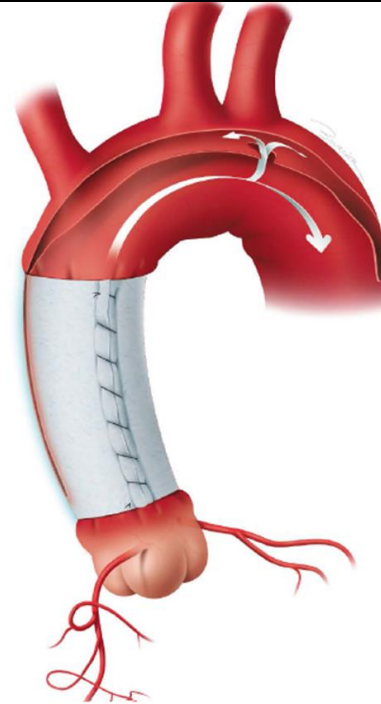
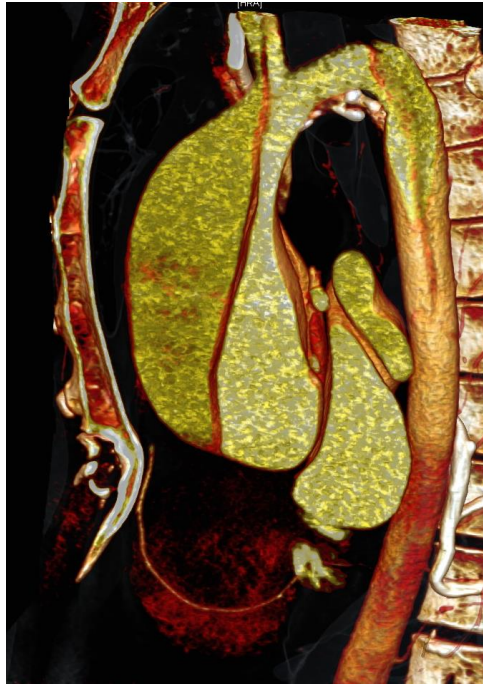


Off Pump Wrapping in Acute Type A Aortic Dissection



Ramzi Ramadan, Alexandre Azmoun, Maïra Gaillard, Julien Guihaire, Philippe Deleuze

Adult Cardiac Surgery, Marie Lannelongue Hospital

University of Paris Sud - France



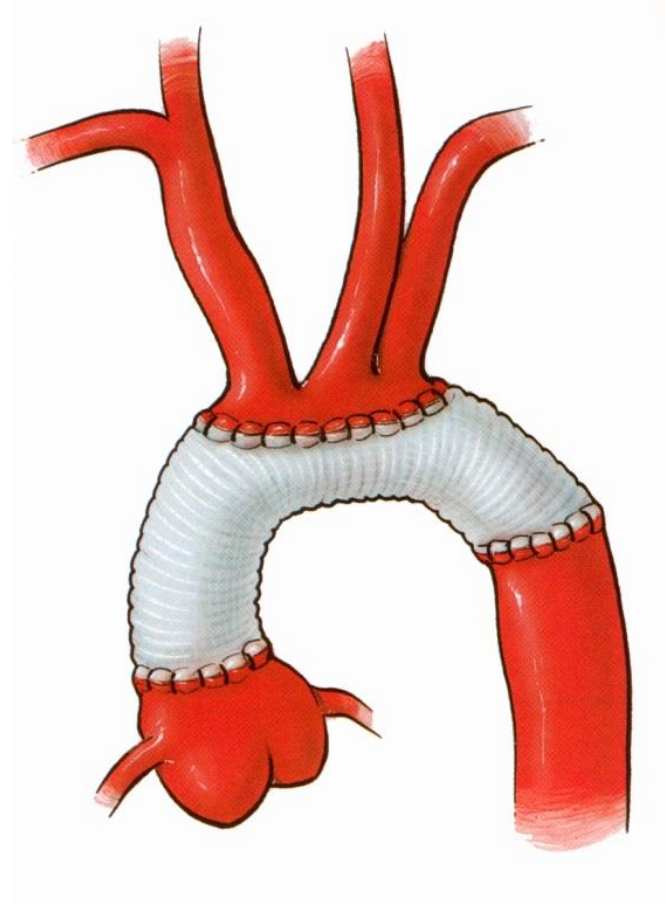
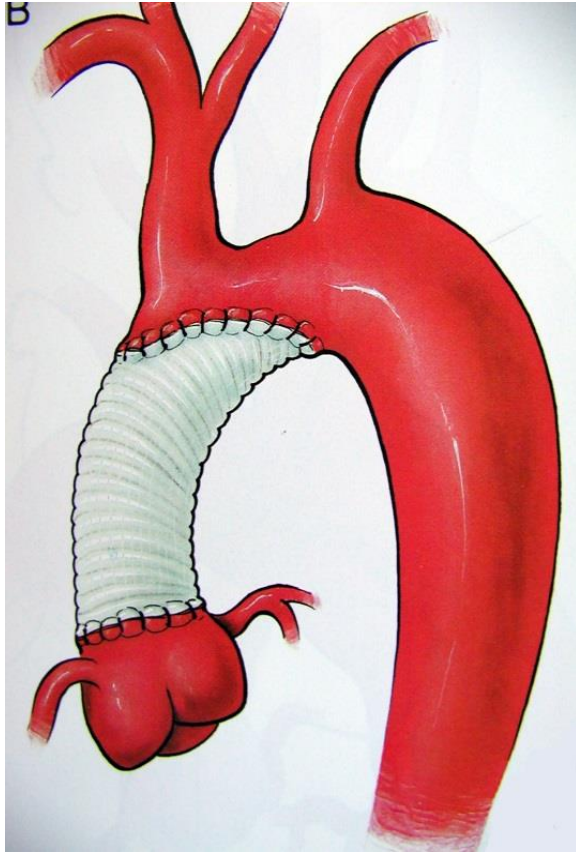
Marie Lannelongue

