24-25 May 2012
Crowne Plaza Lille

16TH INTERNATIONAL EXPERTS SYMPOSIUM
CRITICAL ISSUES
in aortic endografting 2012

Hybrid repair of TAAAs: state of the art

Roberto Chiesa

Vascular Surgery, Università Vita-Salute

Scientific Institute San Raffaele – Milan, Italy

Conflict of interest

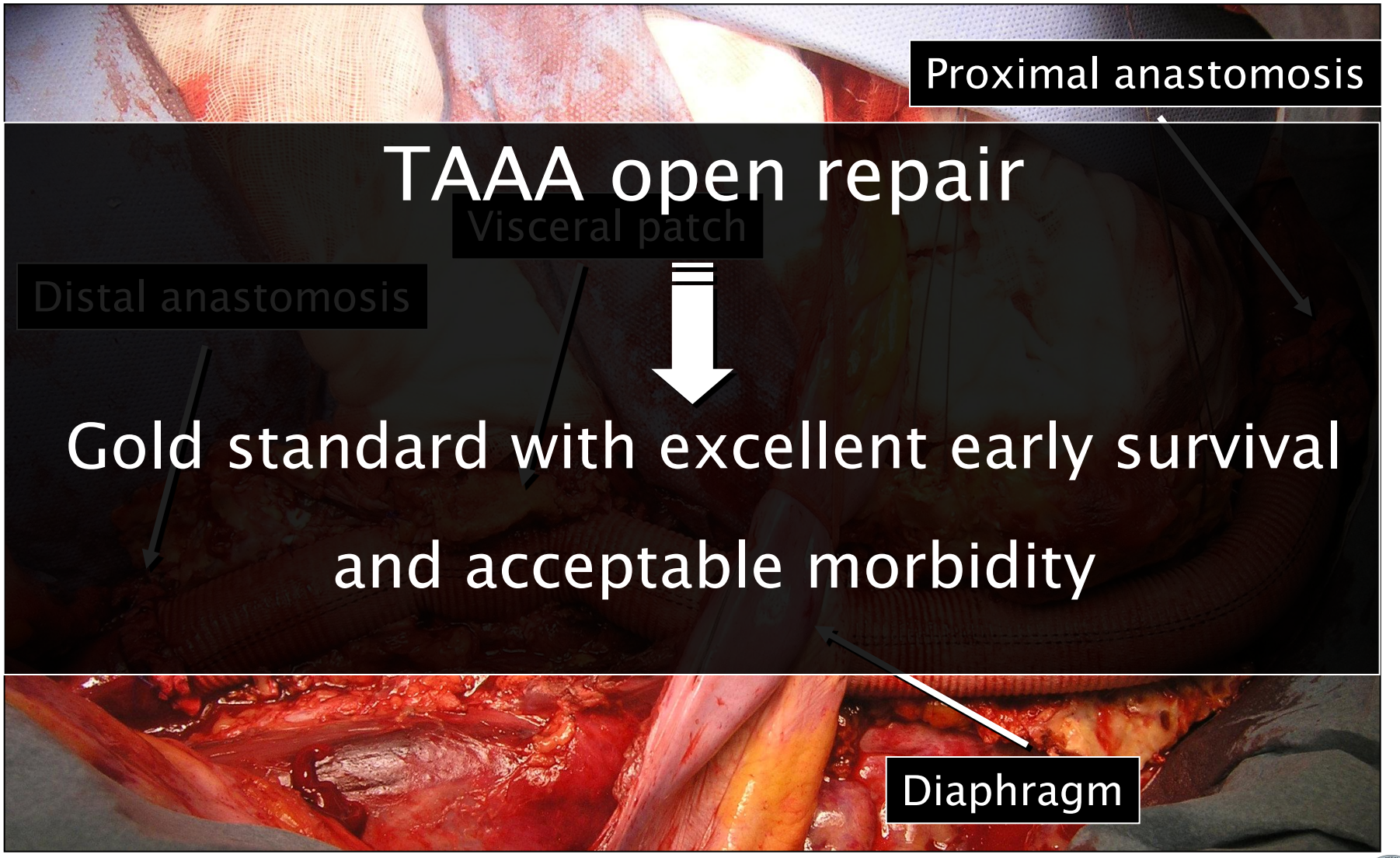
- Dr Chiesa is the Co/PI for several thoracic and abdominal aortic stent graft trials (*Cook, Inc, Cordis® Corporation, Bolton Medical, and TriVascular, Inc.*)

- Dr Chiesa participated as a lecturer at symposia hosted by *Cook, Inc., Bolton, W.L. Gore and Associates, and Medtronic, Inc.*

