Les Hôpitaux Universitaires de STRASBOURG

Anévrisme de l'aorte abdominale
- La Chirurgie Ouverte -

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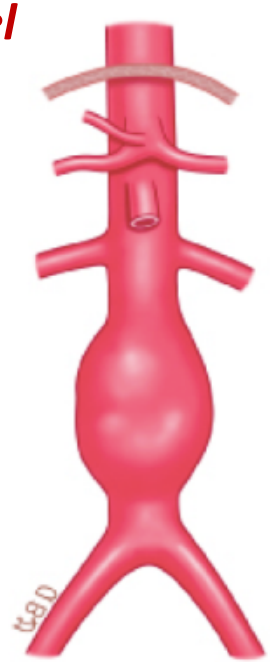
Introduction

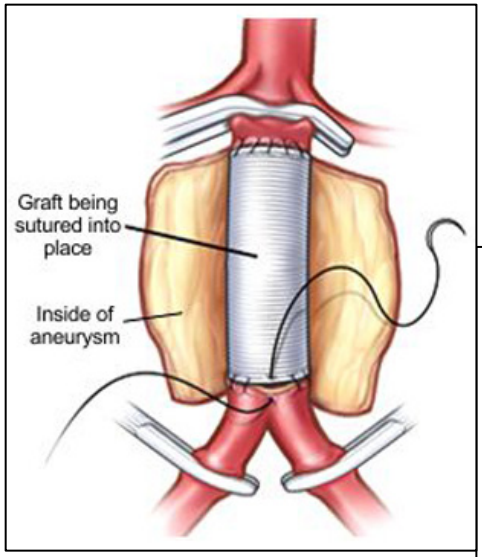
Une Pathologie : AAA

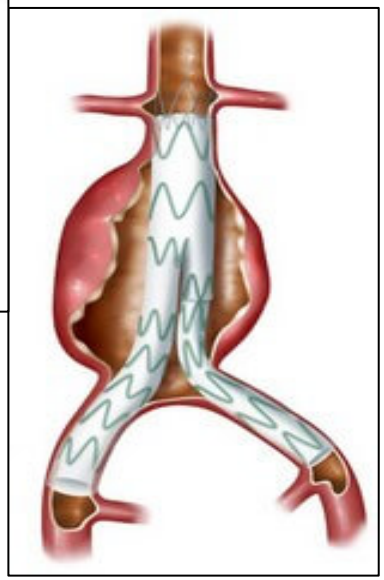
- Evolution naturelle : augmentation de diamètre (non prévisible) ➜ **Rupture**

- ***Risque de rupture annuel***
  - < 40 mm : 0.5 %
  - 40-50 mm : 0.5 à 5 %
  - 50-59 mm : 3-15 %
  - 60-69 mm : 10-20 %
  - 70-79 mm : 20-40 %
  - > 80 mm : 30-50 %



