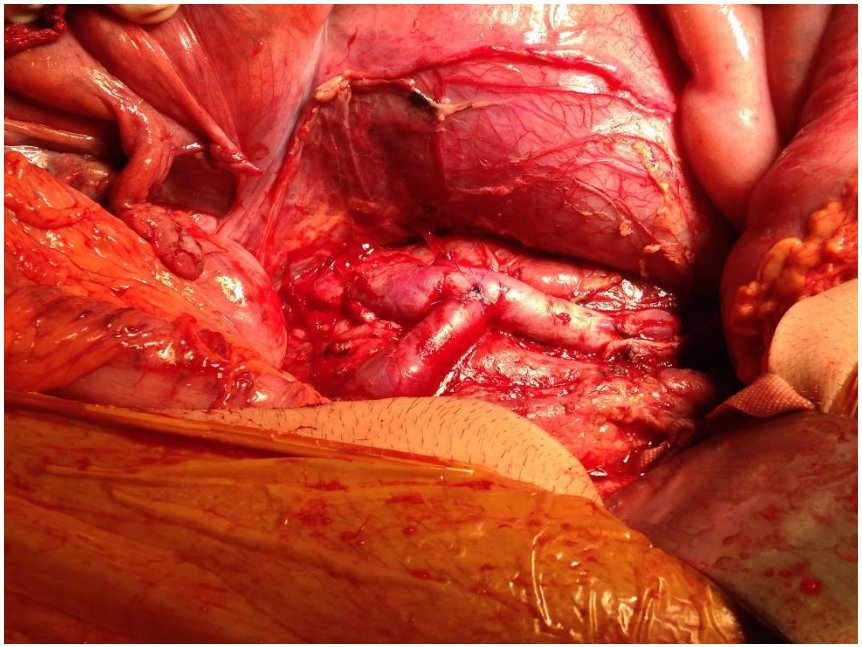

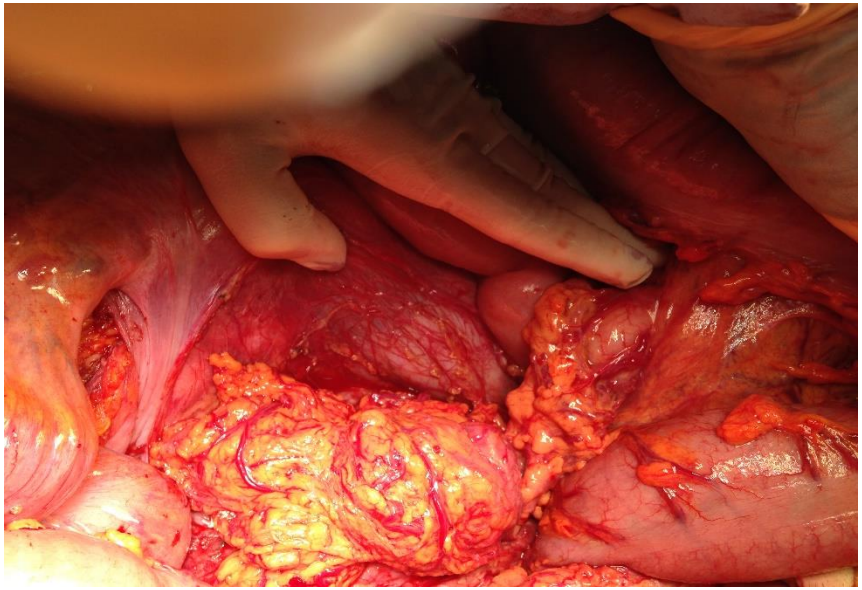

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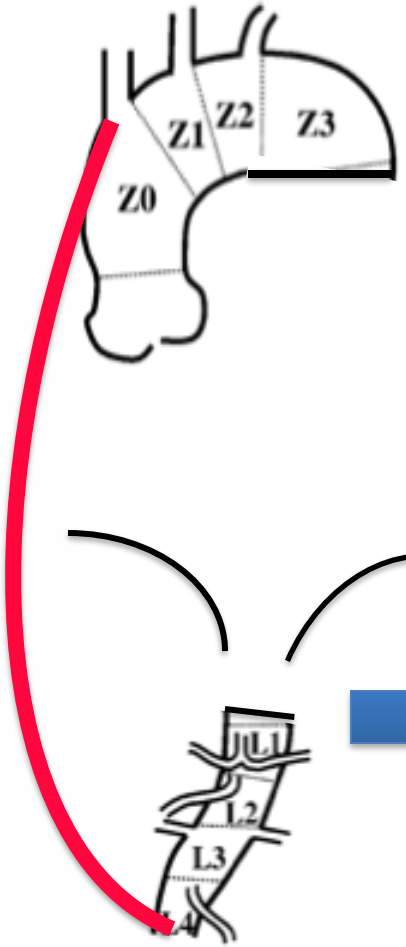
STENTING FOR EMERGENCY TREATMENT