- Dr Chiesa has received educational grants from *Cook, Inc.*

TAAA in fit patients

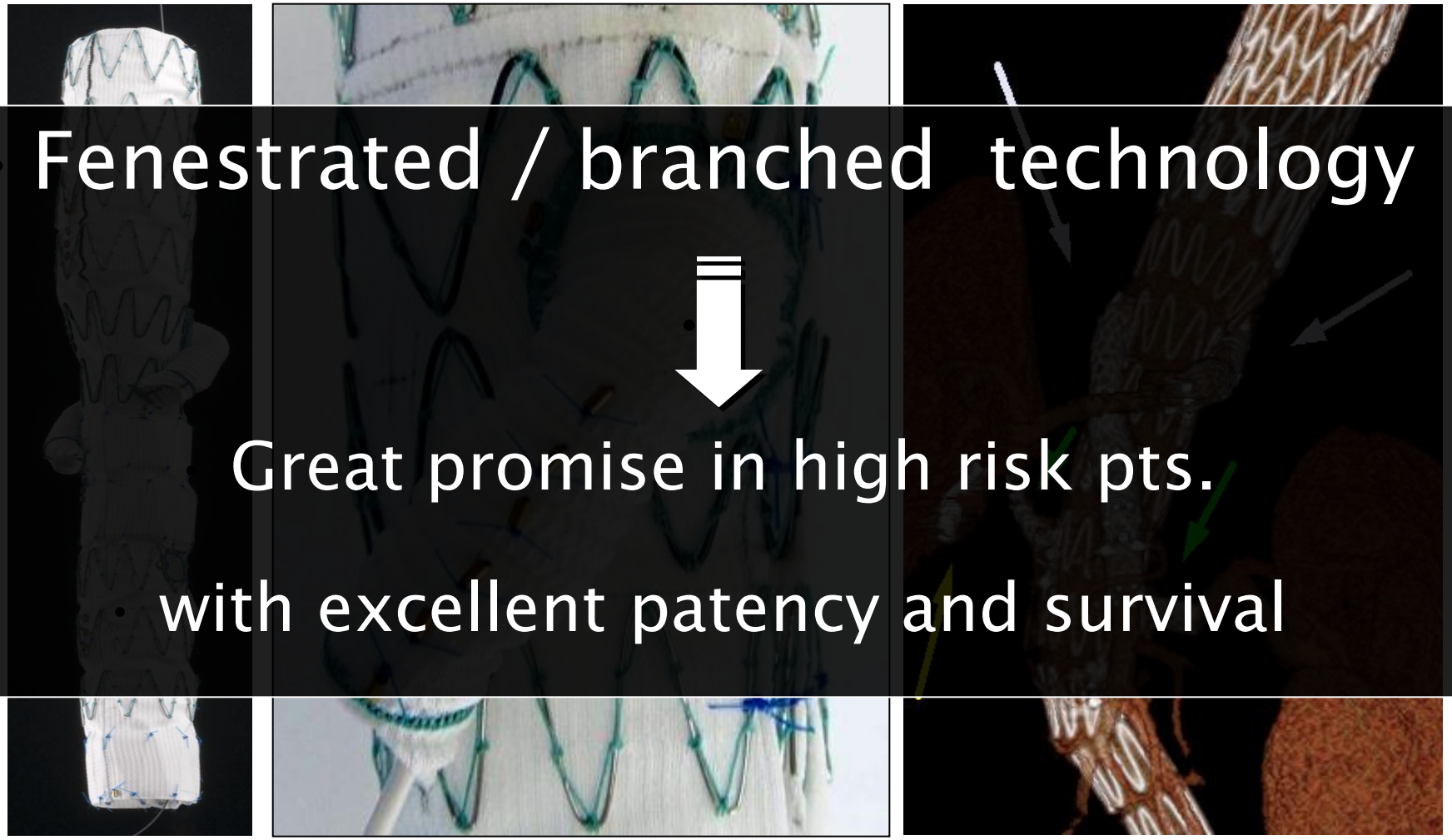
TAAA open repair



Coselli JS, et al. Semin Vasc Surg '08

TAAA in unfit patients?

TAAA endovascular repair



- Fenestrated / branched technology

⇓

Great promise in high risk pts.

- with excellent patency and survival

Greenberg R, et al. J Thorac Vasc Surg '12

Fenestrated / branched technology

… a recent clear

proof of strength!

Fenestrated / branched technology

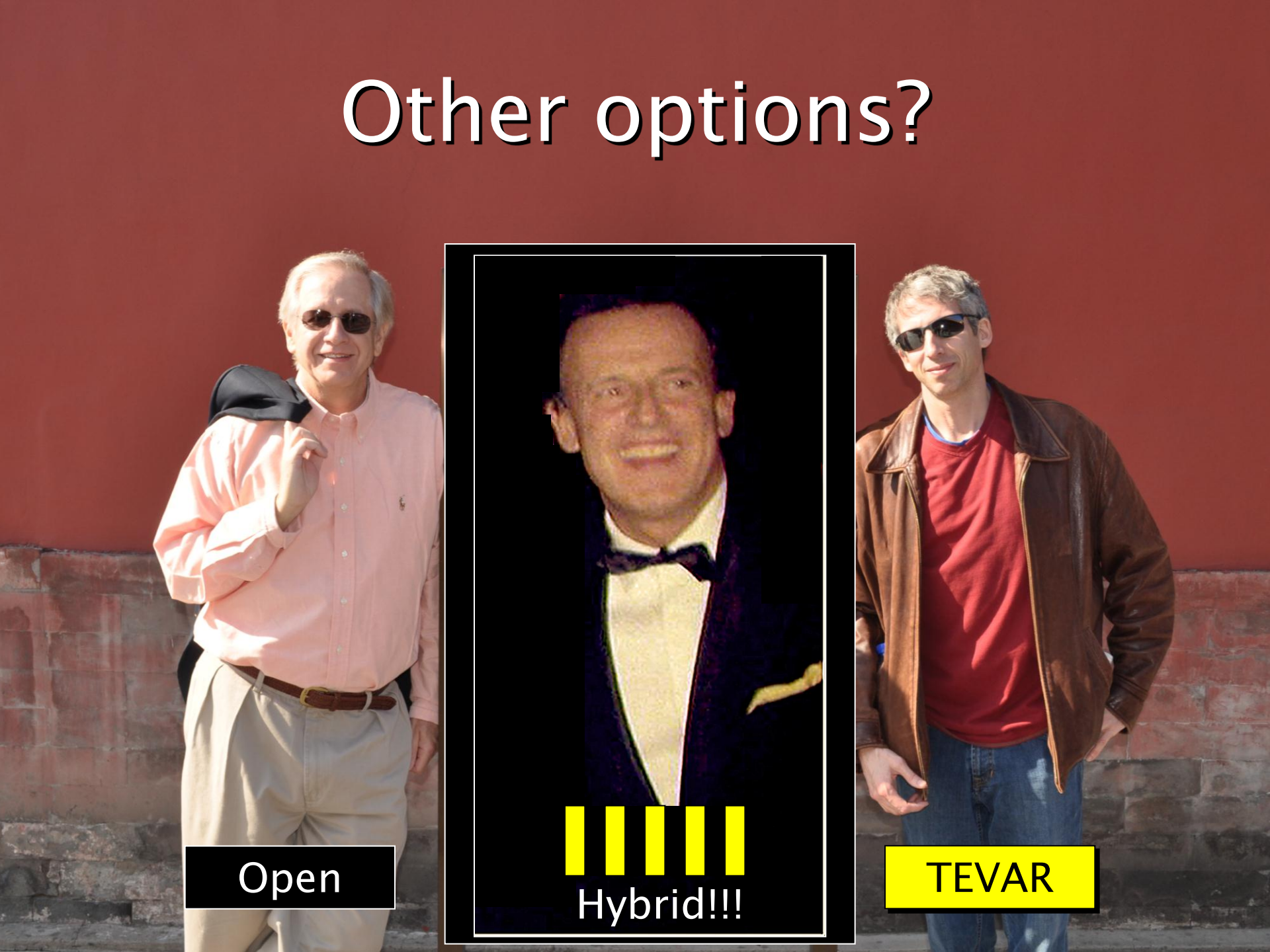
Current results

- In-hospital mortality: 10%
- 30-day mortality: 8.9%
- Spinal ischemia: 7.8%
- Renal filtration: 6.7%
- Operative time: >200’

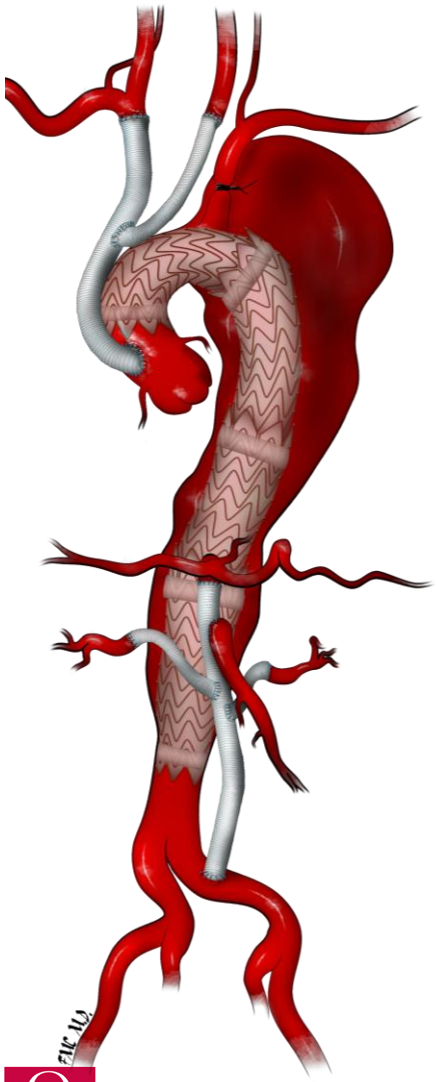
Fenestrated / branched technology

Limited high-volume Centers

Other options?