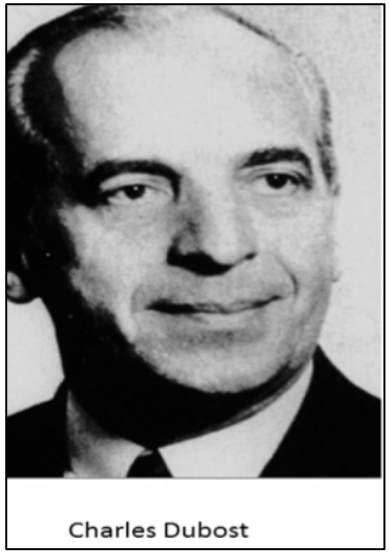
Deux traitements : Ouvert vs Endo

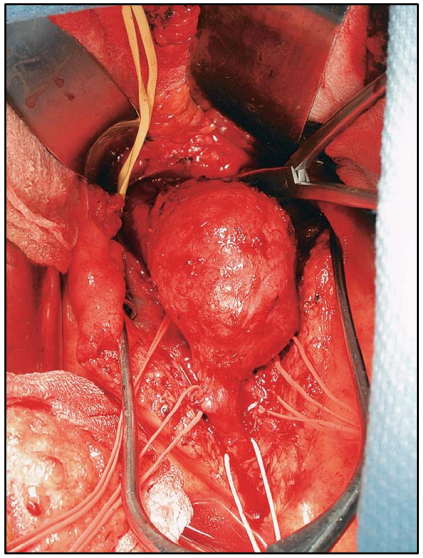


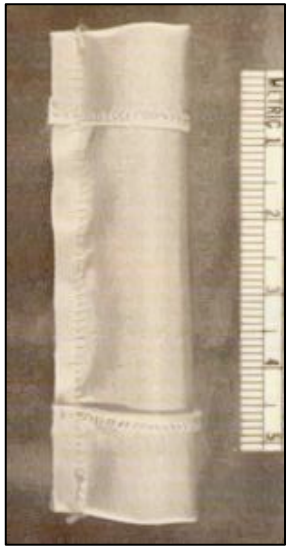


La chirurgie conventionnelle

Paris 29/3/1951



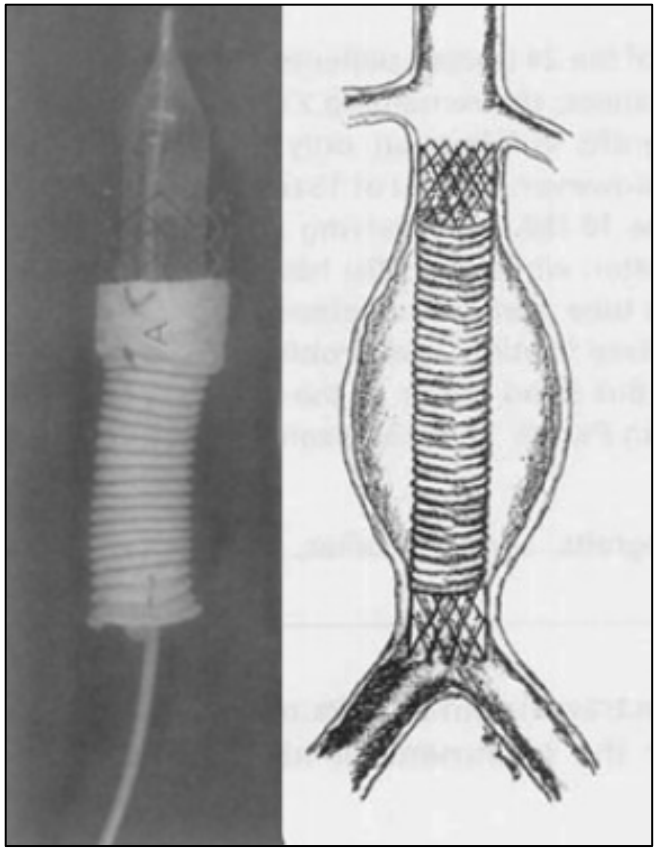




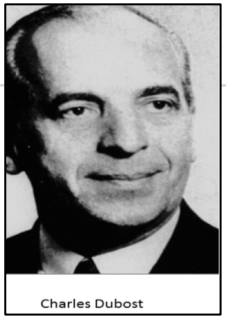
USA 60’

Le traitement endovasculaire

Parodi JC, Palmaz JC, Barone HD
Ann Vasc Surg 1991;5:491-499



Références pubmed


Charles Dubost

1000
750
500
250
0

9 3 8 6 7 9 14 13 16 14 14 24 15 17 6 2 1 1 1 1 5 2 3 126 347 383 384 451 490 516 617 550 656 652 721 717 678 735 708 725 756 772 778 866 849 925 898 863 651 42

1951 1953 1955 1957 1959 1961 1963 1965 1977 1979 1989 1991 1993 1995 1997 1999 2001 2003 2005 2007 2009 2011 2013 2015 2017

Malgré tout cela, beaucoup d'interrogations persistent…

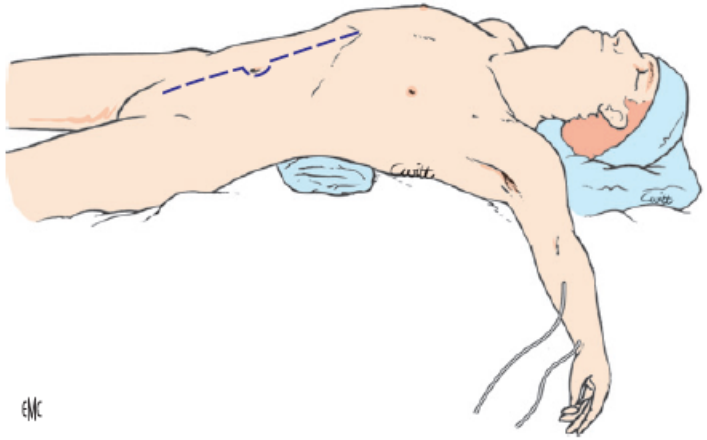
- **Qui traiter et quand ?**
- **Par quelle méthode ?**
  - Endo ou Ouvert ?
- **Modalités de surveillance, fréquence, durée**
  - Problématique de l'irradiation répétée
  - Néphrotoxicité et insuffisance rénale
- **Gestion des complications**
  - Endofuites ?

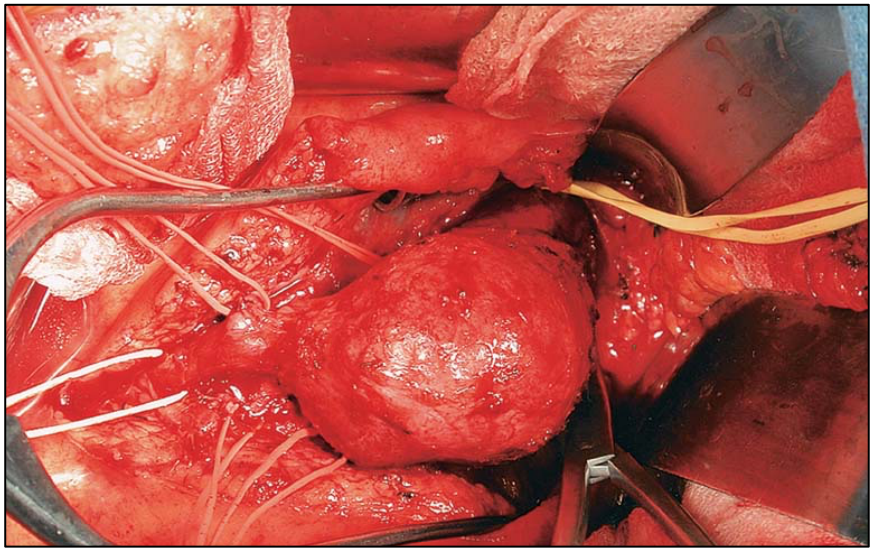
La chirurgie par mise à plat greffe prothétique

