CONTROVERSES ET ACTUALITÉS EN CHIRURGIE VASCULAIRE

CONTROVERSIES & UPDATES IN VASCULAR SURGERY

JANUARY 25-27 2018

MARRIOTT RIVE GAUCHE & CONFERENCE CENTER, PARIS, FRANCE

No or short neck AAA: is open surgery obsolete?

Michel A Bartoli

Timone hospital, Marseille France

Disclosure

Speaker name:

Michel A Bartoli.....

☐ I have the following potential conflicts of interest to report:

☒ Consulting

☐ Employment in industry

☐ Shareholder in a healthcare company

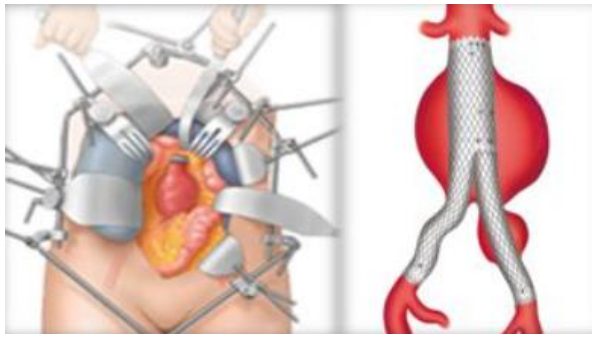
☐ Owner of a healthcare company

☐ Other(s)

☐ I do not have any potential conflict of interest

Conflict of Interest

- I am a French vascular surgeon



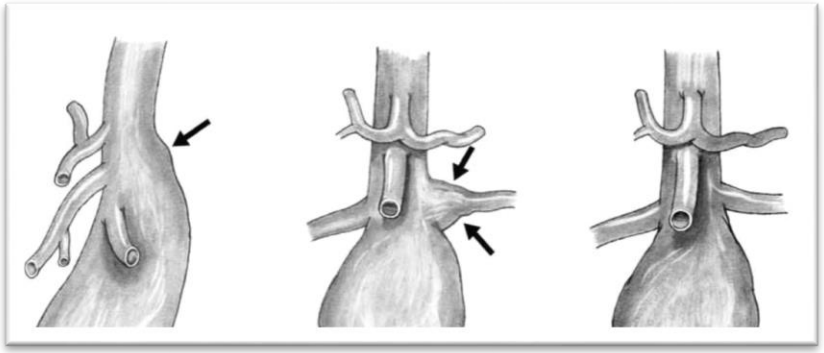
30 day or in hospital all cause mortality

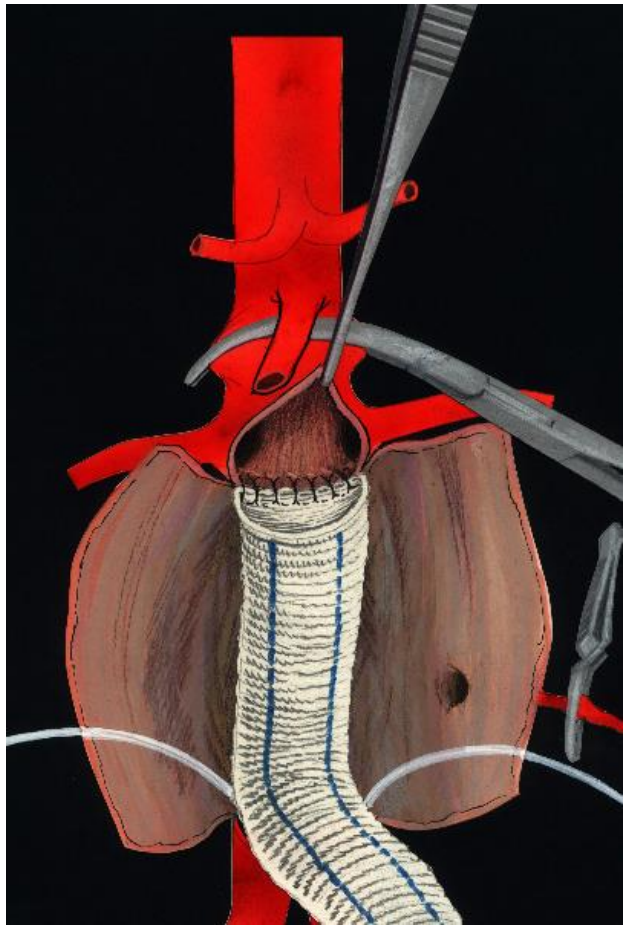
	EVAR	OSR
ACE	**1.3 %**	**0.6 %**
DREAM	1.1 %	4.5 %
EVAR1	3.6 %	9.6%
OVER	0.4 %	2.9%