Acute Type A Aortic Dissection (Background)

- Surgical emergency
- Conventional surgical Tt carries high morbi-mortality
- **Patient's age is a significant and independent risk factor for in-hospital mortality (IRAD)**
- Conservative treatment is associated with poor outcomes due to the risk of aortic rupture



Surgical Treatment



Role of age in acute type A aortic dissection outcome: Report from the International Registry of Acute Aortic Dissection (IRAD)

The Journal of Thoracic and Cardiovascular Surgery • October 2010

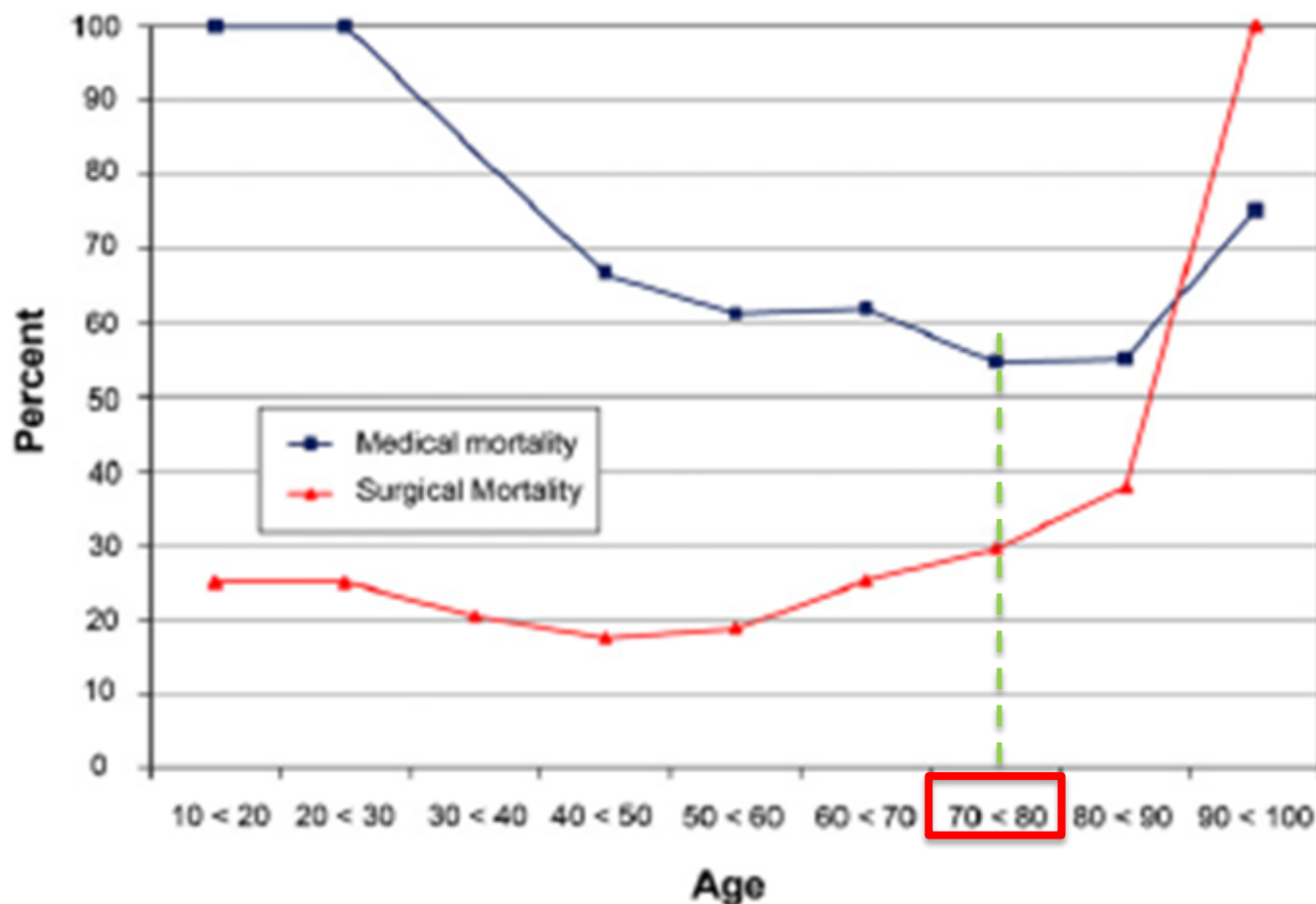
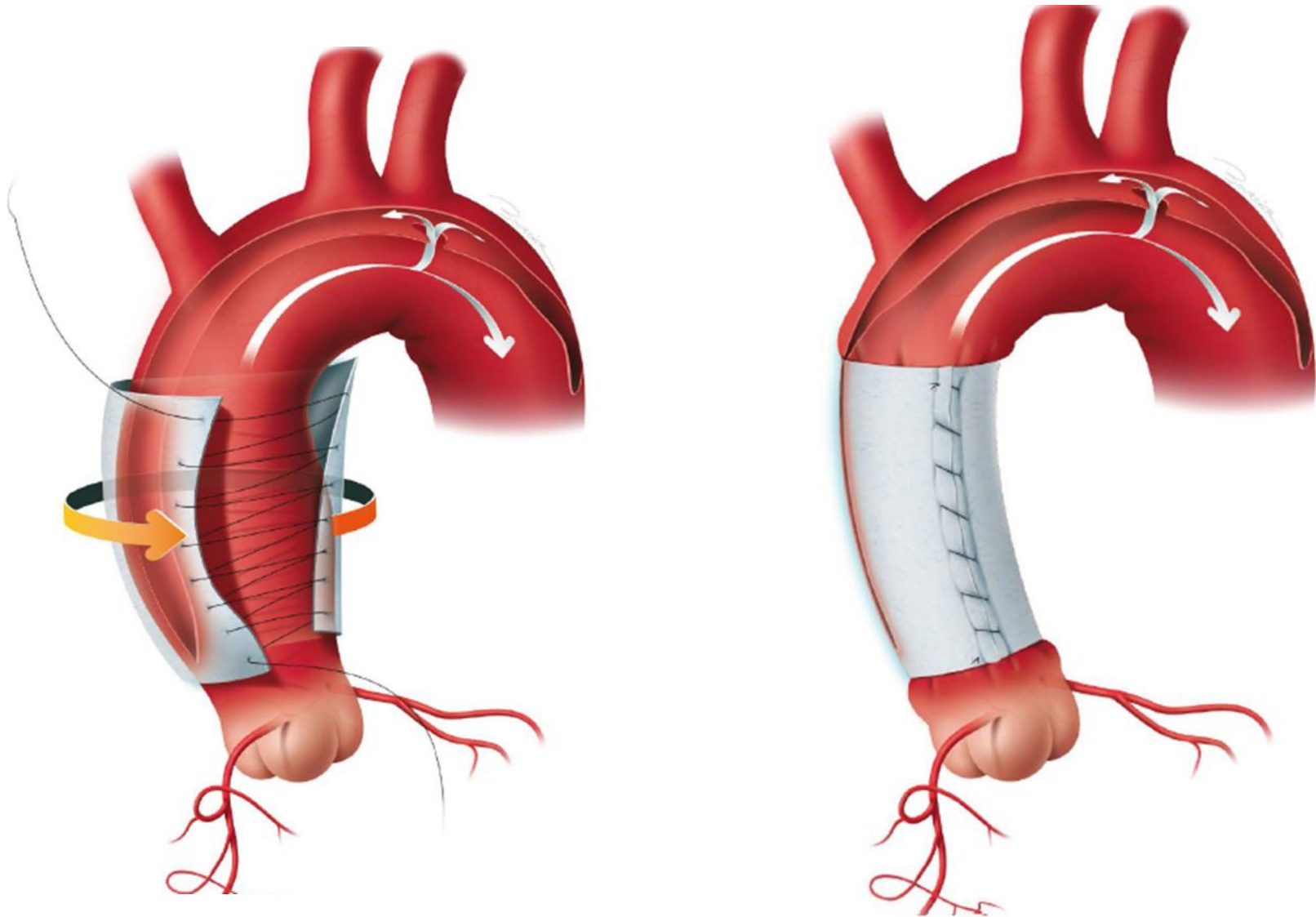