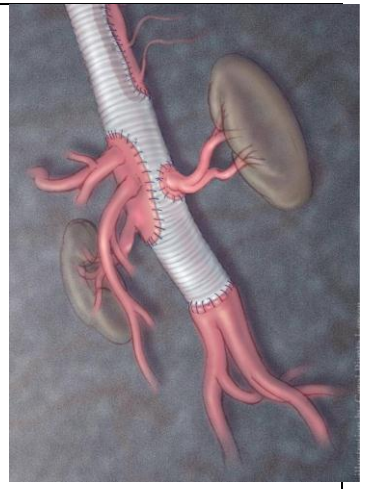
Hybrid repair



VERSUS OPEN

- No thoracotomy
- No Aortic clamping
- No LHBP / EC

?



VERSUS BRANCHED

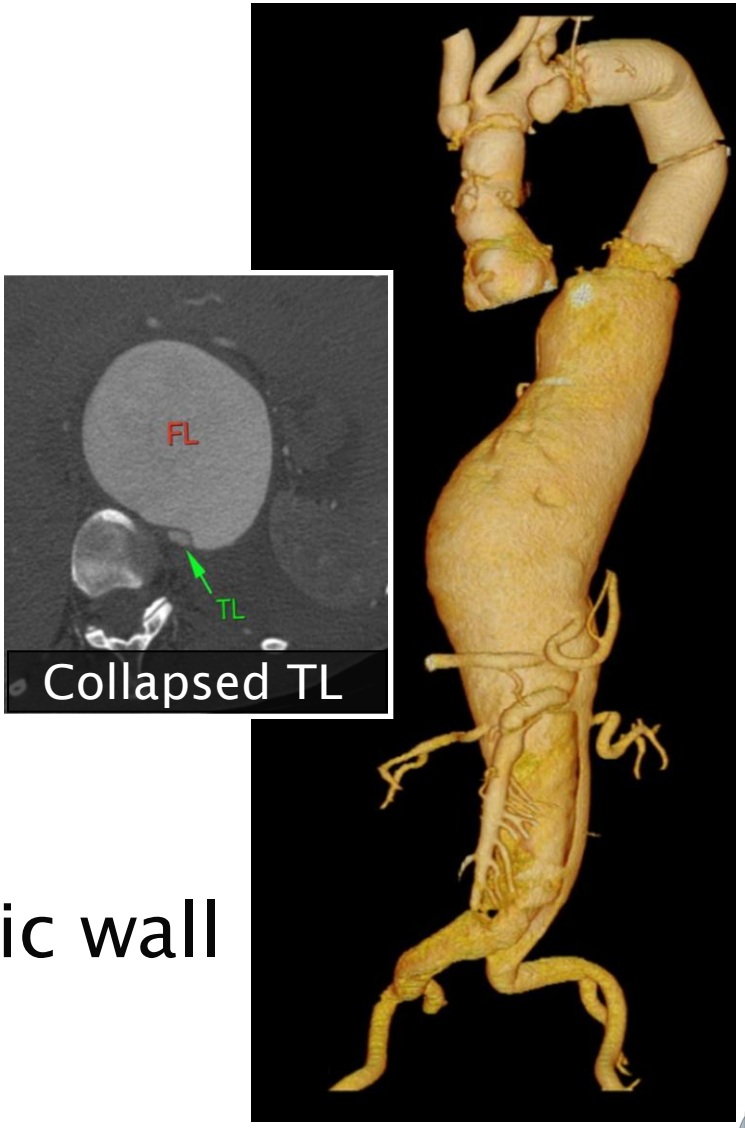
- Comm. available devices
- Easy planning
- ↓ X-rays

?

Hollier LH. J Endovasc Surg '98

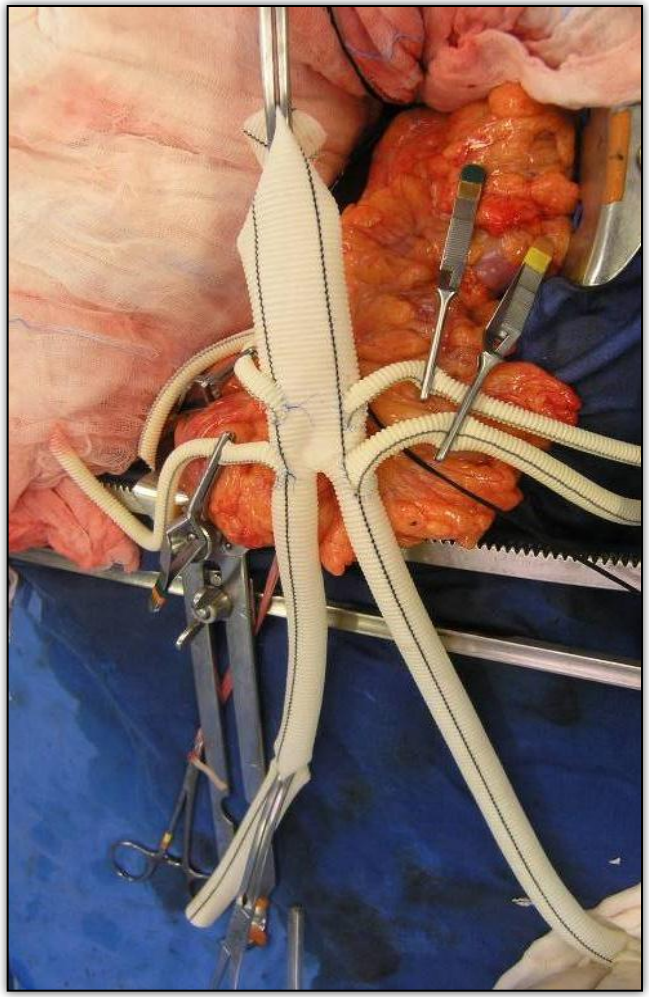
Clinical case: type II TAAA

- Marfan syndrome
- Enlarging residual type B dissection with pain
- Previous multiple thoracic aortic interventions
- "Frozen chest" with thoracic wall infection

