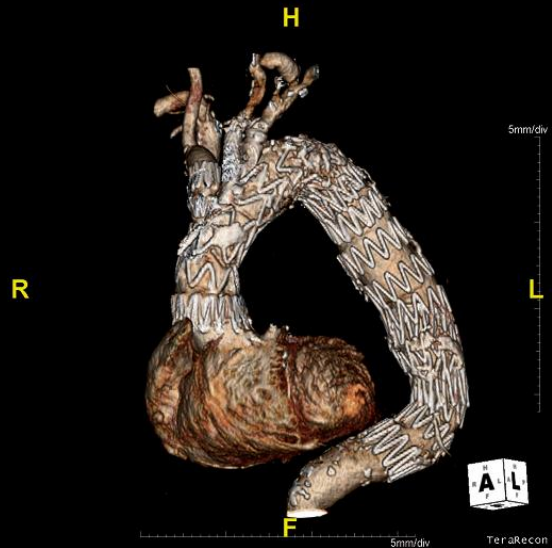


16<sup>TH</sup> INTERNATIONAL EXPERTS SYMPOSIUM  
**CRITICAL ISSUES**  
in aortic endografting 2012



**May 24 & 25**  
**LILLE, FRANCE**

**2012**

## Type B Dissections: are bare-metal stents needed?

J Sobocinski, NV Dias, L Berger,  
M Midulla, T Resch, B Maurel,  
R Azzaoui, S Haulon  
Lille University Hospital, France

# Disclosure

No conflict of interest



# Acute & Complicated type B AD

## Treatment endpoints

- To restore aortic flow to the true lumen
  - Malperfusion
  - Rupture
- To promote aortic remodeling
  - Primary entry tear exclusion
  - False lumen thrombosis
  - True lumen expansion

# Open repair

**30d mortality =**

**34%** Fattori et al, JACC Cardiovasc Interv 2008

**27%** Umana JP et al Ann Thorac Surg 2002



**ENDOASCULAR STENT-GRAFT PLACEMENT FOR THE TREATMENT OF  
ACUTE AORTIC DISSECTION**

MICHAEL D. DAKE, M.D., NORIYUKI KATO, M.D., R. SCOTT MITCHELL, M.D., CHARLES P. SEMBA, M.D.,  
MAHMOOD K. RAZAVI, M.D., TAKATSUGU SHIMONO, M.D., TADANORI HIRANO, M.D., KAN TAKEDA, M.D., ISAO YADA, M.D.,  
AND D. CRAIG MILLER, M.D.

**N Engl J Med 1999;340:1546-52**

**NONSURGICAL RECONSTRUCTION OF THORACIC AORTIC DISSECTION  
BY STENT-GRAFT PLACEMENT**

CHRISTOPH A. NIENABER, M.D., ROSSELLA FATTORI, M.D., GUNNAR LUND, M.D., CHRISTOPH DIECKMANN, M.D.,  
WALTER WOLF, M.D., YSKERT VON KODOLITSCH, M.D., VOLKMAR NICOLAS, M.D., AND ANGELO PIERANGELI, M.D.

**N Engl J Med 1999;340:1539-45**

# Acute complicated type B AD

→ endograft exclusion of the Proximal Entry Tear

Authors	Year	n	Malperfusion at initial time	FU (months)	In-Hospital mortality	1Y-S
Böckler	2006	15	-	24	19%	62%
Verhoye	2007	16	44%	-	25%	73%
Jing	2008	32	22%	17	-	-
Sayer	2008	38	20%	-	2,6%	-
Cambria	2009	19	37%	-	16%	79%
Zeeshan	2010	45	76%	37	4%	82%
Ehrlich	2010	32	69%	22	12%	81%
Steuer	2011	50	<58%	44	3%	94%
White*	2011	99	72%	-	11%	71%
Yang	2012	33	-	22	6%	78%

