


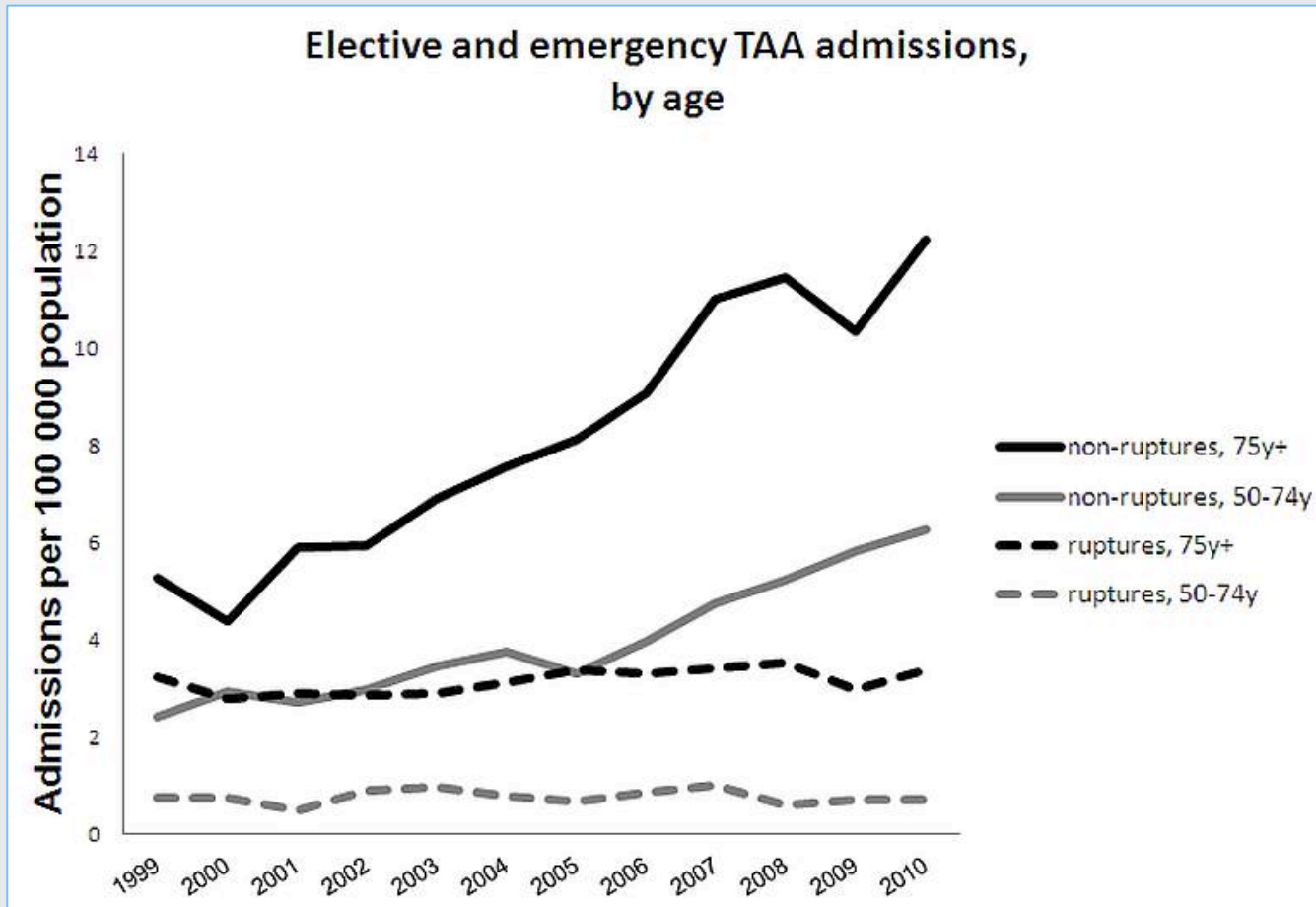
Tips and tricks for branched arch endografting