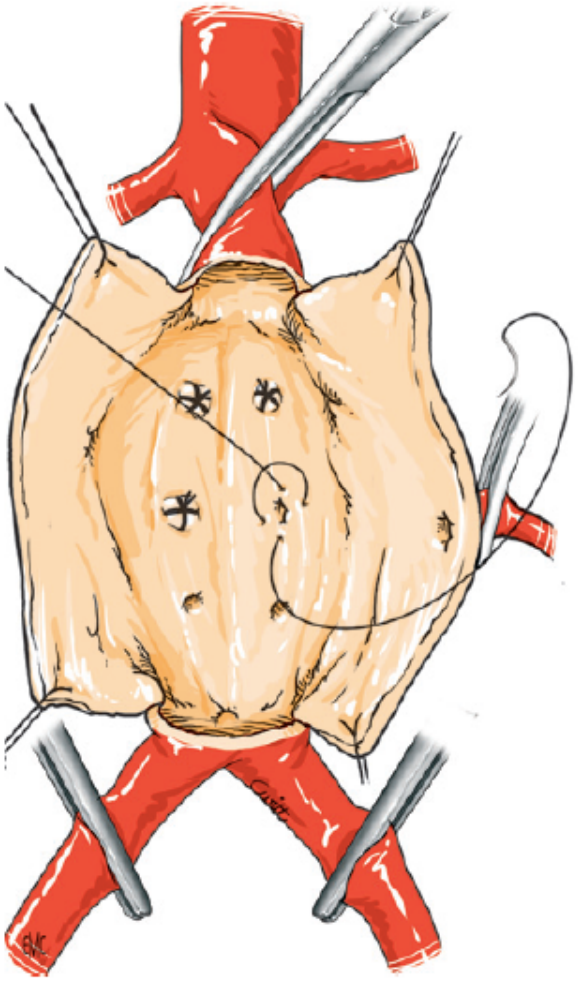
- Nombreux synonymes …
  - Chirurgie ouverte
  - Chirurgie « open »
  - Chirurgie qui « marche »