FIGURE 3. In-hospital mortality of AAD categorized by age and management type.



Ma

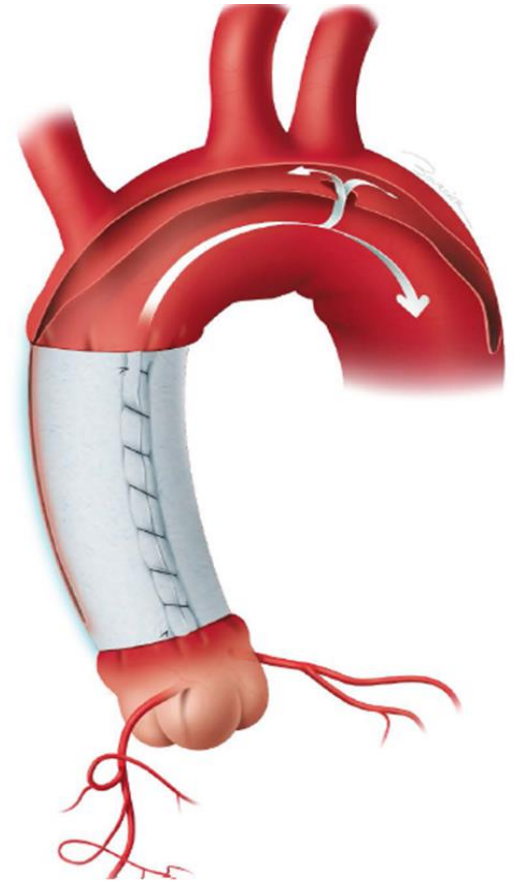
Alternative approach: off pump wrapping



Wrapping of the Ascending Aorta in Acute Type A Aortic Dissection :

→ Avoid :

- **intra pericardial aortic rupture**
- **complications of extensive aortic replacement.**