The aortic programme 2016

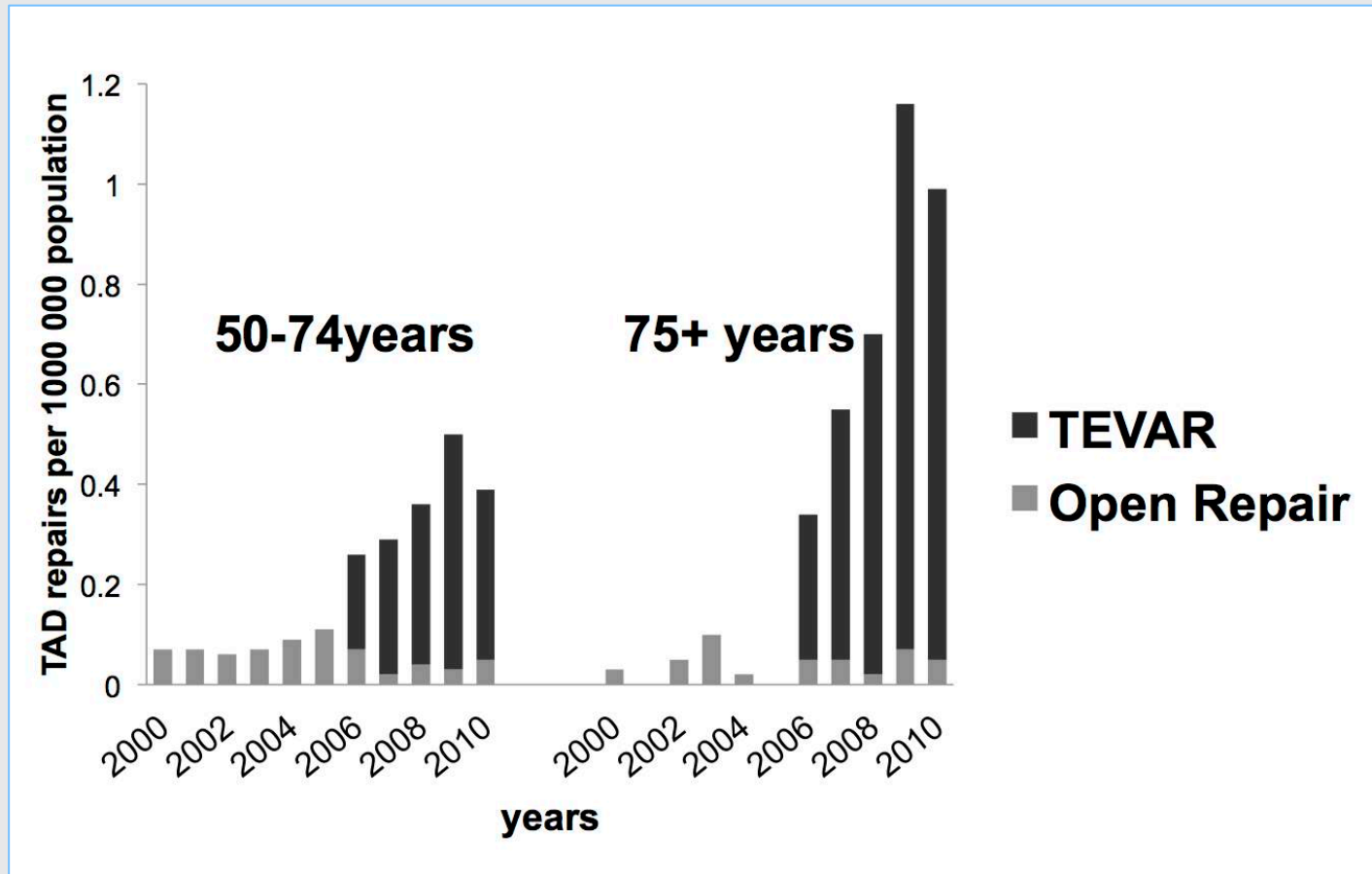


Type of surgery	Volume
Root/ ascending (including David)	77
Ascending/ hemiarch	132
Total arch (including FET)	38
TEVAR (including aortic arch)	46
EVAR	74
AAA classical surgery	93
TAAA classical surgery	21
Other	14
Total	495