La chirurgie par mise à plat greffe prothétique

Effectivement la technique a peu évoluée depuis années 60

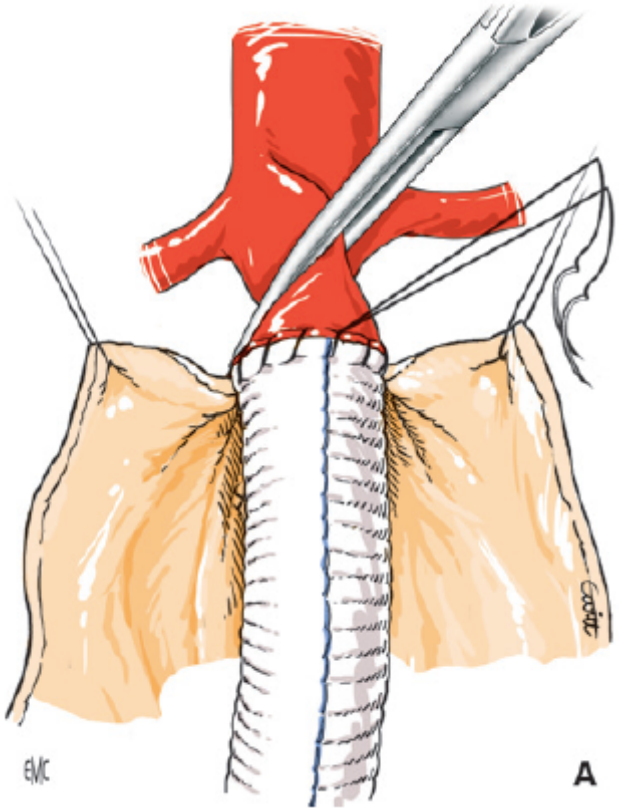


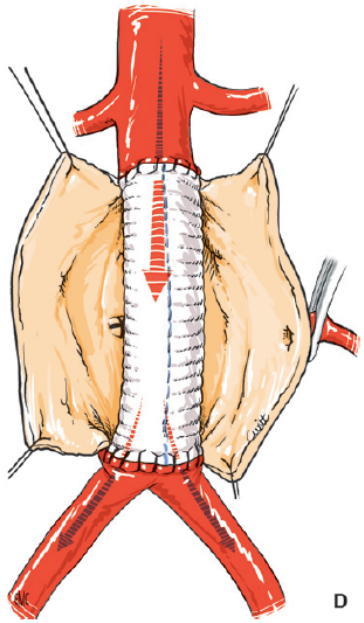


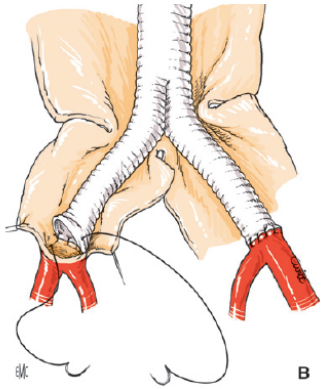


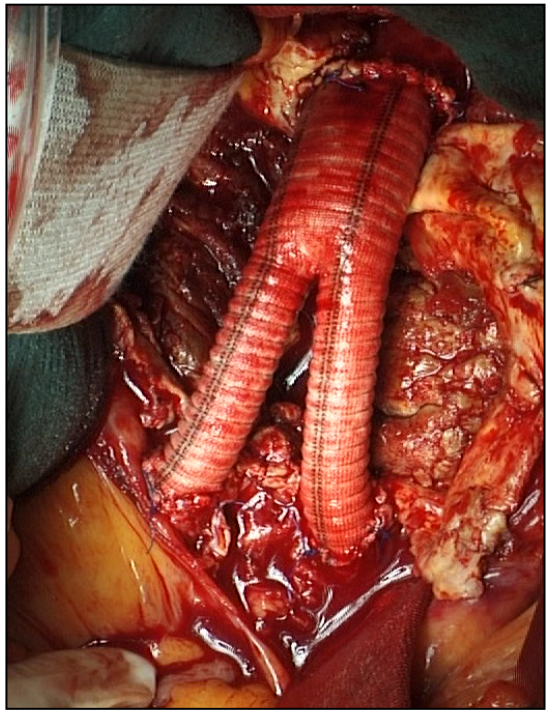
La chirurgie par mise à plat greffe prothétique

Simple mais efficace !









Les résultats de la chirurgie conventionnelle

- **Mortalité J30**
  - 1 - 4 % Séries monocentriques
  - ***1.6 % CHU Strasbourg (2003-2012)***
  - 3 - 4.7 % Essais randomisés
- *Corrélée Volume de cas*
  - 8 % < 17 cas/an
  - 4% > 60 cas/an
- Spécialités
  - 2.2% Chirurgien vasculaire
  - > 4% Chirurgien cardiaque/général

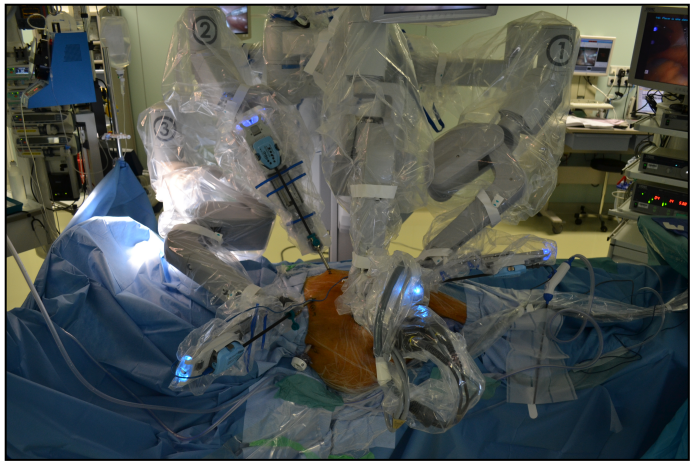
Complication	Frequency, %
All cardiac	15
Myocardial infarction	2-8
All pulmonary	8-12
Pneumonia	5
Renal insufficiency	5-12
Dialysis	1-6
Bleeding	2-5
Wound infection	<5
Leg ischemia	1-4
Deep venous thrombosis	5-8
Colon ischemia	1-2
Stroke	1-2
Graft thrombosis	<1
Graft infection	<1
Ureteral injury	<1