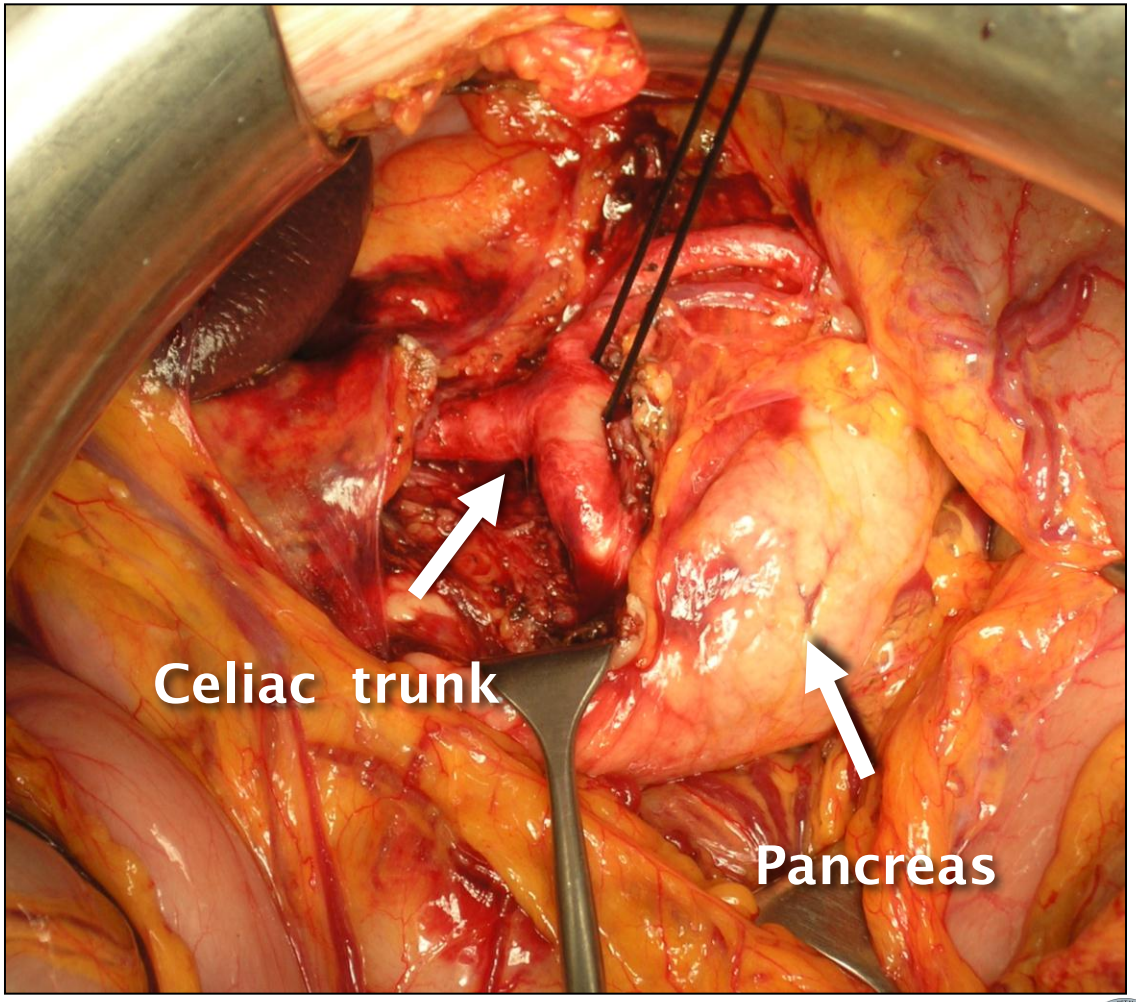


Step I: abdominal surgical access

Custom made graft

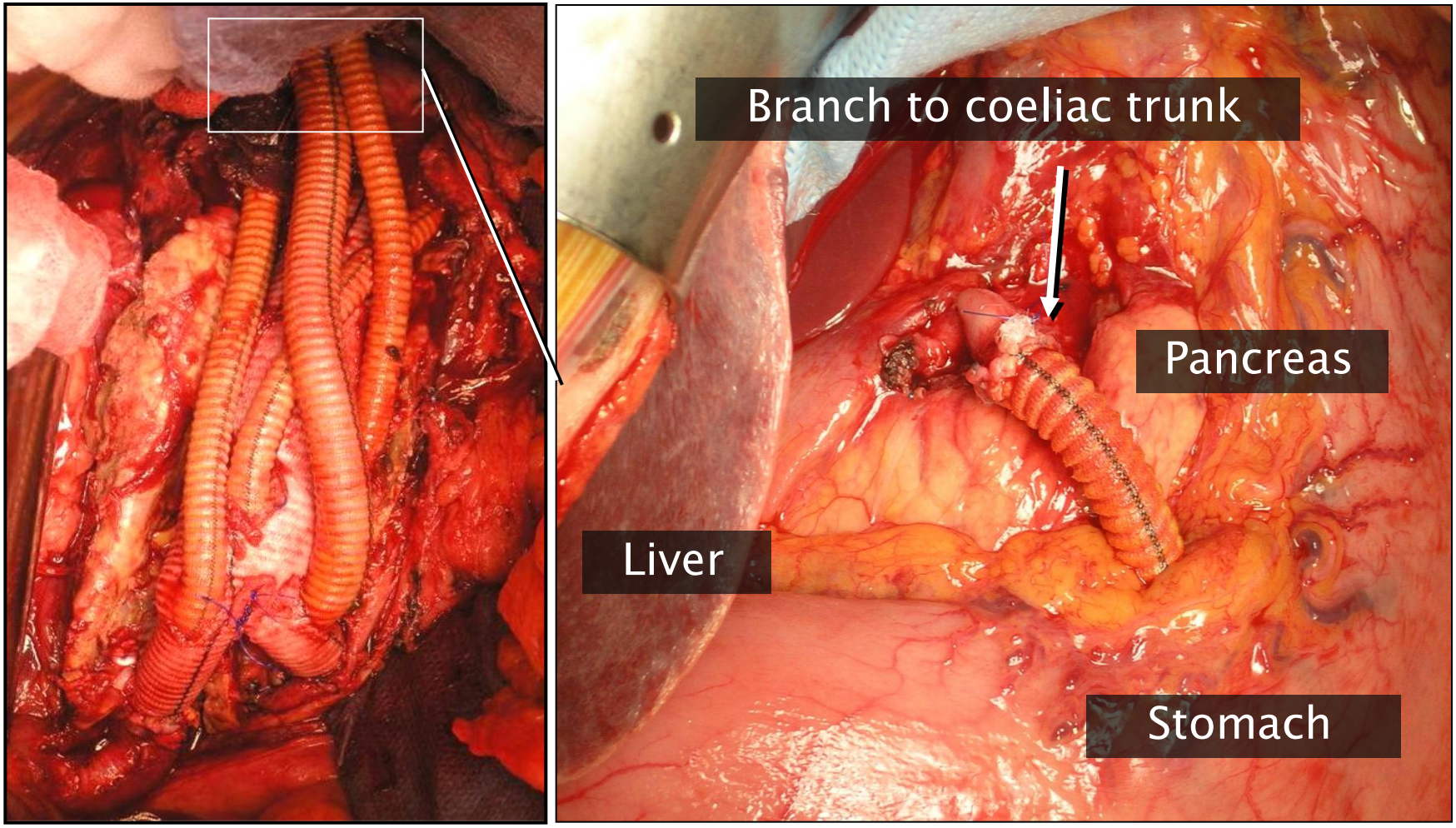


Trans-peritoneal vessels exposure



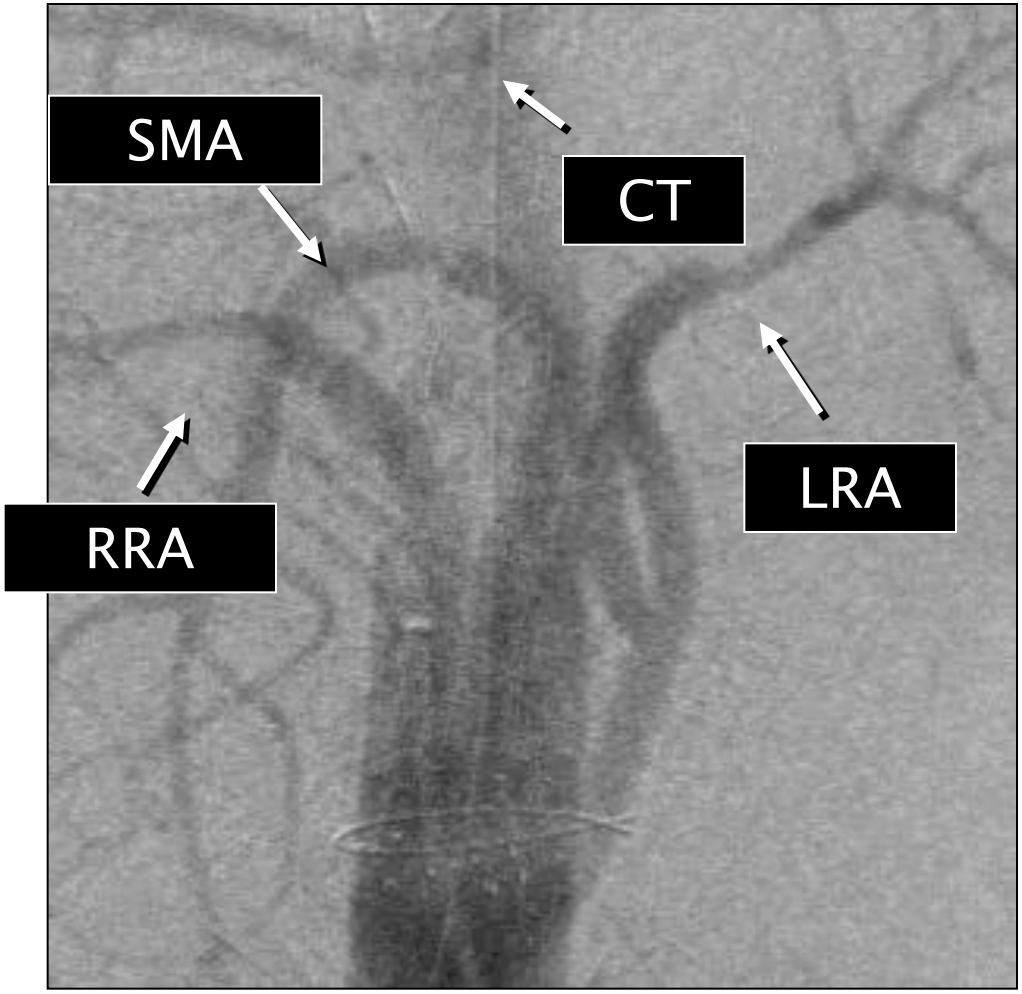
Step I: final results

Infrarenal aorto-bi-iliac repair + visceral debranching