Thoracic aortic pathology- admissions



Thoracic aortic pathology- repairs



Options

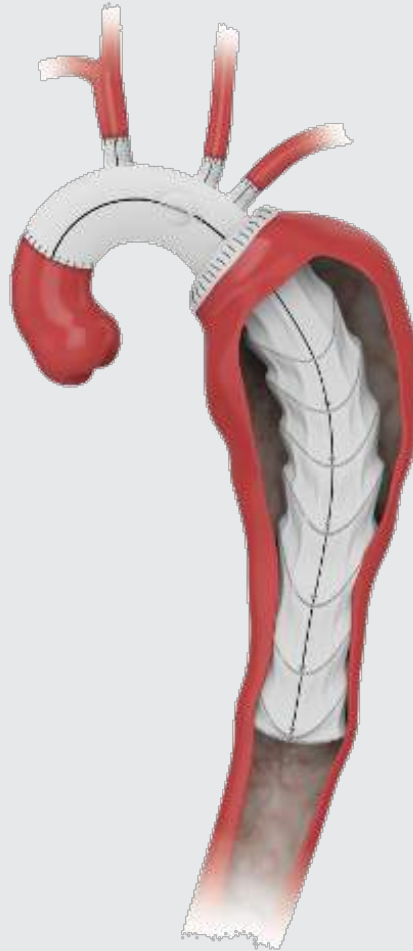


A- Classical surgery/ FET

B- Supraaortic transpositions

C- Branched endovascular aortic arch repair

The frozen elephant trunk technique



Shrestha EJCTS 2015
Czerny EJCTS 2017
Kreibich EJCTS in press

Options

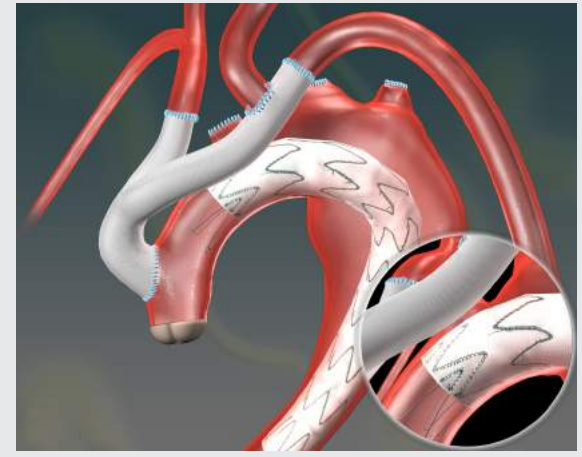
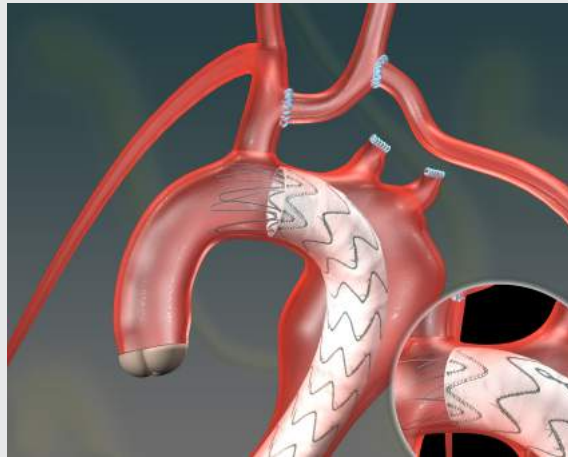
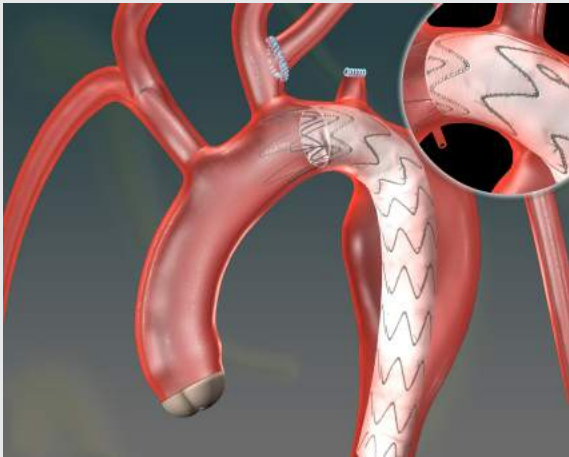
▶ A- Classical surgery/ FET