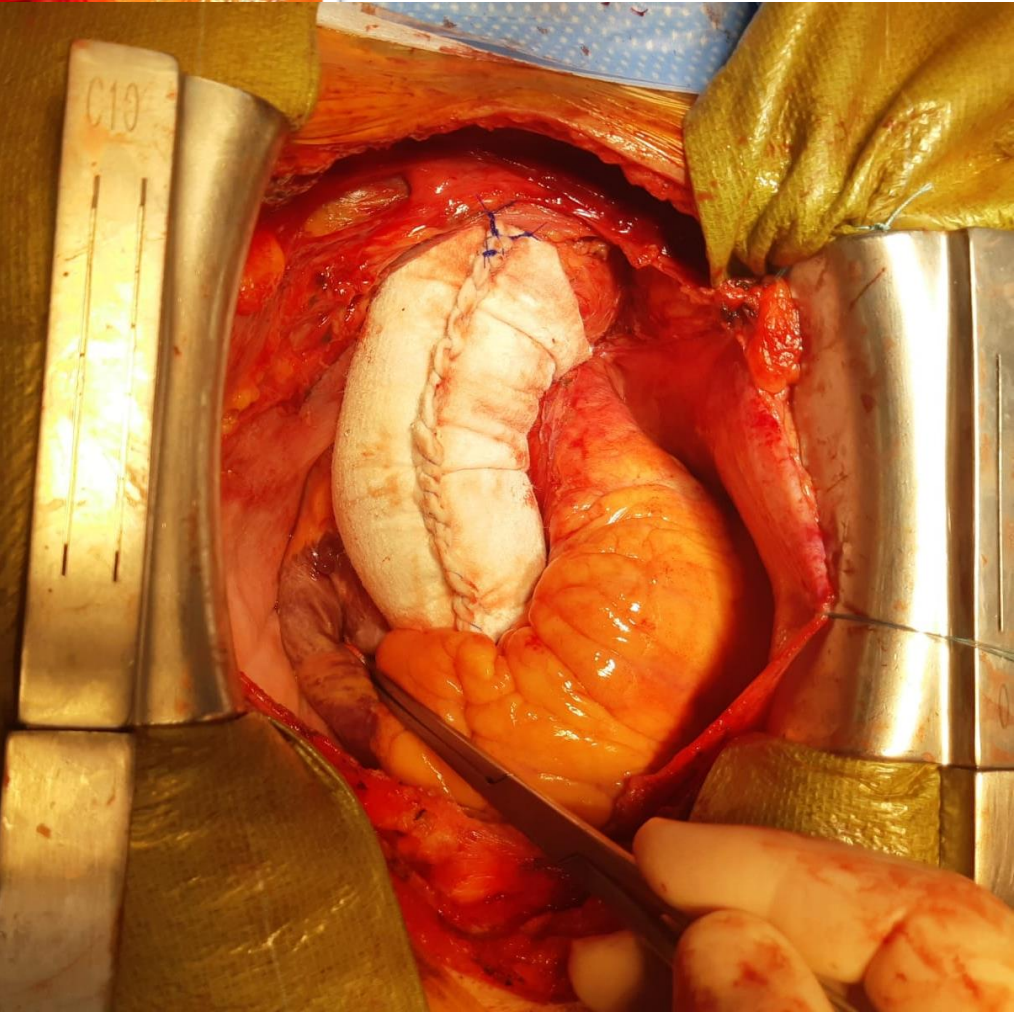
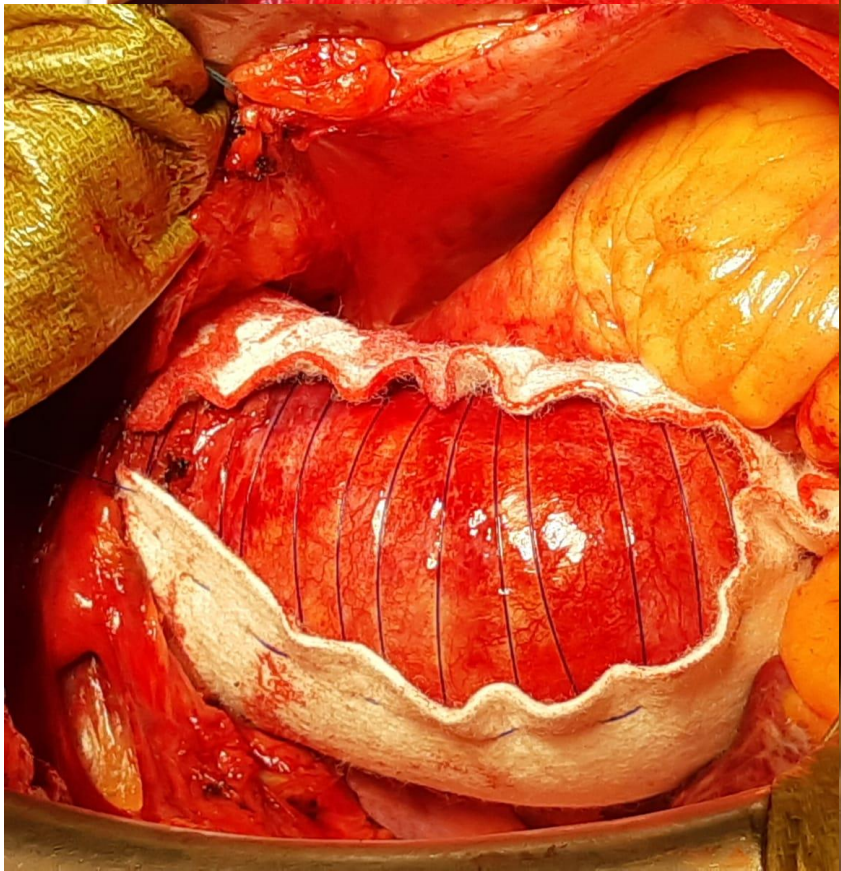