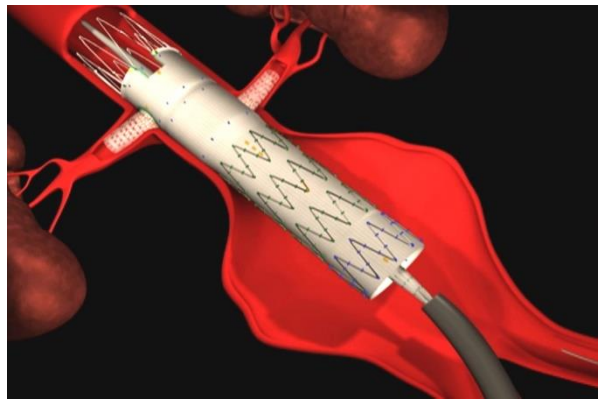
PW Stather, BJS 2013

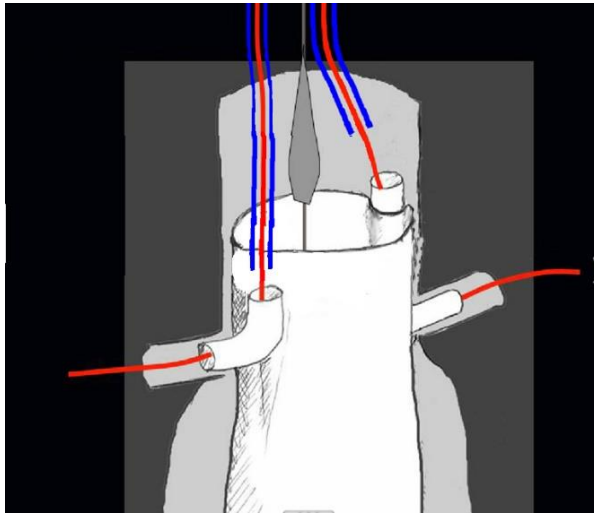
Literature: Juxta Renal Aneurysm

3 Main Options

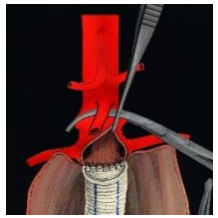


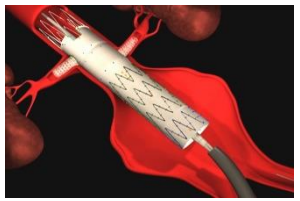






FEVAR vs OSR: Short Term Data





A propensity-matched comparison of outcomes for fenestrated endovascular aneurysm repair and open surgical repair of complex abdominal aortic aneurysms

Maxime Raux, MD,[a,b] Virendra I. Patel, MD, MPH,[b] Frédéric Cochennec, MD,[a] Shankha Mukhopadhyay, MS,[b] Pascal Desgranges, MD, PhD,[a] Richard P. Cambria, MD,[b] Jean-Pierre Becquemin, MD,[a] and Glenn M. LaMuraglia, MD,[b] *Créteil, France; and Boston, Mass*

Jvs 2014

Peri-operative mortality
After propensity matching

FEVAR n=42	OSR n=147
9.5%	2%

Open repair versus fenestrated endovascular aneurysm repair of juxtarenal aneurysms

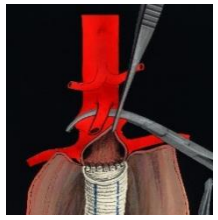
Rohini Rao, BSc, Tristan R. A. Lane, MRCS, Ian J. Franklin, FRCS(Gen Surg), and Alun H. Davies, DM, FRCS, *London, United Kingdom*