B- Supraaortic transpositions

C- Branched endovascular aortic arch repair

Supraaortic transpositions

▶ Transposition of one, two or three supraaortic vessels for landing zone extension before TEVAR



Gottardi ATS 2008
Czerny JTCVS 2013

Options



A- Classical surgery/ FET

B- Supraaortic transpositions

C- Branched endovascular aortic arch repair

Branched endografts

Haulon et al

Evolving Technology/Basic Science

Global experience with an inner branched arch endograft

Stéphan Haulon, MD, PhD,^a Roy K. Greenberg, MD,^b Rafaëlle Spear, MD,^a Matt Eagleton, MD,^b Cherrie Abraham, MD,^c Christos Lioupis, MD,^c Eric Verhoeven, MD, PhD,^d Krassi Ivancev, MD,^e Tilo Kölbel, MD, PhD,^f Brendan Stanley, MD,^g Timothy Resch, MD,^h Pascal Desgranges, MD, PhD,ⁱ Blandine Maurel, MD,^a Blayne Roeder, PhD,^j Timothy Chuter, MD,^k and Tara Mastracci, MD^b

2009-2013

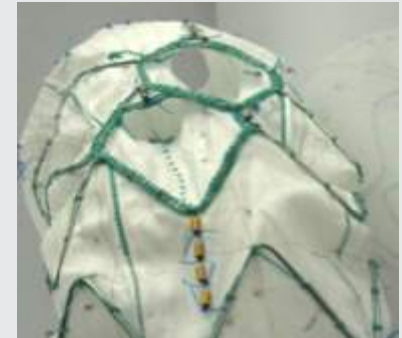
Multicenter Study

n = 38

Technical success 32/38

Mortality 5/38 (13%)

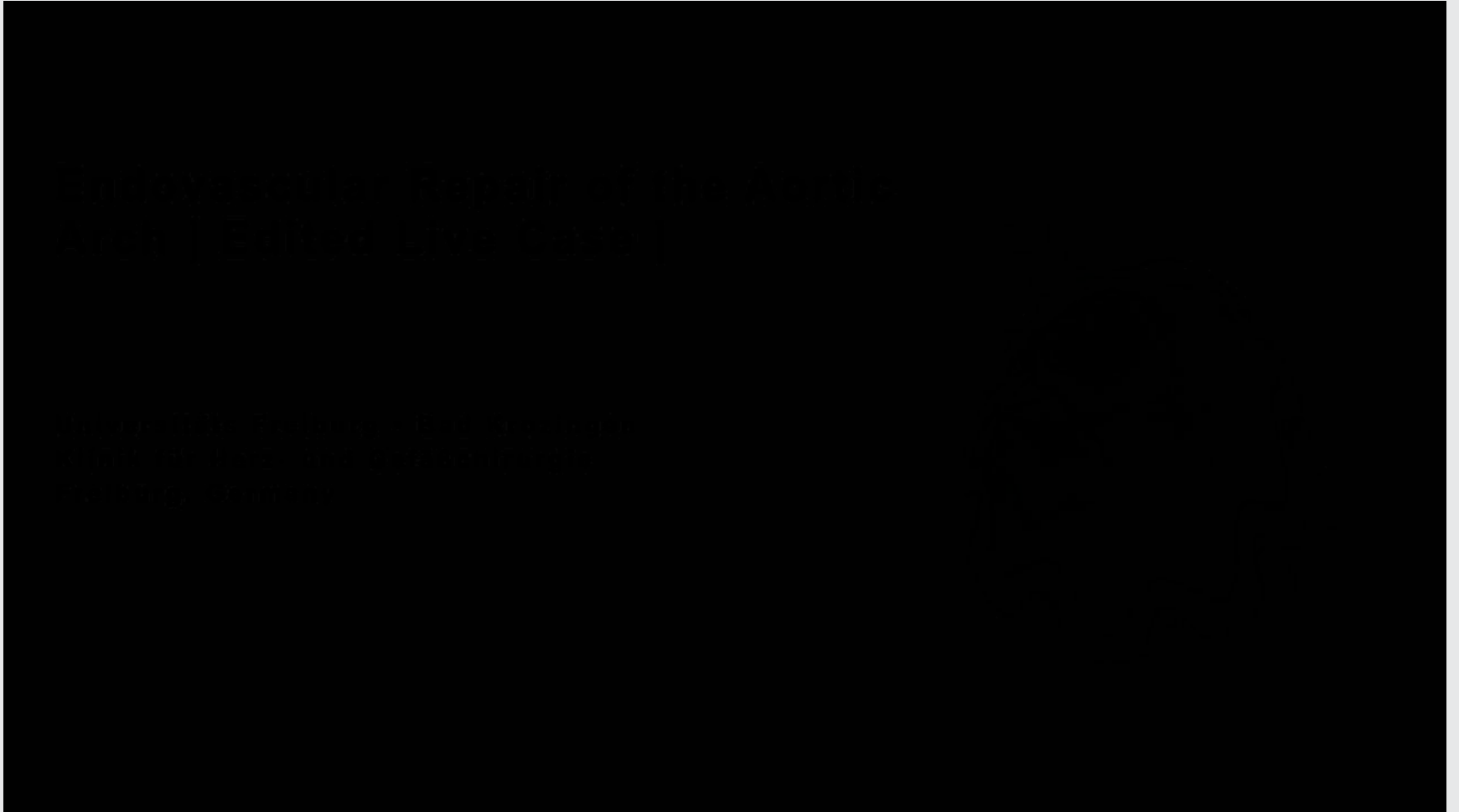
Stroke/TIA 6/38 (16%)