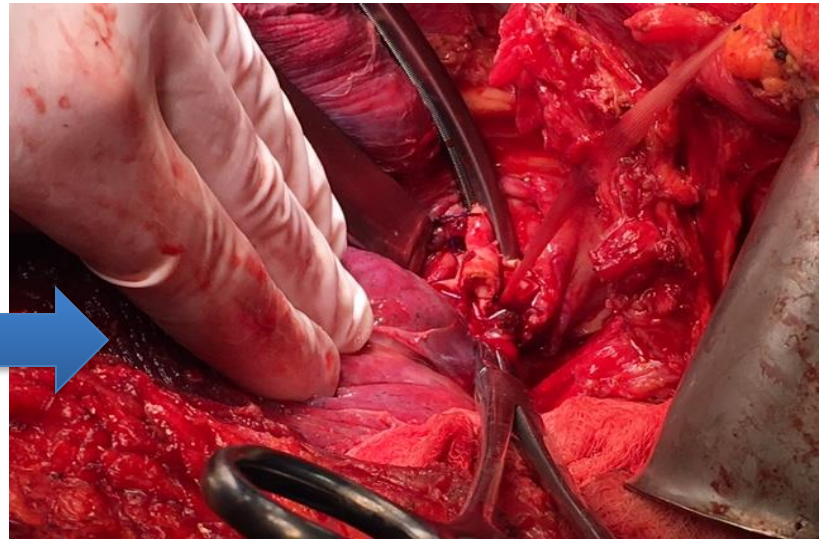
Recovery, antibiotics +/- TPN

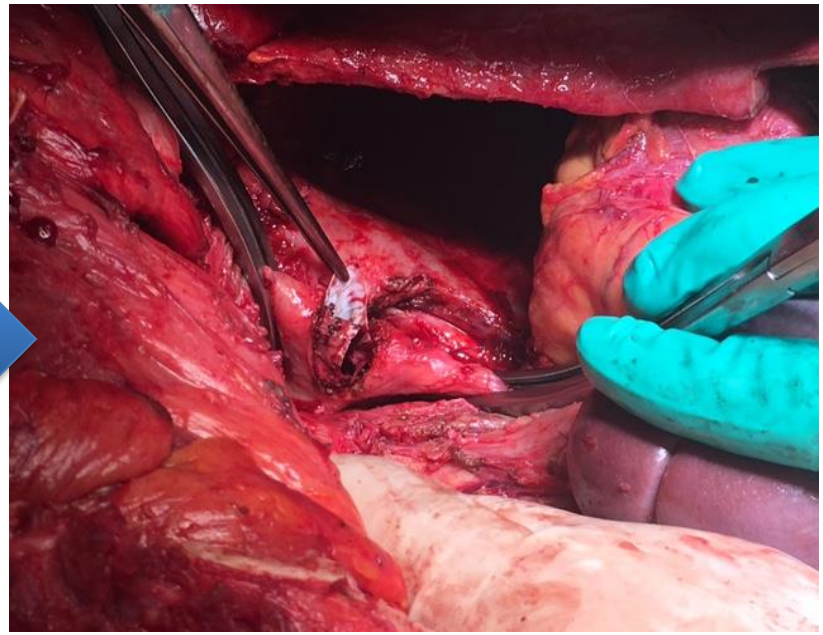
Aim for definitive surgery, consider the endograft as a bridge to definitive surgery

WHY?