# Staged endovascular treatment for complicated type B aortic dissection

Peter J Mossop\*, Craig S McLachlan, Shalini A Amukotuwa and Ian K Nixon



Nat Clin Pract Cardiovasc  
Med 2005;2:316



# Evaluation of a new disease-specific endovascular device for type B aortic dissection

Germano Melissano, MD, Luca Bertoglio, MD, Andrea Kahlberg, MD, Domenico Baccellieri, MD, Massimiliano M. Marrocco-Trischitta, MD, Fabio Calliari, MD, and Roberto Chiesa, MD

**J Thorac Cardiovasc Surg 2008; 136: 1012-8**

→ in chronic type B AD

**11 patients / median FU=11 months**

At thoracic level:

FL thrombosis 100%

FL shrinkage 44%

At dissection stent level:

No FL thrombosis

No FL shrinkage

Median TL reexpansion = 5mm



# Prospective multicenter clinical trial (STABLE) on the endovascular treatment of complicated type B aortic dissection using a composite device design

Joseph V. Lombardi, MD,<sup>a</sup> Richard P. Cambria, MD,<sup>b</sup> Christoph A. Nienaber, MD,<sup>c</sup> Roberto Chiesa, MD,<sup>d</sup> Omke Teebken, MD, PhD,<sup>e</sup> Anthony Lee, MD,<sup>f</sup> Peter Mossop, MD,<sup>g</sup> and Priya Bharadwaj, PhD,<sup>h</sup> on behalf of the STABLE investigators, *Camden, NJ; Boston, Mass; Milan, Italy; Rostock and Hannover, Germany; Boca Raton, Fla; Fitzroy, Victoria, Australia; and West Lafayette, Ind*

**JVS 2012; 55: 629**

# Inclusion Criteria

- Type B Aortic dissection
- Acute (<3 months)
- Complicated
  - Impending rupture or periaortic effusion
  - Malperfusion (visceral, renal, or limb ischemia)
  - Resistant hypertension
  - Persistent pain/symptoms
  - Max transAortic diameter  $\geq 40$ mm or
  - Aortic growth  $\geq 5$ mm within 3 months

# Lille-Malmö-Caen 2012

## Acute + Complicated

- Retrospective database
- Same Inclusion Criteria as STABLE
- Proximal intimal tear exclusion by thoracic endograft



	STABLE	Lille Caen Malmö
n	40	68
median FU		24 months
Complete FU imaging at 1 Year	33/40	47/68
Malperfusion(s) at initial time	67%	43%
Impending rupture	20%	25%

	STABLE	Lille Caen Malmö
30d Mortality	5%	7%
1-year Survival (Kaplan Meier)	90%	91%
Reintervention Rate within 1 year	10%	3%

False lumen status	STABLE Lille Malmö Caen Thoracic		STABLE Lille Malmö Caen Abdominal	
<b>Preprocedure CTscan</b>				
Completely thrombosed	0	4,6%	0	4,6%
Partially thrombosed	61,5%	35,4%	35,0%	15,4%
Patent	38,5%	60,0%	62,5%	54,0%
Not applicable	0	0	2,5%	26,0%
<b>1-Year CTscan</b>				
Completely thrombosed	31,0%	77,0%	3,1%	21,3%
Partially thrombosed	69,0%	19,0%	81,3%	27,7%
Patent	0	2,0%	15,6%	19,1%
Not applicable	0	2,0%	0	32,0%

	STABLE	Lille	Malmö	Caen	vs
<b>within 1 year</b>					
Change in transaortic thoracic diameter					p ns
TL expansion in the DTA					p=0,74
FL shrinkage in the DTA					p<0,05
Change in the area of the DTA					p ns



DTA Diameter variation over 12 months	
stable (within 5mm)	45%
enlargement	23%
regression	32%



# Conclusion



- ❖ Acute complicated type b AD
  - Endograft treatment for the exclusion of the primary entry tear
- ❖ Bare metal stents: for all patients?
  - Need for larger cohort of patients and more follow-up