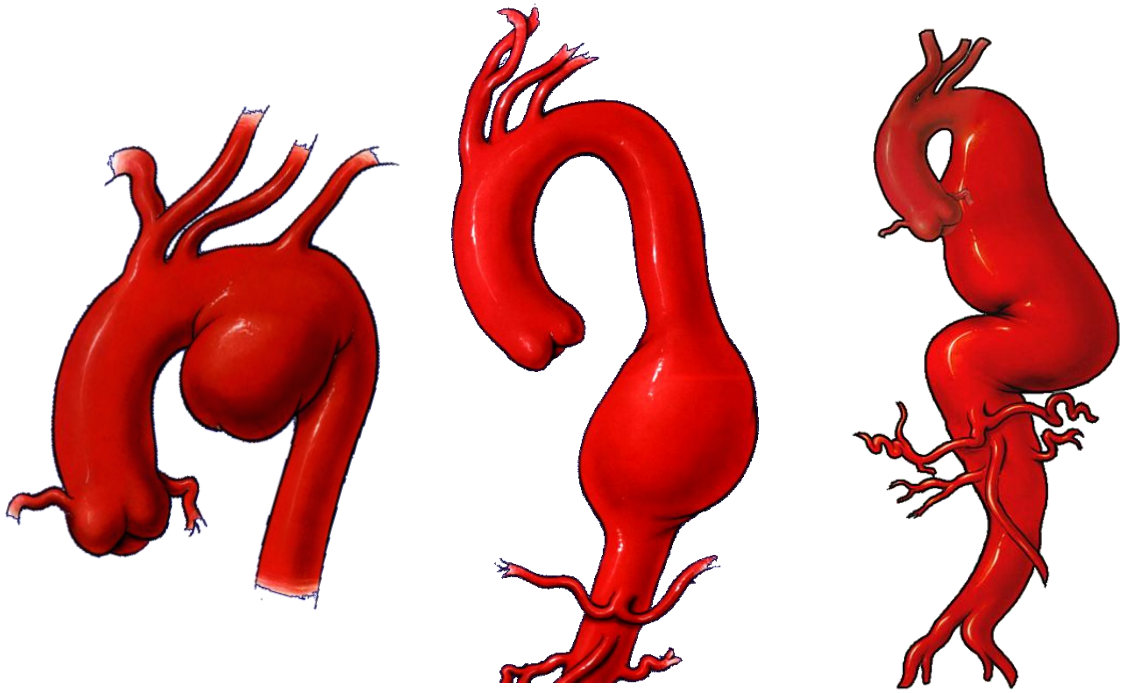
Step II: TAAA stent-graft repair

Quality check of visceral bypasses and TEVAR



HSR-Milan experience ('93-'12)

	Arch	DTA	TAAA
Open ('93-'12) (836 pts – 64.2%)			
TEVAR ('98-'12) (466 pts – 35.8%)			
Tot: 1302 pts	317	518	467