EXCISION OF THORACIC GRAFT AND BYPASS



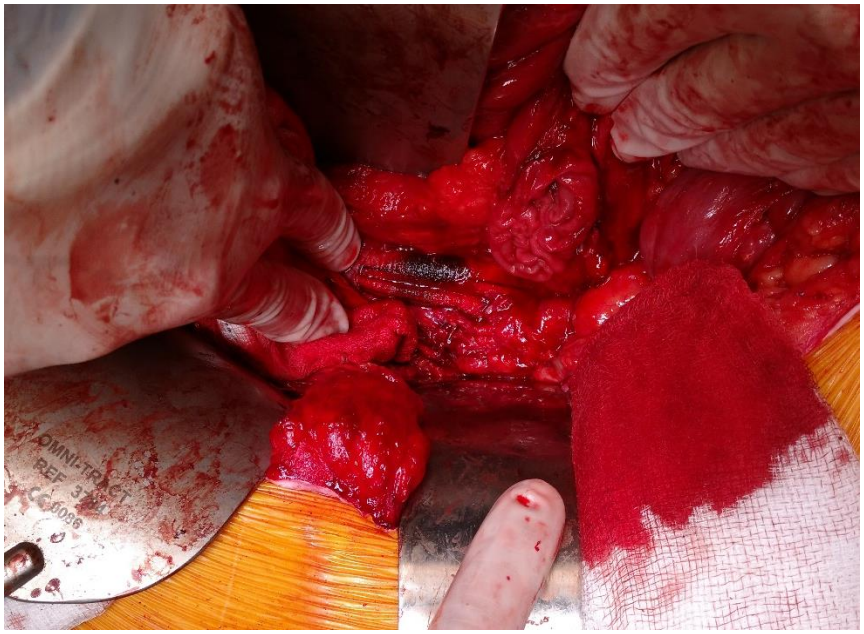


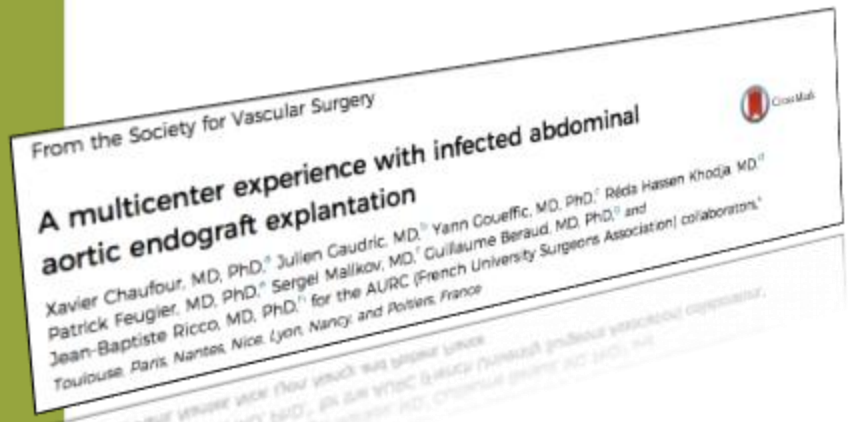


WHY NOT LEAVE THE GRAFT IN?

Chaufour et al:
AEF was present in a third of patients with infected endografts

AEF is a more common finding than initially thought.