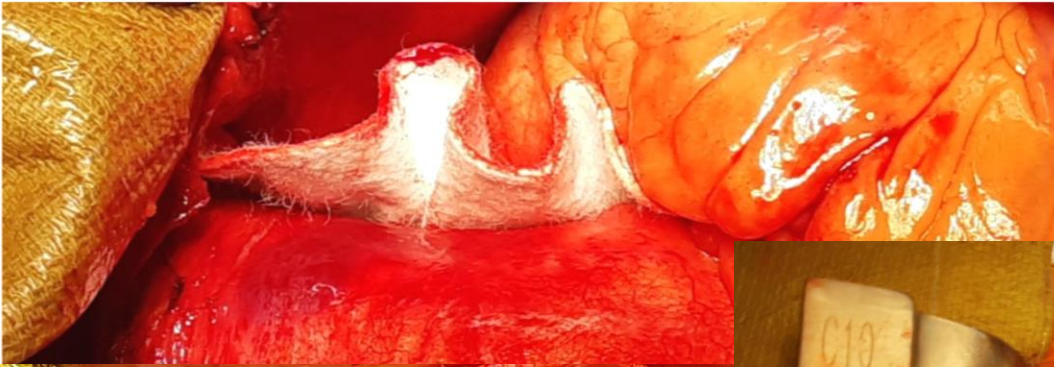