TAAA hybrid repair: 30-day results

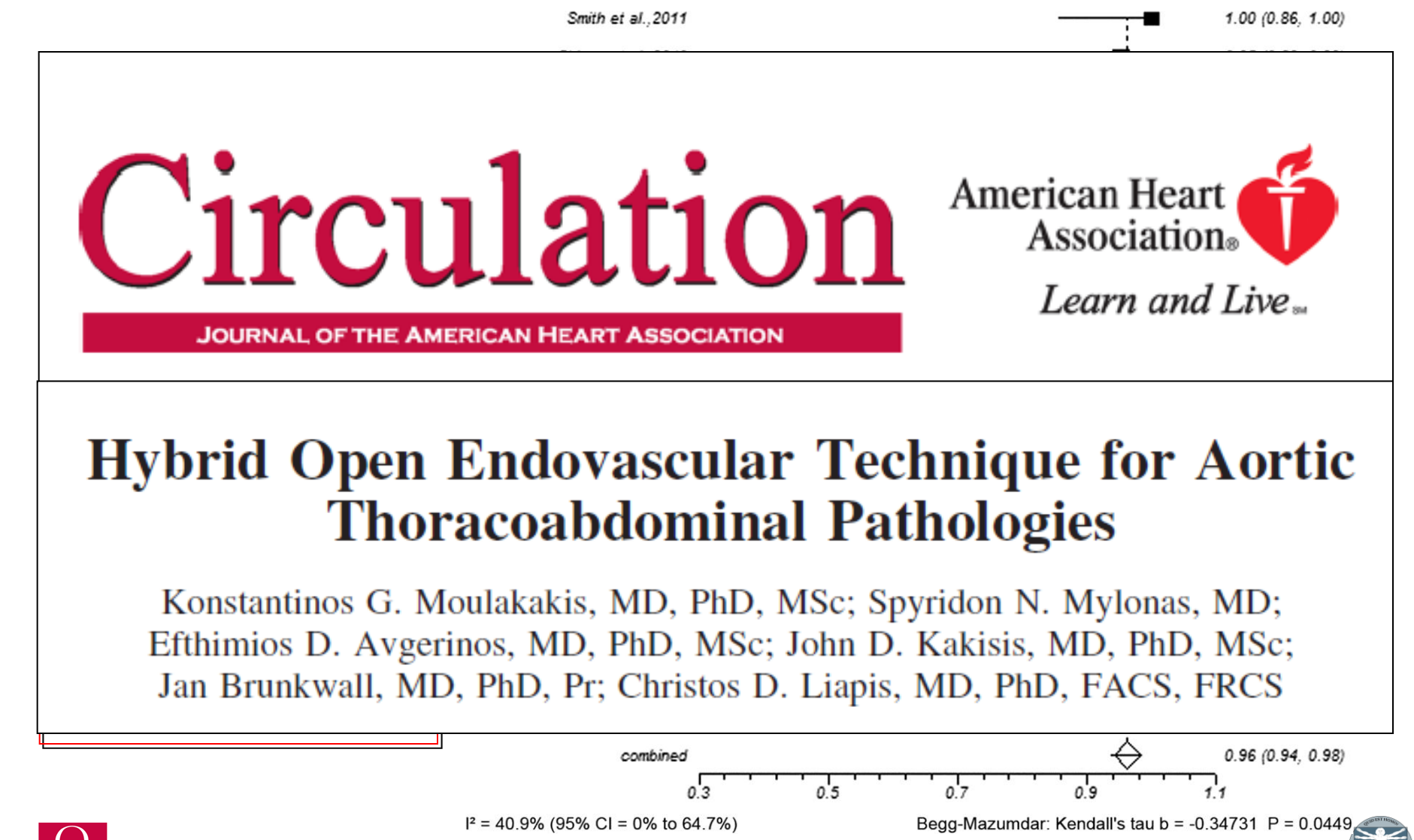
TAAA hybrid repair personal series (52 pts)	% (N)
Technical success	98.1 (51)
Mortality	13.4 (7)
Respiratory complications / MOF	3
AMI	2
DIC	1
Visceral graft occlusion	1
Complications	28.8 (15)
Renal failure	5
Pancreatitis	3
Respiratory failure	3
Transient paraparesis	2
Paraplegia	1
Dysphagia	1

TAAA hybrid repair: mid-term results
(Mean follow up 23.9±19 months)

TAAA hybrid repair personal series (52 pts)	% (N)
Related mortality	7.7 (4)
Visceral graft occlusion	1
Aortic rupture	3
Non-related mortality	11.5 (6)
AMI	4
Other	2
Complications	15.4 (8)
Endoleak / migration	4
Renal failure	2
Acute pancreatitis	1
Graft occlusion	6.2 (9/145)

TAAA hybrid repair

Metanalysis on 19 publications (507 patients)



Circulation

JOURNAL OF THE AMERICAN HEART ASSOCIATION

American Heart Association®

Learn and Live℠

Hybrid Open Endovascular Technique for Aortic Thoracoabdominal Pathologies

Konstantinos G. Moulakakis, MD, PhD, MSc; Spyridon N. Mylonas, MD; Efthimios D. Avgerinos, MD, PhD, MSc; John D. Kakisis, MD, PhD, MSc; Jan Brunkwall, MD, PhD, Pr; Christos D. Liapis, MD, PhD, FACS, FRCS

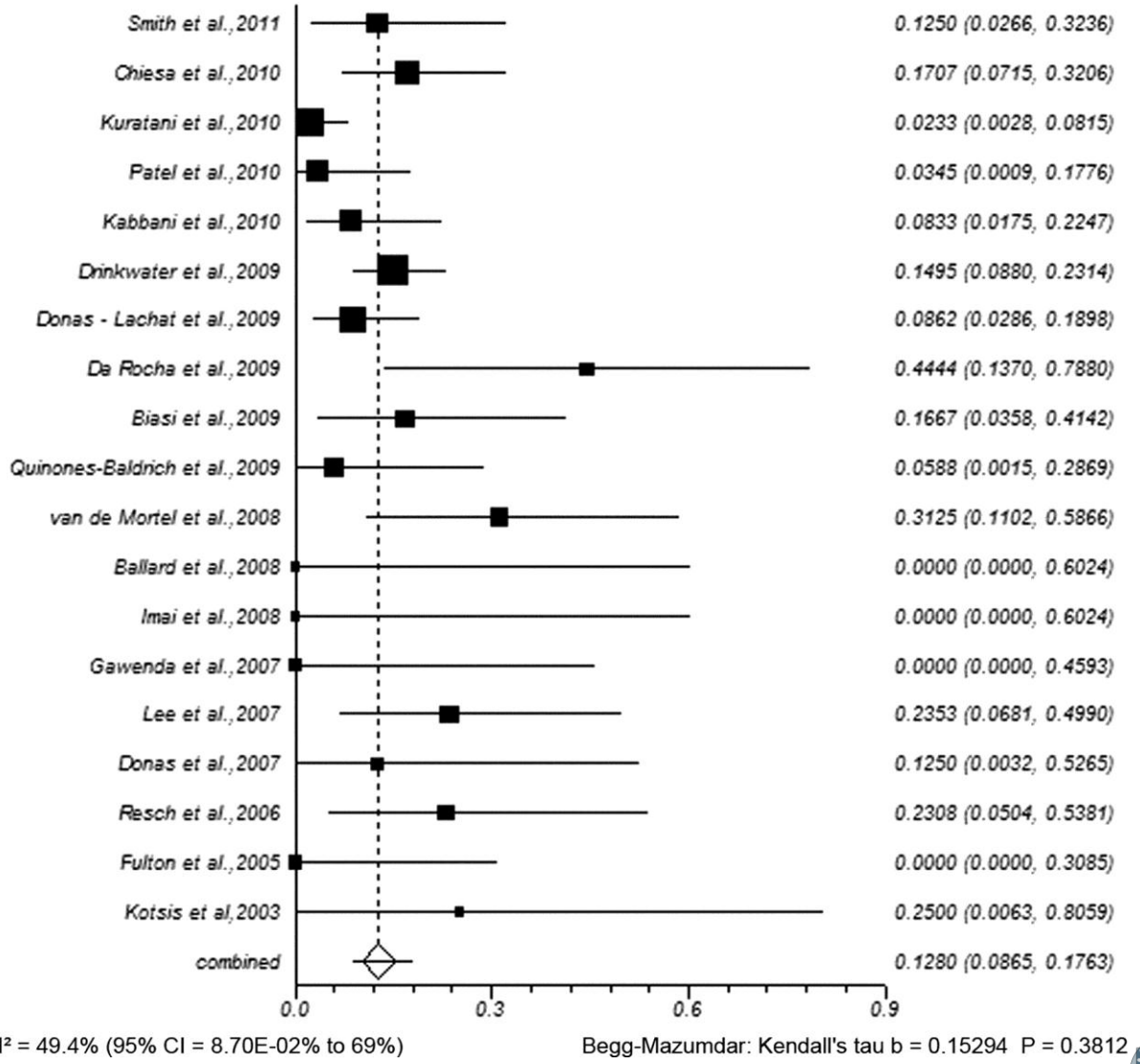
Moulakakis, Liapis et al., Circulation '11