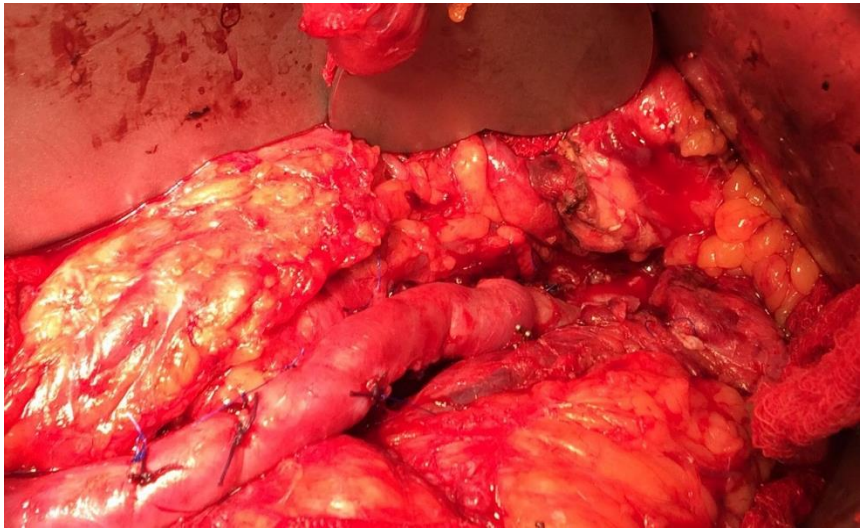


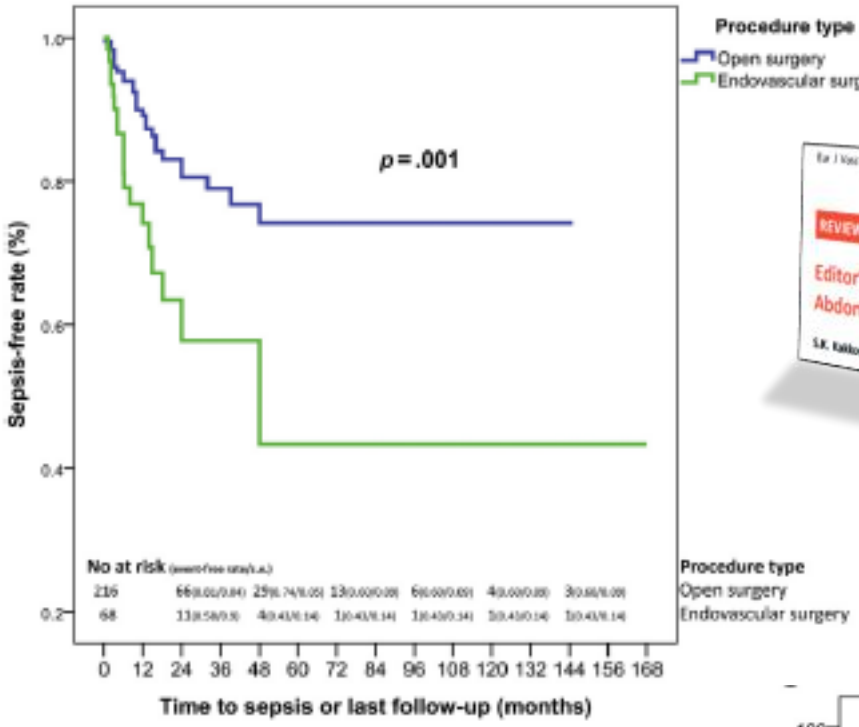


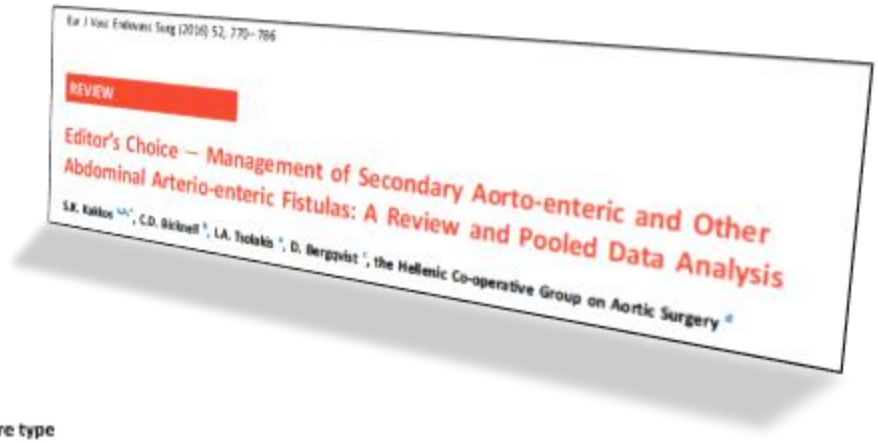
From the Society for Vascular Surgery

A multicenter experience with infected abdominal aortic endograft explantation

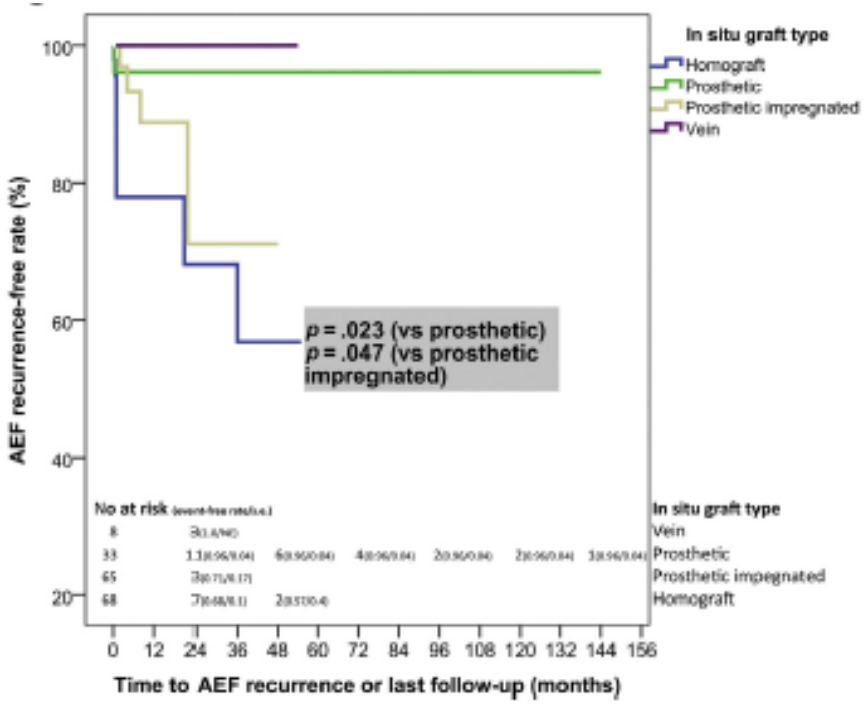
Xavier Chaufour, MD, PhD,[a] Julien Caudric, MD,[b] Yann Gouëffic, MD, PhD,[c] Réda Hassen Khodja, MD,[d] Patrick Feugier, MD, PhD,[e] Sergei Mallikov, MD,[f] Guillaume Beraud, MD, PhD,[g] and Jean-Baptiste Ricco, MD, PhD,[h] for the AURC (French University Surgeons Association) collaborators,* Toulouse, Paris, Nantes, Nice, Lyon, Nancy, and Poitiers, France