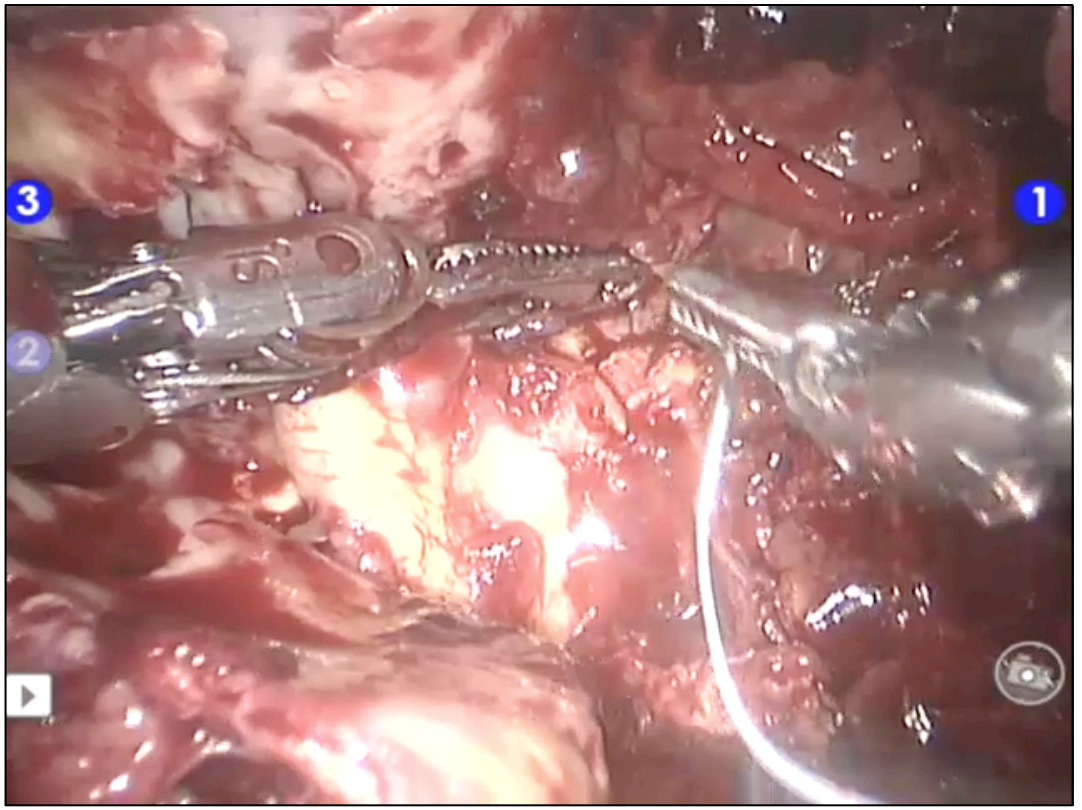
From Schermerhorn ML, Cronenwett JL. Abdominal aortic and iliac aneurysms. In: Rutherford RB, editor. Vascular surgery. 6th ed. Philadelphia: Elsevier Saunders; 2005. p. 1431.

Dimick JB
Surgeon specialty and provider volumes are related to outcome of intact abdominal aortic aneurysm repair in the United States.
J Vasc Surg 2003;38:739-44.

Approches mini-invasives

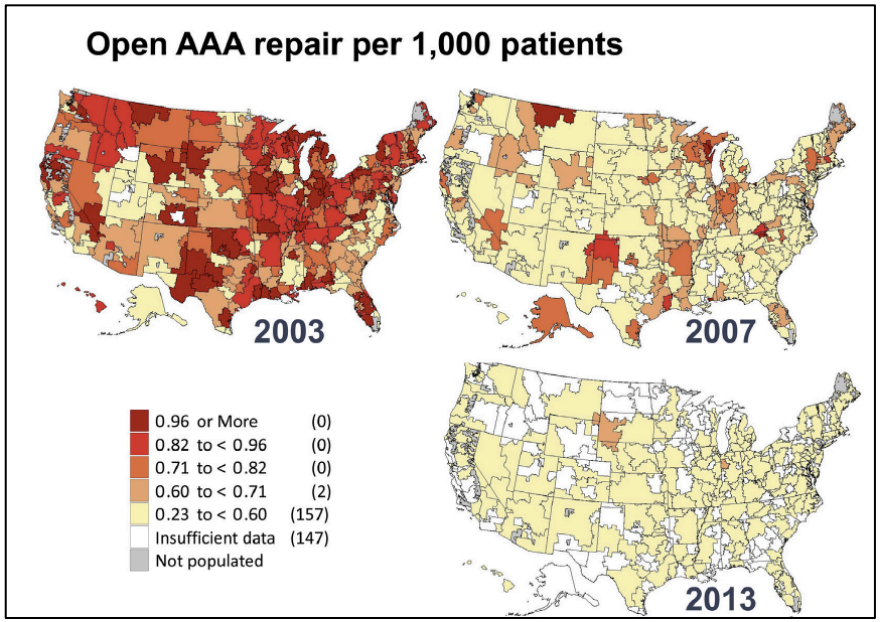
- Laparoscopie classique
- **Laparoscopie robot-assistée**