TAAA hybrid repair

Metanalysis on 19 publications (507 patients)

30-day/
in hospital
mortality

12.8%



Moulakakis, Liapis et al., Circulation '11

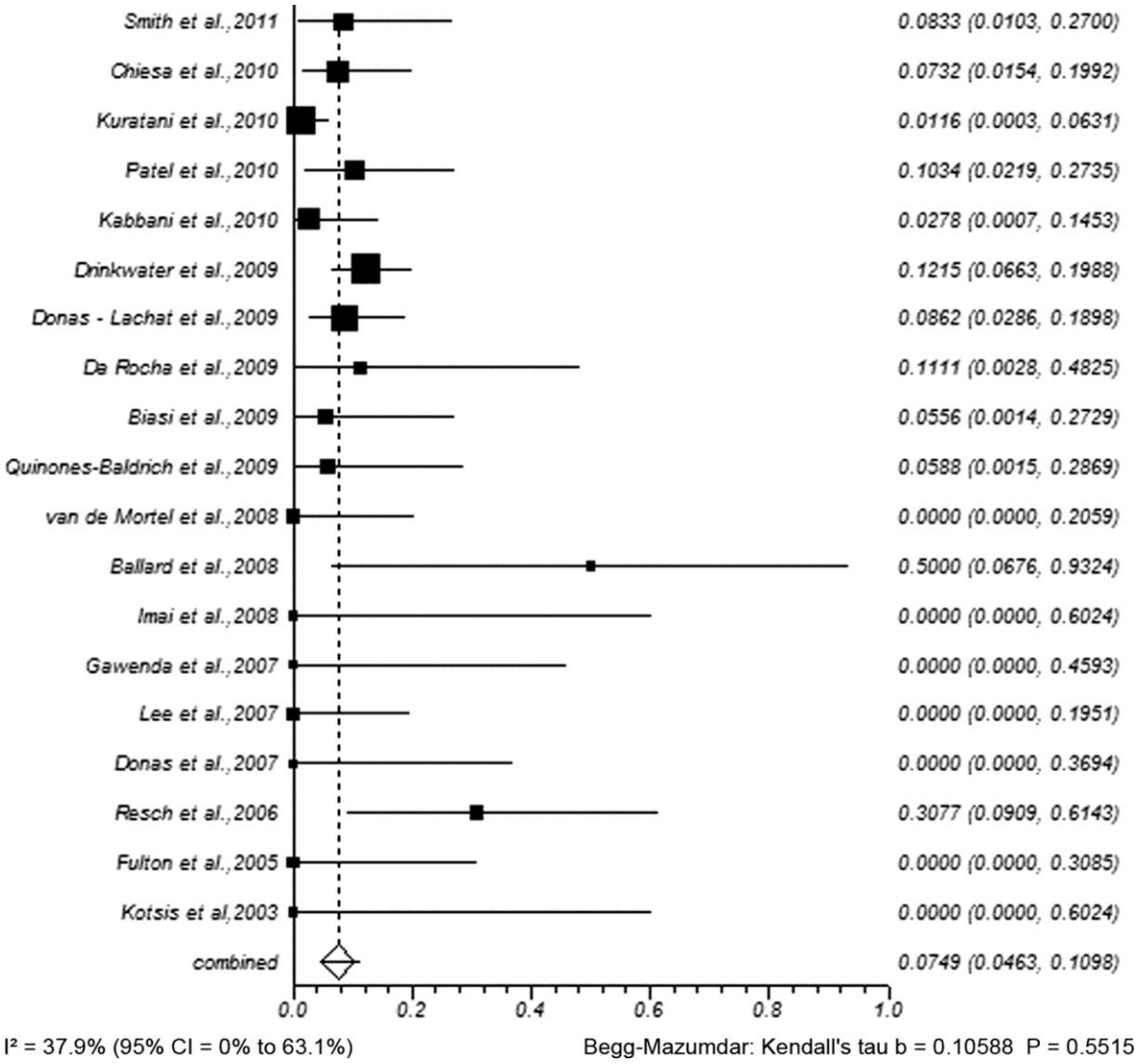
TAAA hybrid repair

Metanalysis on 19 publications (507 patients)

Spinal cord ischemia

7.5%

(Irreversible paraplegia: 4.5%)