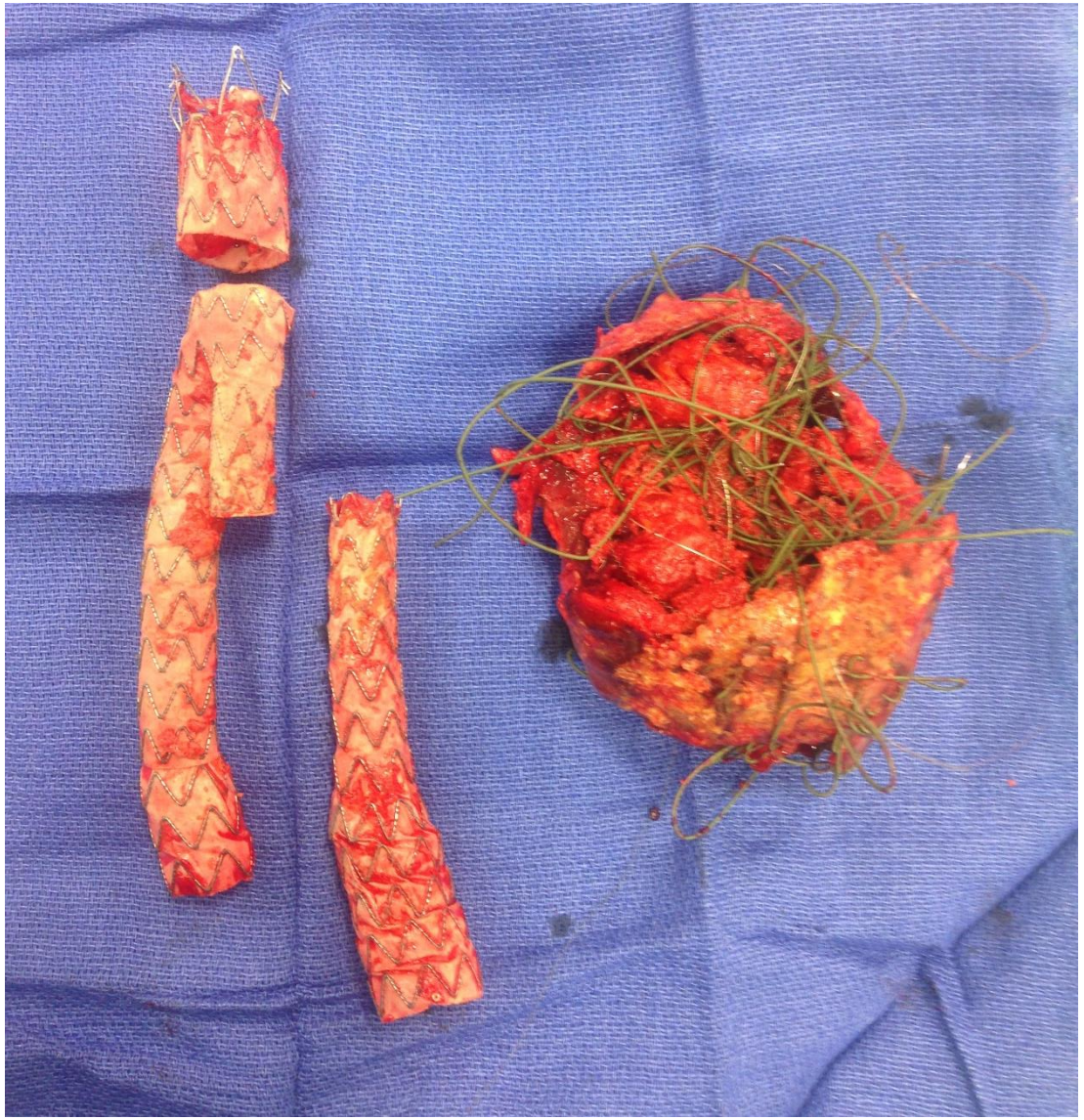


SECONDARY AORTO-ENTERIC FISTULA - RECURRENT SEPSIS



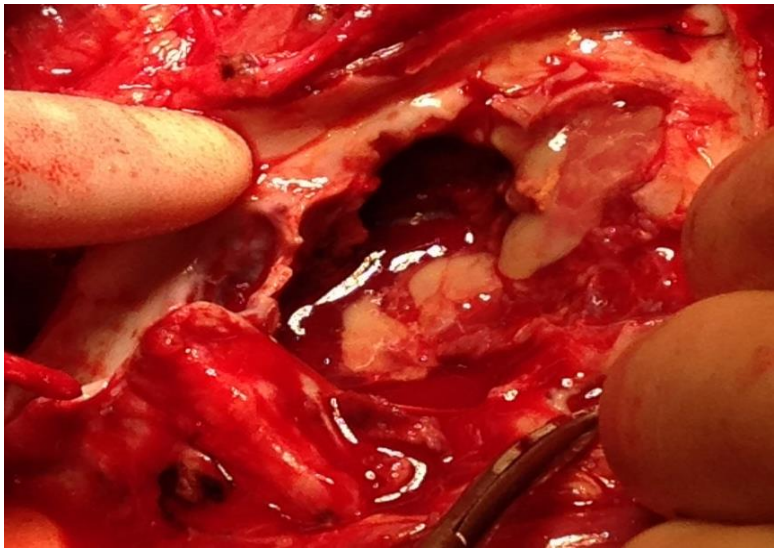
WHY NOT LEAVE THE GRAFT IN?