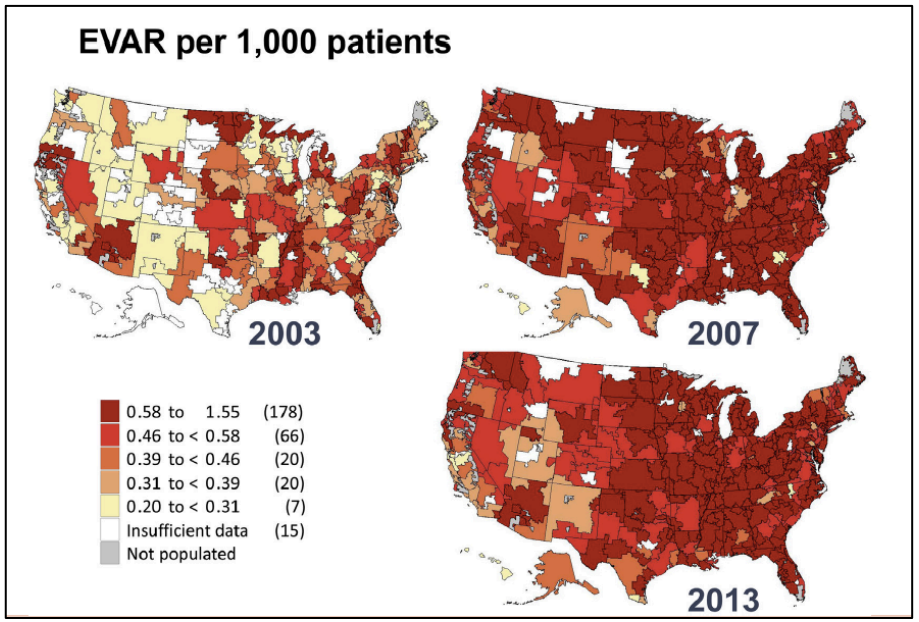




National trends in open surgical, endovascular, and branched-fenestrated endovascular aortic aneurysm repair in Medicare patients

Bjoern D. Suckow, MD, MS,[a] Philip P. Goodney, MD, MS,[a,b,c] Jesse A. Columbo, MD,[a,b] Ravinder Kang, MD, MS,[b] David H. Stone, MD,[a] Art Sedrakyan, MD,[c] Jack L. Cronenwett, MD,[a] *and* Mark F. Fillinger, MD,[a] *Lebanon and Hanover, NH; and White River Junction, Vt*





Open

Articles

Research

Systematic review

Vers un retour à la chirurgie ouverte pour les

Eur J Vasc Endovasc Surg (2016) 52, 719—720

EDITORIAL

Prophylactic Abdominal Aortic Aneurysm Repair? Open Repair Brings Early Pain but Later Gain

firmed. Over 5 years, patients of marginal fitness had no early survival advantage from EVAR compared with open repair. Aneurysm-related mortality and patients with low ankle : brachial pressure index contributed to the erosion of the early survival advantage for the EVAR group. Trial registration numbers: EVAR-1, ISRCTN55703451; DREAM (Dutch Randomized Endovascular Aneurysm Management), NCT00421330; ACE (Anévrysme de l'aorte abdominale, Chirurgie *versus* Endoprothèse), NCT00224718; OVER (Open *Versus* Endovascular Repair Trial for Abdominal Aortic Aneurysms), NCT00094575.

Presented to the Charing Cross International Symposium, London, UK, April 2016

Paper accepted 26 September 2016

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Introduction

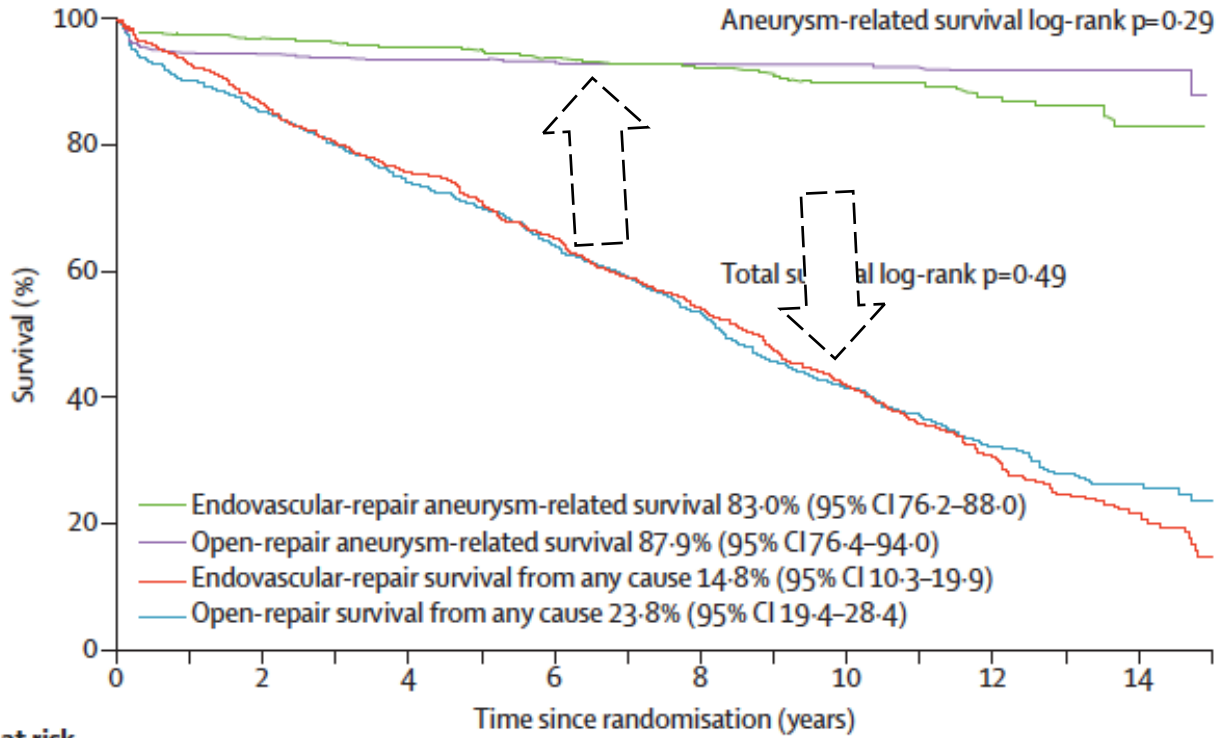
Open repair of abdominal aortic aneurysm (AAA) was first introduced by Dubost in 1951[1]. In the 1990s, the less invasive endovascular aneurysm repair (EVAR) was introduced; EVAR-1[2], the first multicentre randomized trial of EVAR *versus* open repair, was started in 1999 in the UK. This was soon followed by the DREAM[3] and ACE[4] multicentre trials in Europe, and the OVER trial[5] in the USA.