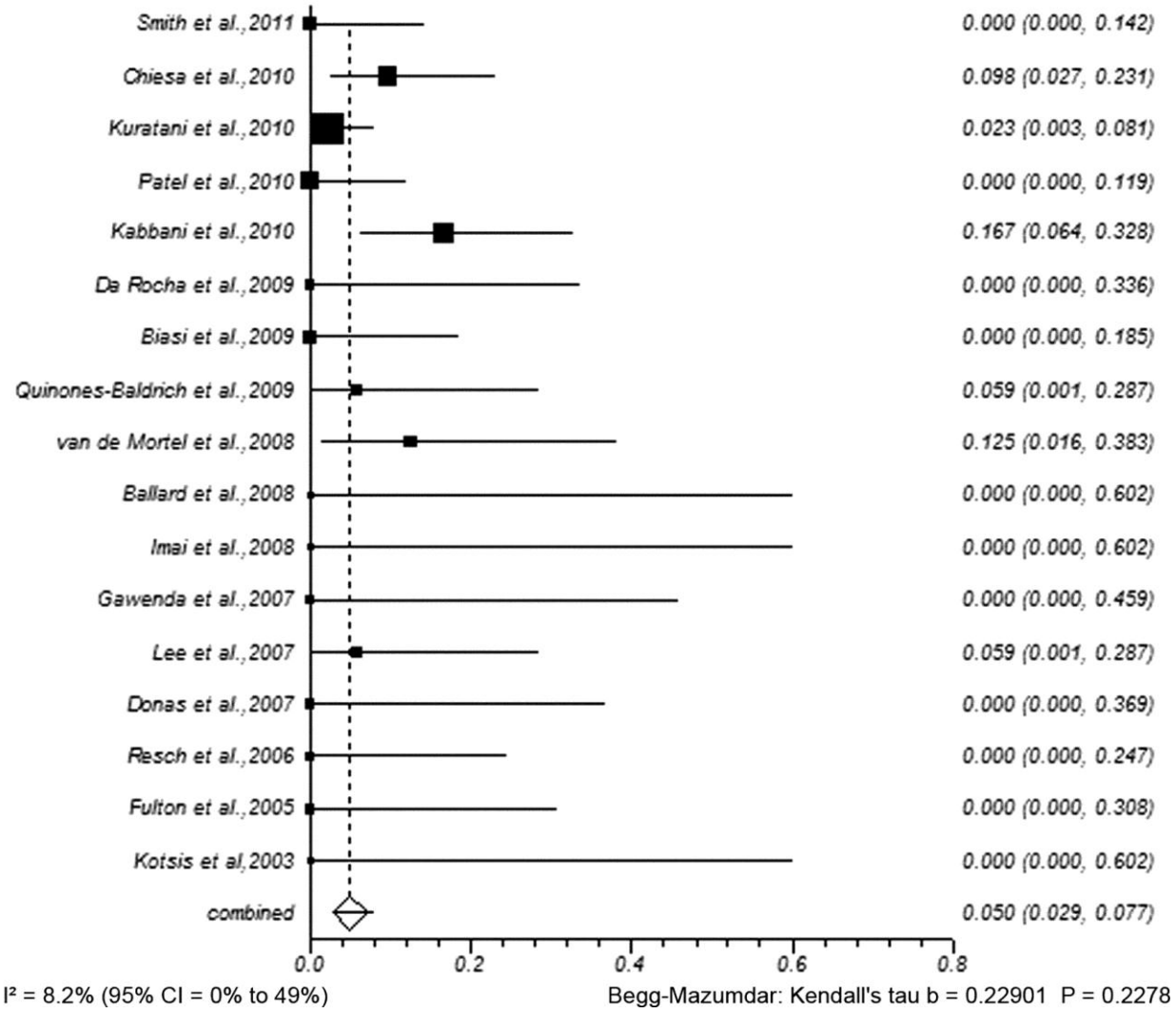
Moulakakis, Liapis et al., Circulation '11

TAAA hybrid repair

Metanalysis on 19 publications (507 patients)

Renal failure requiring hemodyalisis

8.8%




Texas Heart Institute, Houston TX
... even in the Mecca of open aortic repair...
ST. LUKE'S
ST. LUKE'S EPISCOPAL HOSPITAL

Texas Heart Institute, Houston TX

BCM Baylor College of Medicine
Division of Cardiothoracic Surgery
Michael E. DeBakey Department of Surgery
Baylor College of Medicine

Aortic Surgery IV: Aortic Dissection - Danny Chu, M.D., *Moderator*

3:21 - 3:39	**Hybrid Repair of Aortic Aneurysms and Dissections, Including Retrograde: The European Perspective** Roberto Chiesa, M.D.
3:40 - 3:58	**Why Do Dissections Occur?** Roy K. Greenberg, M.D.
4:00 - 4:18	**The 250-year Evolution of Aortic Dissection** Frank J. Criado, M.D.
4:20 - 4:38	**Aortic Dissection and Sports: Prevalence and Prevention** John A. Elefteriades, M.D.
4:40 - 4:54	**Panel Discussion / Feedback / Q&A** Danny Chu, M.D., *Moderator*
4:55 - 5:00	**Wrap-up and Adjourn** Joseph S. Coselli, M.D.

April 2011, with Dr Cooley, 90 yrs!!!

Houston experience (58 cases)

PERSPECTIVES IN VASCULAR SURGERY AND ENDOVASCULAR THERAPY

Clinical Outcome of Staged Versus Combined Treatment Approach of Hybrid Repair of Thoracoabdominal Aortic Aneurysm With Visceral Vessel Debranching and Aortic Endograft Exclusion

Peter H. Lin, MD[1], Panagiotis Kougias, MD[1], Carlos F. Bechara, MD[1], Sarah M. Weakley, MD[1], Faisal G. Bakaeen, MD[2], Scott A. LeMaire, MD[2], and Joseph S. Coselli, MD[2]

TAAA hybrid repair: state of the art

- Technical challenge

- Perioperative mortality higher than branched technology

- Not negligible spinal / renal complications

TAAA hybrid repair: state of the art

- Easier logistics and ↓ costs
- Possibility of staged strategy in more complex cases
- Theoretically very durable stent-grafts (straight tubes)

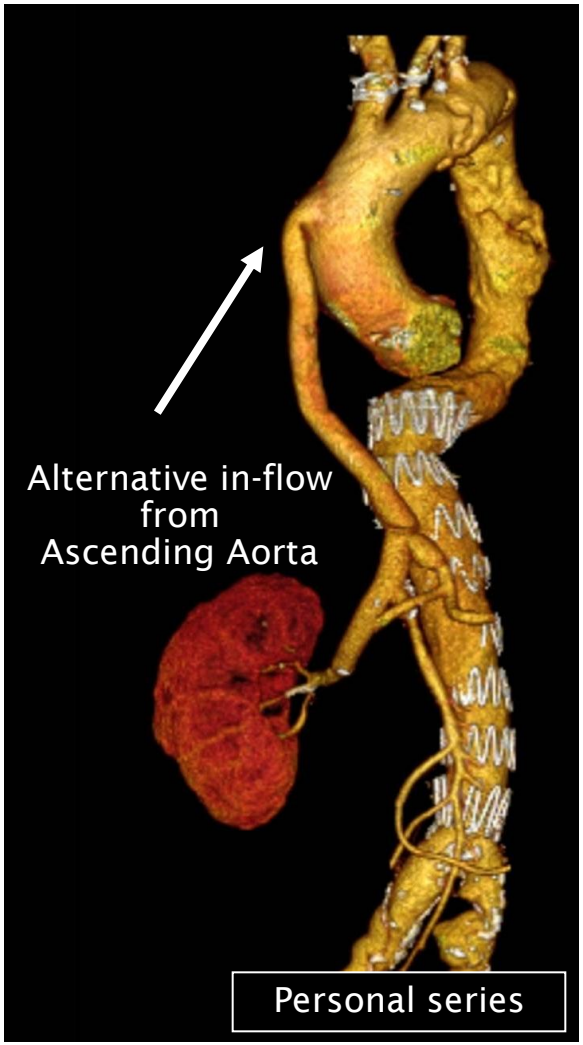
TAAA hybrid repair: indications

"Compassionate" pts. unfit

for branched and emergencies

only in highly skilled Centres

both for open and TEVAR



Milan, December 14th-15th