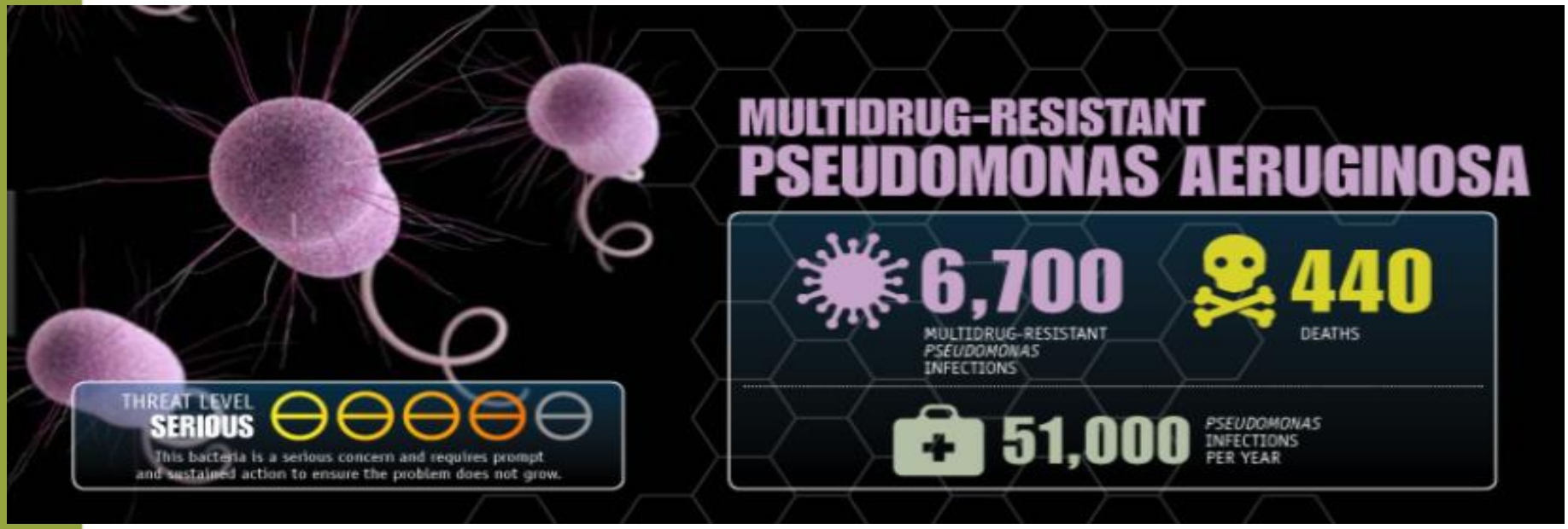
Graft in infection is commonly associated with multiple interventions, providing a further nidus for infection



WHY NOT LEAVE THE GRAFT IN? - ANTIMICROBIAL RESISTANCE

- In 2013, CDC published a report outlining the top 18 drug-resistant threats to the United States.
- Threats are categorized based on level of concern: urgent, serious, and concerning.