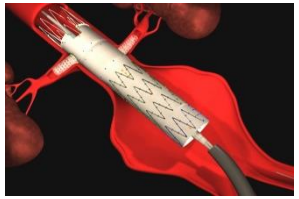
Jvs 2015

Peri-operative mortality
⚠ *Selection bias*

FEVAR n=1575	OSR n=751
4.6%	4.6%

FEVAR vs OSR: Long Term Data





Open repair versus fenestrated endovascular aneurysm repair of juxtarenal aneurysms

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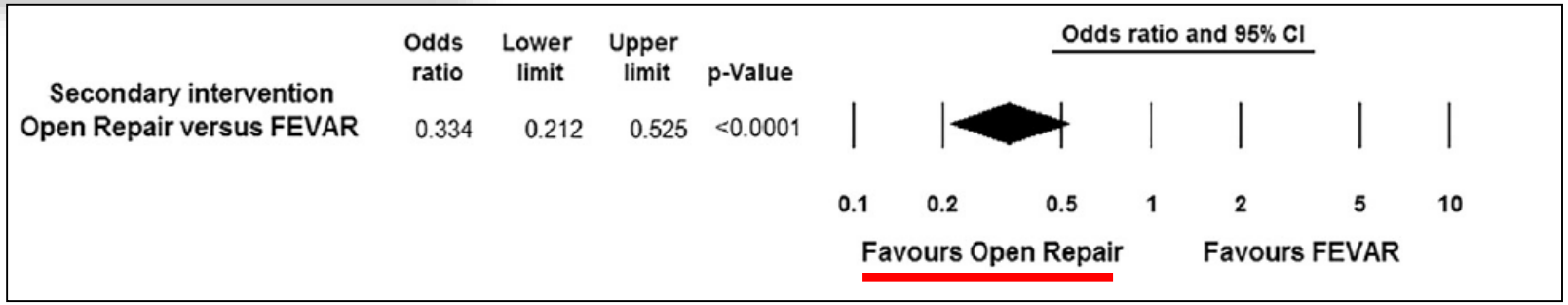
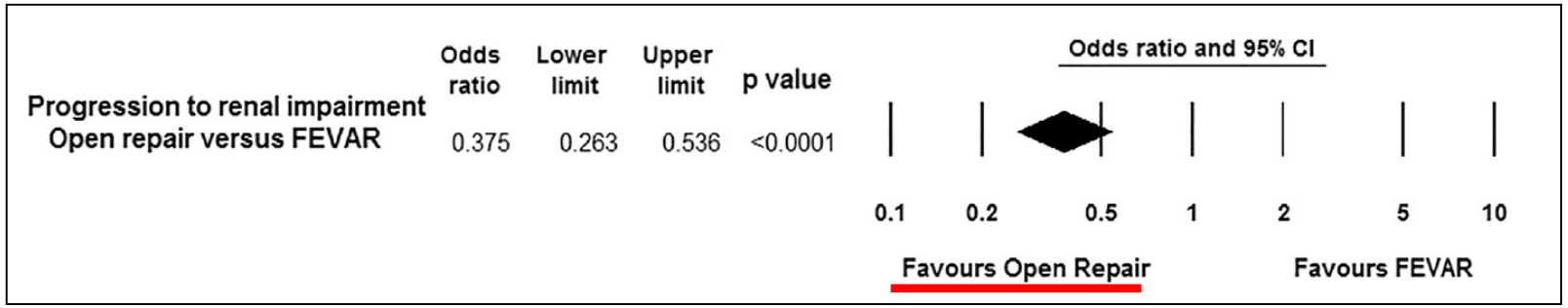
Jvs 2015