Each of the randomized trials of EVAR *versus* open repair recruited patients (suitable for either open or endovascular repair) with slightly different entry characteristics

Endovascular versus open repair of abdominal aortic aneurysm in 15-years' follow-up of the UK endovascular aneurysm repair trial 1 (EVAR trial 1): a randomised controlled trial

Rajesh Patel, Michael J Sweeting, Janet T Powell, Roger M Greenhalgh, for the EVAR trial investigators*

- EVAR1 (1999-2003) : 1082 patients
  - Mortalité J30 1.7 vs 4.7%
  - Réinterventions 9.8 vs 5.8%
- Résultats tardifs à 15 ans
  - Survie similaire après 6 mois…
  - Inversion des courbes
  - A 8 ans Ruptures
    - 7 % EVAR vs 1 %



Number at risk

Endovascular repair	626	543	474	409	339	263	135	41
Open repair	626	534	464	399	333	257	143	50

Endovascular versus open repair of abdominal aortic aneurysm in 15-years' follow-up of the UK endovascular aneurysm repair trial 1 (EVAR trial 1): a randomised controlled trial

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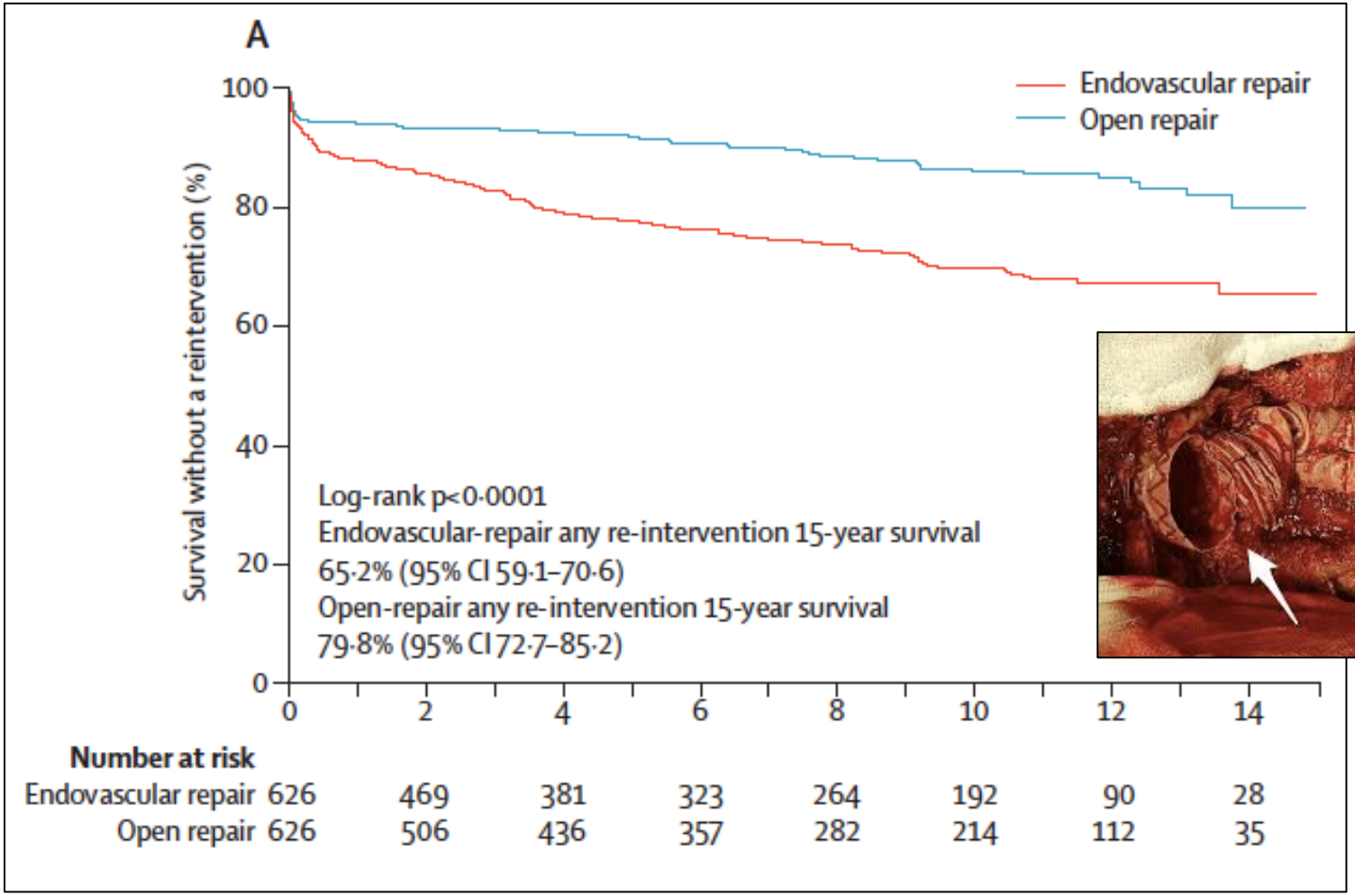
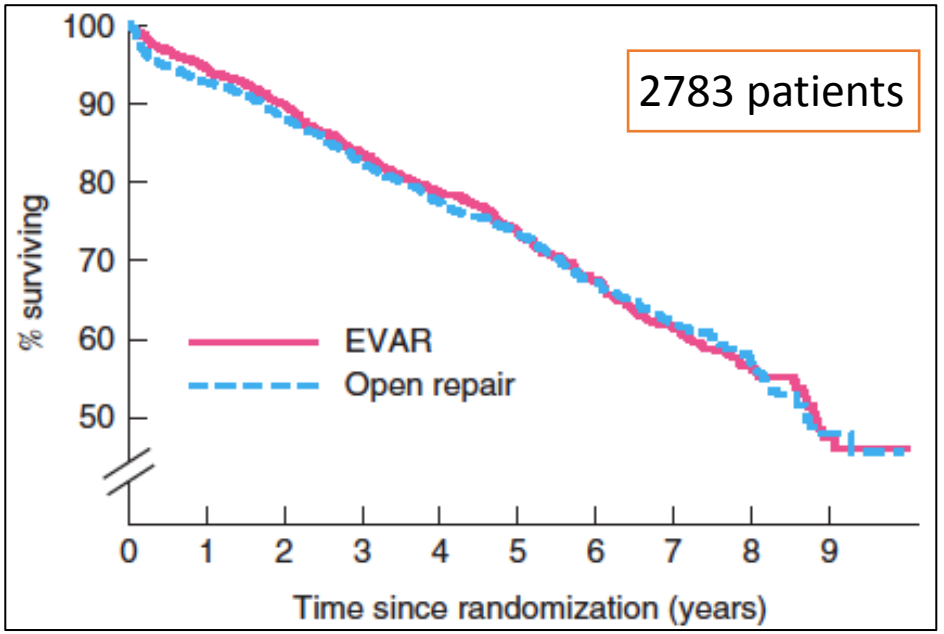