Branched endografts



Future concepts already available



Demographics


Parameters	N=15
Demographics	
Age, years	76 (74; 82)
Male gender	12 (80%)
Chronic health conditions and risk factors	
Chronic obstructive pulmonary disease	7 (47)
Diabetes	0 (0)
Renal insufficiency	4 (27)
Coronary artery disease	6 (40)
Left ventricular dysfunction	3 (20)
Previous coronary bypass surgery	1 (7)
Previous aortic valve replacement	1 (7)
Previous aortic surgery	9 (60)
Atrial fibrillation	4 (27)
Euro score I (numeric)	8 (5; 11)
Euro score I (logistic), %	13.6 (4.2; 22.8)
Euro score II, %	2.9 (1.7; 4.0)

Morphology



Parameters	N=15
Beginning of lesion	
Zone 1, n (%)	4 (27)
Zone 2, n (%)	7 (47)
Zone 3, n (%)	4 (27)
End of lesion	
Zone 2, n (%)	1 (7)
Zone 3, n (%)	6 (40)
Zone 4, n (%)	8 (53)
Ascending aorta	
Diameter	38 (37; 39)
Length	82 (80; 88)
Innominate artery	
Diameter	15 (14; 18)
Length	39 (36; 45)
Left common carotid artery diameter	8 (7; 10)
Common innominate and left common carotid artery orifice	1 (7)
Isolated vertebral artery offspring	2 (13)

Outcome



Parameters	N=15
Early Endoleaks	
Type I and III	1 (7)
Type II	1 (7)
Late Endoleaks	
Type I and III	0 (0)
Type II	1 (7)
Follow-up	
Follow-up time, days	263 (84; 564)
ICU stay, days	4 (1; 8)
In-hospital stay, days	14 (9; 18)
In-hospital mortality	1 (7)
Disabling stroke	1 (7)
Aortic related death during follow-up	0
All-cause death at follow-up	4 (27)

Czerny EJCTS in press

Summary

▶ Branched endovascular aortic arch repair is a safe and reproducible technique

Primarily for non surgical candidates

Mortality and stroke rates are low, aortic-related survival is excellent

Likely to reduce the need for combined vascular and endovascular procedures

Further studies needed