Secondary Intervention



Progression to renal impairment



Long term Data

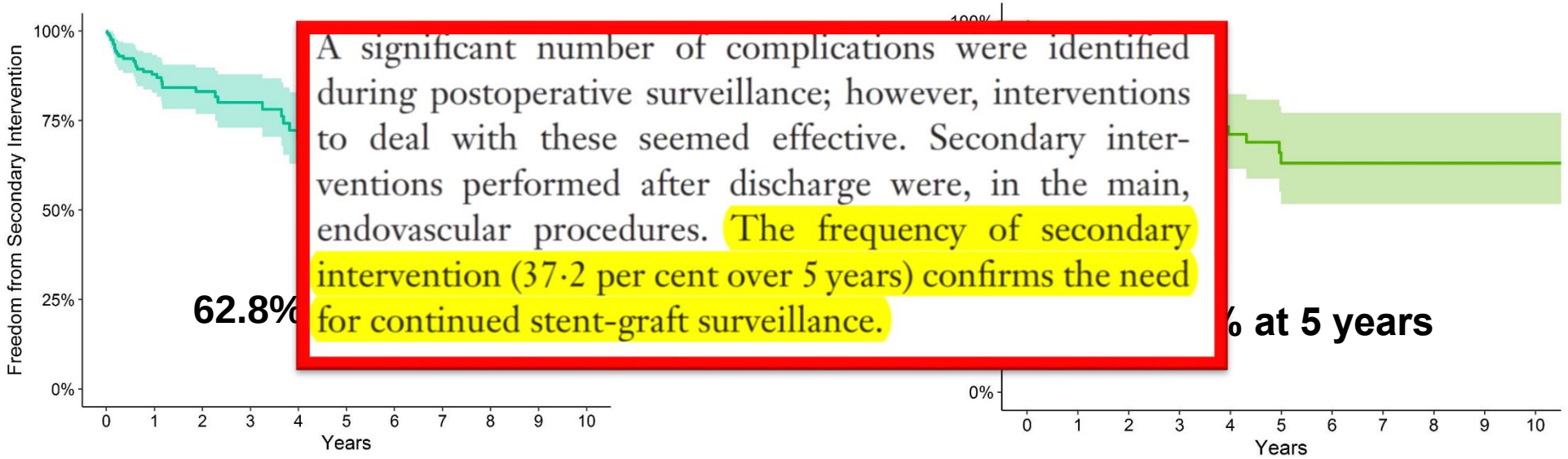
Original article

Long-term follow-up of fenestrated endovascular repair for juxtarenal aortic aneurysm

BJS 2017; **104**: 1020–1027

I. N. Roy[1,3], A. M. Millen[1], S. M. Jones[1], S. R. Vallabhaneni[1,3], J. R. H. Scurr[1], R. G. McWilliams[2], J. A. Brennan[1] and R. K. Fisher[1]

173 patients with a median follow-up 34 months



A significant number of complications were identified during postoperative surveillance; however, interventions to deal with these seemed effective. Secondary interventions performed after discharge were, in the main, endovascular procedures. The frequency of secondary intervention (37·2 per cent over 5 years) confirms the need for continued stent-graft surveillance.

Freedom from secondary intervention

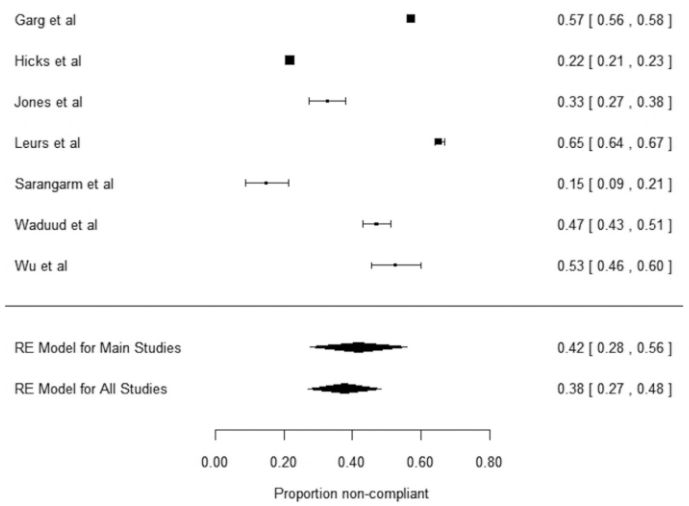
Freedom from AAA growth >5mm

The continued graft Surveillance is An Issue

REVIEW

The Implications of Non-compliance to Endovascular Aneurysm Repair Surveillance: A Systematic Review and Meta-analysis