THERE IS AN EARLY MORTALITY RATE
for graft excision

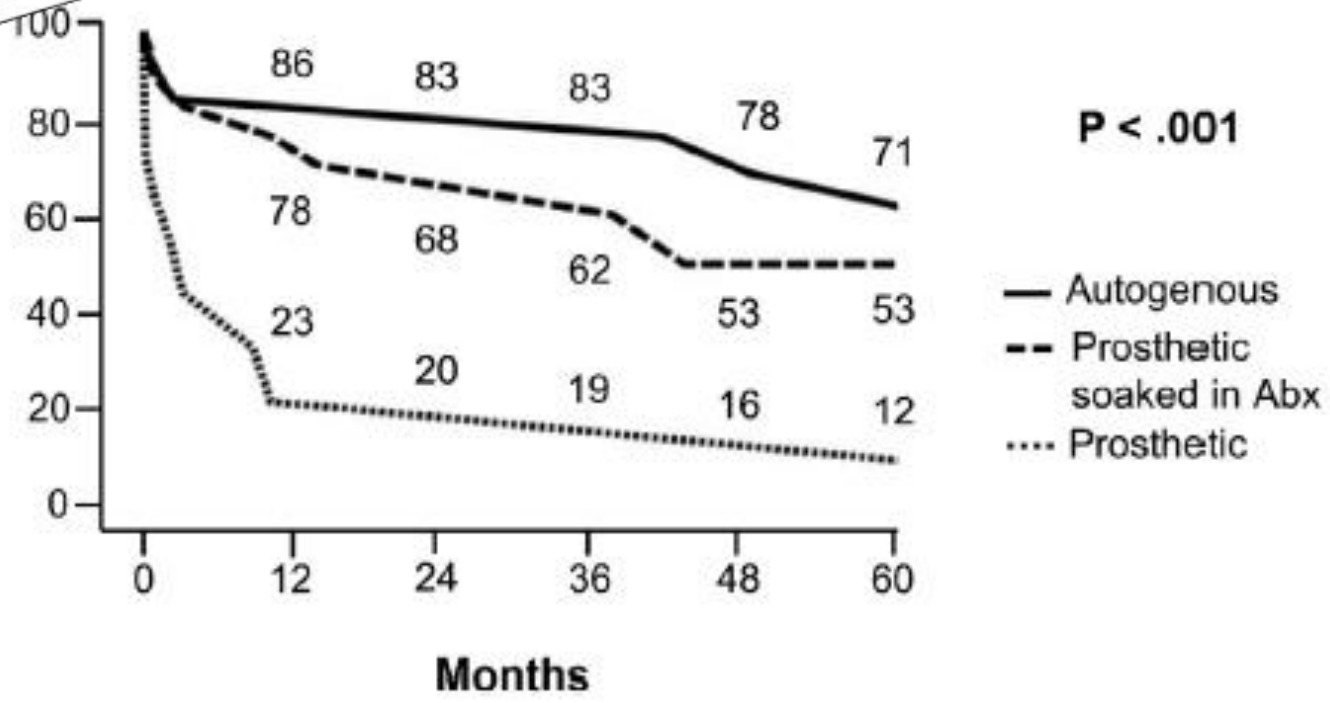
10-30%
DEPENDENT ON SELECTION, PRESENTATION, TYPE OF SURGERY AND EXPERTISE

LONG TERM SURVIVAL AFTER EXPLANTATION

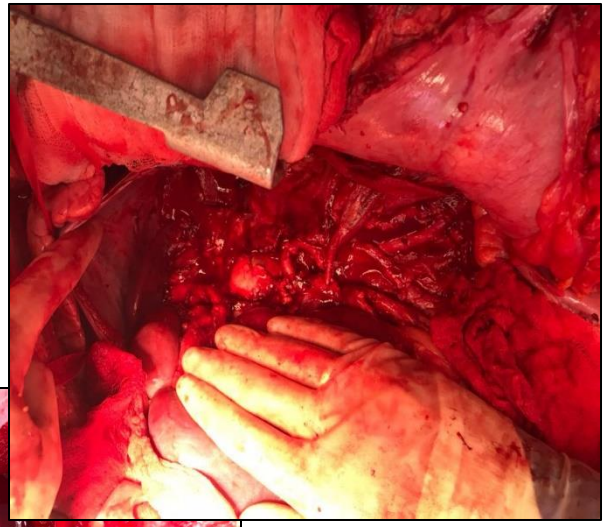
From the Society for Vascular Surgery

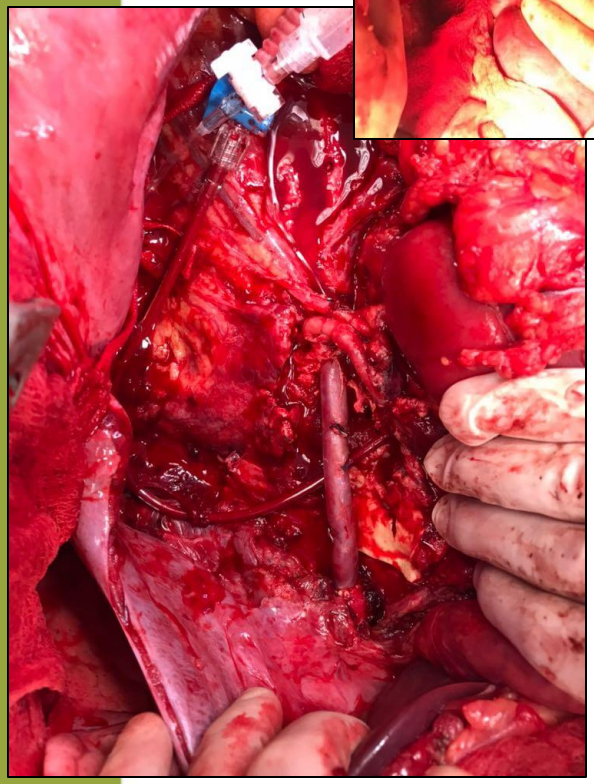
Treatment and outcomes of aortic endograft infection