Meta-analysis of individual-patient data from EVAR-1, DREAM, OVER and ACE trials comparing outcomes of endovascular or open repair for abdominal aortic aneurysm over 5 years

J. T. Powell[1], M. J. Sweeting[2], P. Ulug[1], J. D. Blankensteijn[3], F. A. Lederle[4], J.-P. Becquemin[5] and R. M. Greenhalgh[1], on behalf of the EVAR-1, DREAM, OVER and ACE Trialists

Survie globale : NS

	Pooled ($n = 2724$)
Proportion of patients who died*	
All patients	
EVAR	53 of 1373 (0·8)
Open repair	56 of 1351 (0·8)
Time since operation	
0–30 days	
EVAR	16 of 1373 (14·2)
Open repair	40 of 1351 (36·5)
31 days to 3 years	
EVAR	18 of 1357 (0·5)
Open repair	13 of 1311 (0·4)
> 3 years	
EVAR	19 of 1096 (0·6)
Open repair	3 of 1054 (0·1)



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- Décès liés à l'AAA
  - En faveur chirurgie ouverte **après 3 ans**

- Analyse des sous-groupes
  - Age et Sexe n'influencent pas efficacité EVAR
  - Pas de bénéfice précoce (0-6 mois) de l'EVAR
    - Insuffisance rénale modérée
    - Patients coronariens
  - Pas de bénéfice EVAR sujets AOMI Période (6 mois – 4 ans)

Conclusion

- La chirurgie conventionnelle = **GOLD STANDARD**
  - Pour Patient à Espérance de vie > 3 ans
  - Opérable

- Ne diabolisons pas l'EVAR !
- Dont les indications et les résultats sont favorables :
  - Patients (très) fragiles
  - Espérance de vie limitée
  - AAA rompus
  - Morphologie adaptée

Conclusion

Recommendation 4.25	Level	Class	References
In fit patients with long life expectancy, open abdominal aortic aneurysm repair may be considered as the preferred treatment modality.	C	IIb	EVAR 1 trial 15-year

Recommendation 4.26	Level	Class	References
If anatomically suitable, endovascular anaurysm repair should be considered as the preferred treatment modality for moderate to high risk patients.	A	IIa	EAVR 1, EVAR 2b, DREAM, OVER, ACE

Guidelines ESVS – 2018 Coming soon…