Matthew Joe Grima [a,b,*], Mourad Boufi [a,c,e], Martin Law [d], Dan Jackson [d], Kate Stenson [a,b], Benjamin Patterson [a,b], Ian Loftus [a,b], Matt Thompson [a,b], Alan Karthikesalingam [a,b], Peter Holt [a,b]

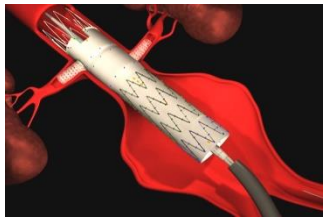


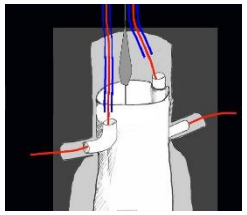
The estimated average non-compliance rate was = 42.0%

26,622 patients= 15,255 compliant + 11,367 noncompliant

Eur J Vasc Endovasc Surg (2017) ■, 1—11

Comparison FEVAR vs Chimney





Fenestrated and Chimney Technique for Juxtarenal Aortic Aneurysm: A Systematic Review and Pooled Data Analysis

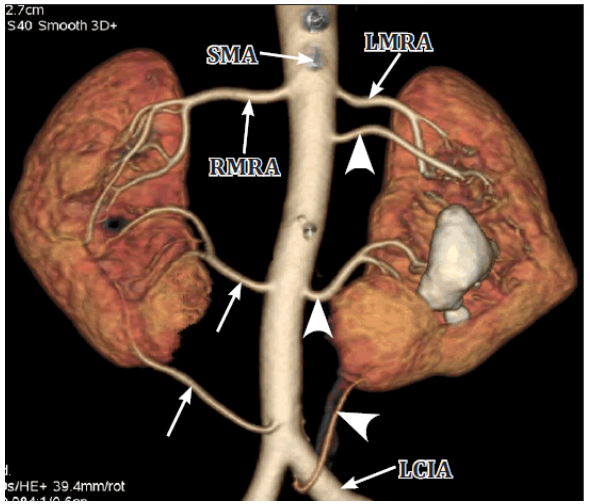
Yue Li, Zhongzhou Hu, Chujie Bai, Jie Liu, Tao Zhang, Yangyang Ge, Shaoliang Luan & Wei Guo

15 studies included

	FEVAR n=542	Chimney n=158	p
30 day mortality	**1.1%**	**3.8%**	**0.02**
Secondary intervention 12 months	**10.7%**	**9.5%**	**0.98**

Li Y, Nature 2016

FEVAR: Limitations



- **Anatomic limitations**
  - Good access vessel
    - Size, tortuosity, without previous stents
  - Target vessels
    - Larger than 4 mm, Without early bifurcation, No sharp downward take off, No tight stenosis at the origin of the target vessel
  - Neck angulation <45°, Shaggy aorta
- **Delay of confection is about 6 to 8 weeks**
  - Ruptured or symptomatic
  - very large aneurysm

The Cost Effectiveness : Windows TRIAL

Editor's Choice — Thirty day Outcomes and Costs of Fenestrated and Branched Stent Grafts versus Open Repair for Complex Aortic Aneurysms

M. Michel [a,*], J.-P. Becquemin [b,d], M.-C. Clément [a,d], J. Marzelle [b], C. Quelen [a], I. Durand-Zaleski [a,c], on behalf of the WINDOW Trial Participants [e]