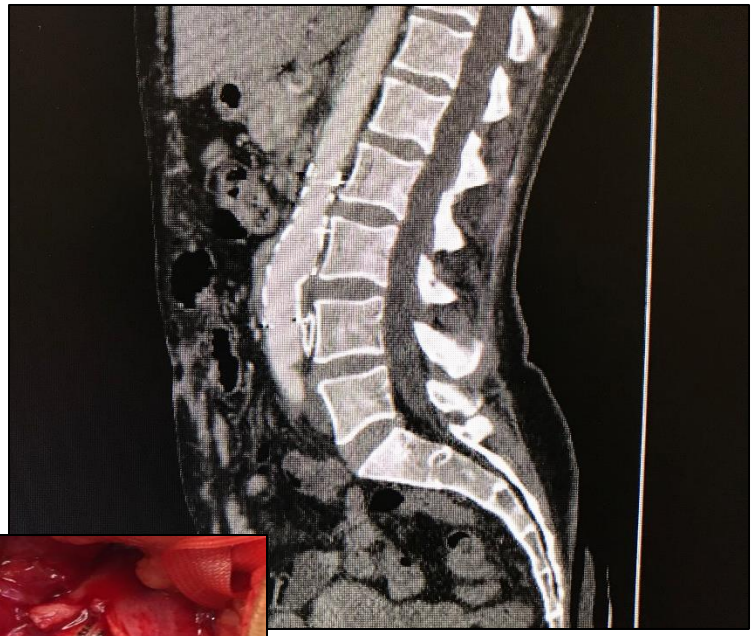
Matthew R. Smeds, MD,[a] Audra A. Duncan, MD,[b] Michael P. Harlander-Locke, MPH,[c] Peter F. Lawrence, MD,[d] Sean Lyden, MD,[e] Javariah Fatima, MD,[f] and Mark K. Eskandari, MD,[f] on behalf of the Vascular Low-Frequency Disease Consortium, *Little Rock, Ark; Rochester, Minn; Bradenton and Gainesville, Fla; Los Angeles, Calif; Cleveland, Ohio; and Chicago, Ill*

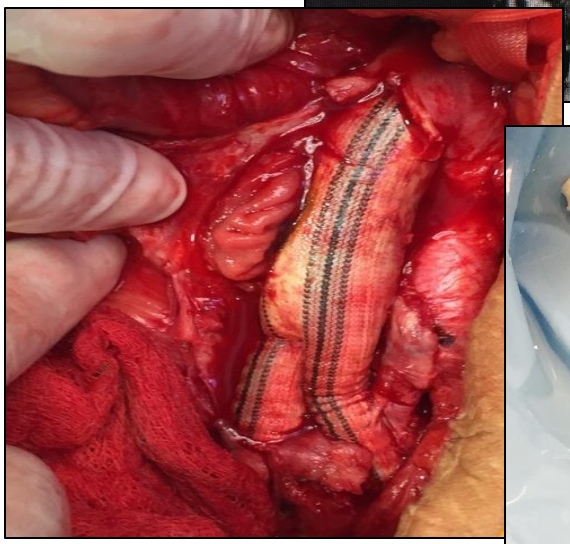


WHY DEEP VEIN?









The Reality – I am sorry

We all get old

Not all patients are suitable

The Reality – I am sorry

We all get old

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IMPERIAL EXPERIENCE

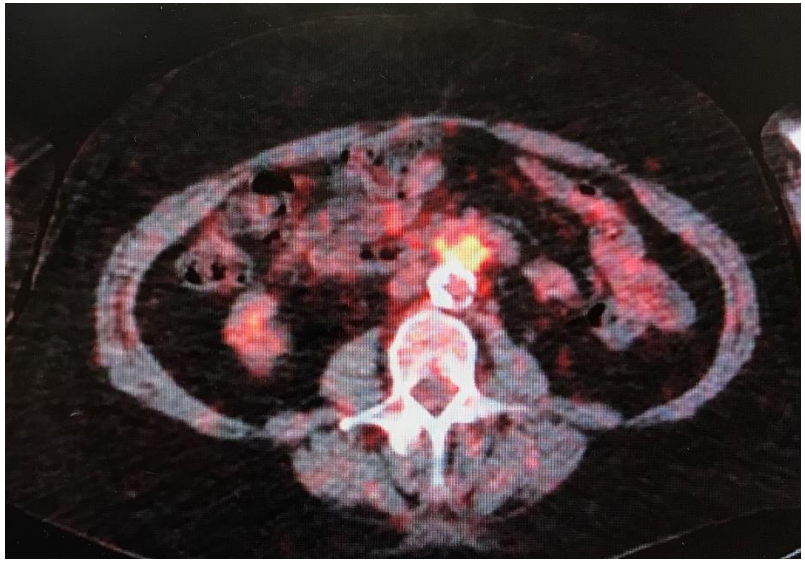
53 in last 8 years on database including emergency/urgent/elective

50% of these deemed “unfit” for surgery

- Endovascular salvage for emergency
- Antibiotics

Survival with this strategy is 0 - 8 years

With explantation mortality is 21% for emergency and “elective” cases

KEY MESSAGES

- Stenting of infected aorta and graft infection in emergency is life saving
- For infection in vascular grafts the traditional teaching is removal…for a reason and anything but graft removal is palliation.
- Graft excision, with extra-anatomical bypass or deep vein reconstruction should be the aim of surgery
- The reality is not all of the reach this stage and we need to palliate successfully in many