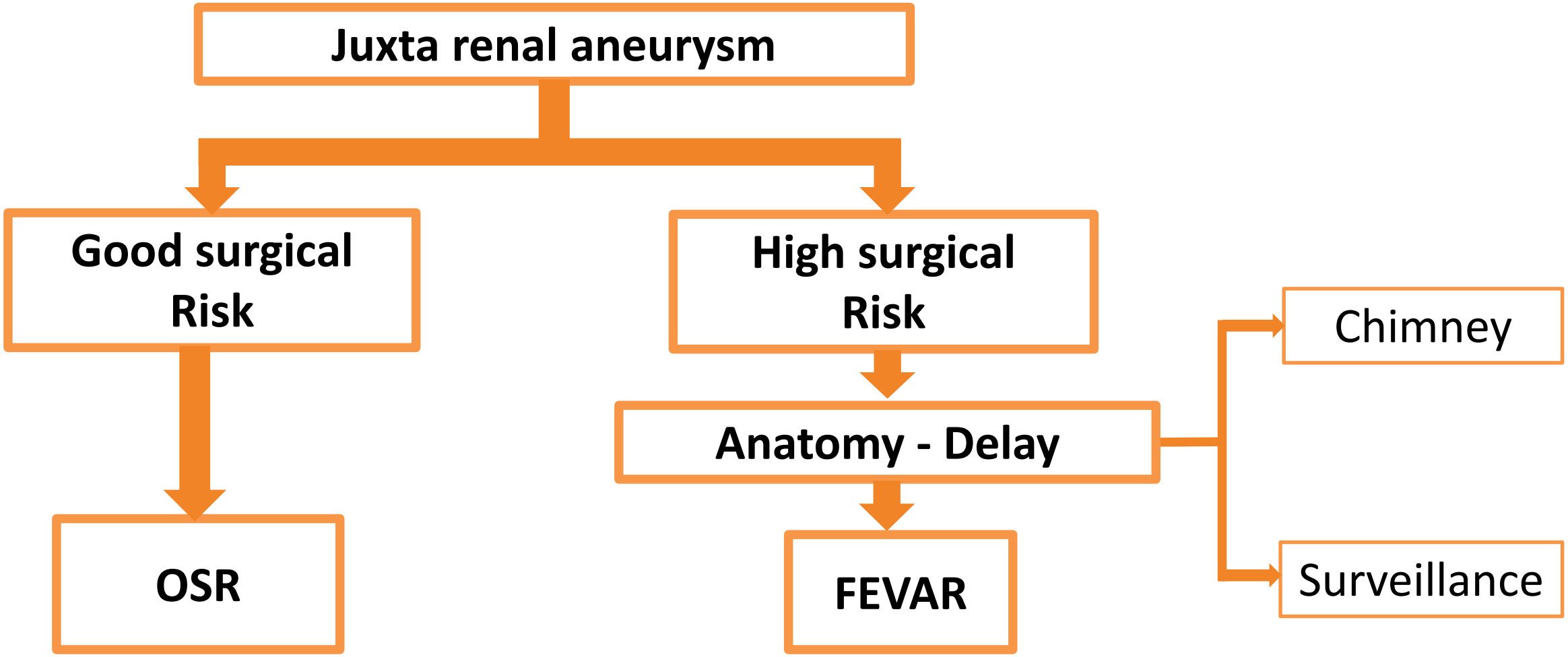
A Study of the Cost-effectiveness of Fenestrated/branched EVAR Compared with Open Surgery for Patients with Complex Aortic Aneurysms at 2 Years

Morgane Michel [a,b,c,*], Jean-Pierre Becquemin [d,e], Jean Marzelle [f], Céline Quelen [a], Isabelle Durand-Zaleski [a,c,e], on behalf of the WINDOW Trial participants [†]

Total hospital cost	FEVAR	OSR	p
30 days	34 425€	14 907	<0.001
2 years	41 786 €	21 142 €	<0.001

- ⚠ comparison between high risk FEVAR patients and low or average risk OSR patients
- The main driver of costs at 2 years remained the cost of the initial admission due to the cost of the device

Proposed Algorithm, in 2018



Marseille, Timone Hospital Experience*

- Over A 10 year period 170 elective patients with juxta renal aneurysm, **Overall Mortality 1.2%**
  - OSR 75% vs FEVAR 25%

	OSR N=125	FEVAR N=45	P
Score ASA ≥3	*32,2%*	*75,5%*	*0,001*
In hospital mortality	**1,6%**	**0%**	**ns**
Secondary intervention (Fw-up 36 month)	**0,8%**	**11%**	**ns**

**R Soler, SVS meeting 2016*

Conclusion

- The literature, no level 1 evidence OSR vs ENDO
  - Short term data are not really in favor of endovascular technique
  - Long term data are in favor of open surgical repair
- FEVAR approach
    - It remains some anatomical and logistic limitation
    - Patient need to be compliant
- In our experience OSR and FEVAR need to complement one an other

Open surgical repair for juxta renal aneurysm is not obsolete

THANK YOU FOR YOUR ATTENTION