Ascending aorta wrapping for high risk acute aortic dissection

- Pre-requisites :
 - **Absence of significant aortic valve insufficiency**
 - **Absence of threatening peripheral malperfusion**
 - performed through median sternotomy
- **without cardiopulmonary bypass**
- ascending aorta is divided from pulmonary artery trunk and right pulmonary artery
- **Teflon plaque** tailored to tightly wrap. the aorta from the coronary ostia till the innominate artery.

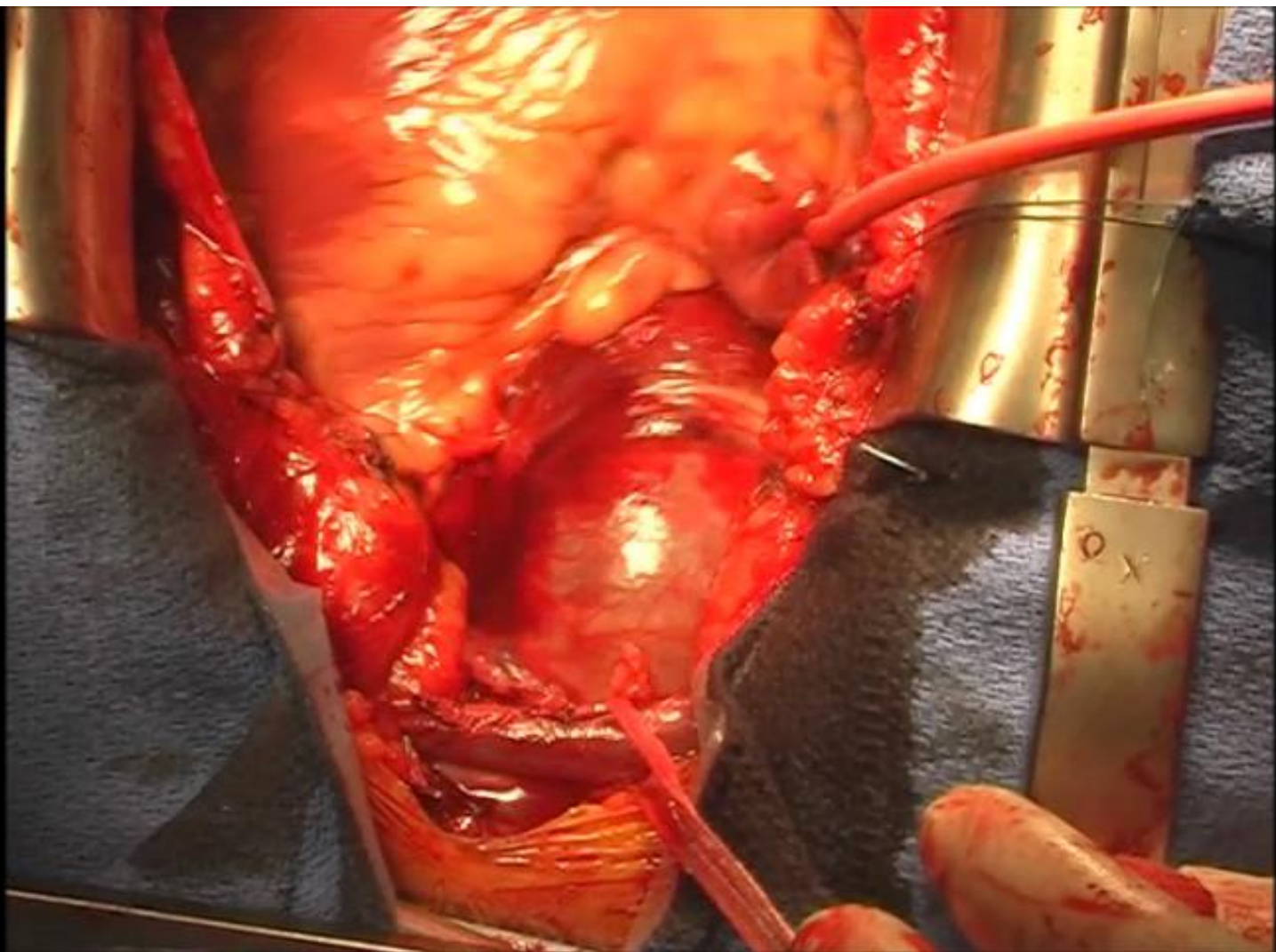


Off pump wrapping Asc. Ao.



Off pump wrapping Asc. Ao.

- Safety: CPB back up
- Median sternotomy
- Controlled arterial hypotension (75 mmHg)
- Reduce dramatically blood pressure during approximation
- choice of the graft: Tefon Felt plaque



Marie Lannelongue Hospital Experience

2008 – 2019: **40** cases

- Age: 77 [46-95] years
 - LVEF<50%: 29%
 - Chronic pulmonary disease : 18%
 - Coma (n=1)
 - EuroSCORE 1: 11.5 [9-16]
- Patients at very high risk for conventional surgical repair**

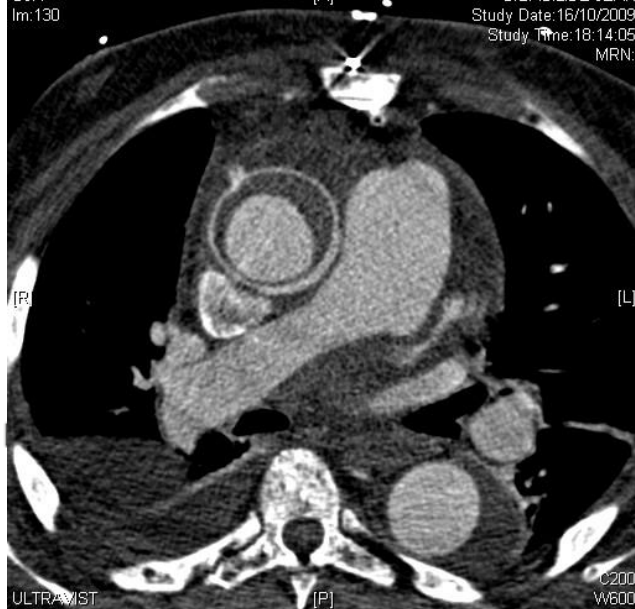


Surgical procedures	N=40
Wrapping of ascending aorta	19
Wrapping of ascending aorta and aortic arch	19
Wrapping of ascending aorta, arch and isthmus	2
Post-operative course	
Mechanical ventilation > 24h	8
Pneumopathy	6
Peripheral malperfusion	3
Septic shock	2
Dialysis	1
Stroke	0
Mean ICU stay (days)	6 [1-24]
Mean Hospital stay (days)	18 [5-30]

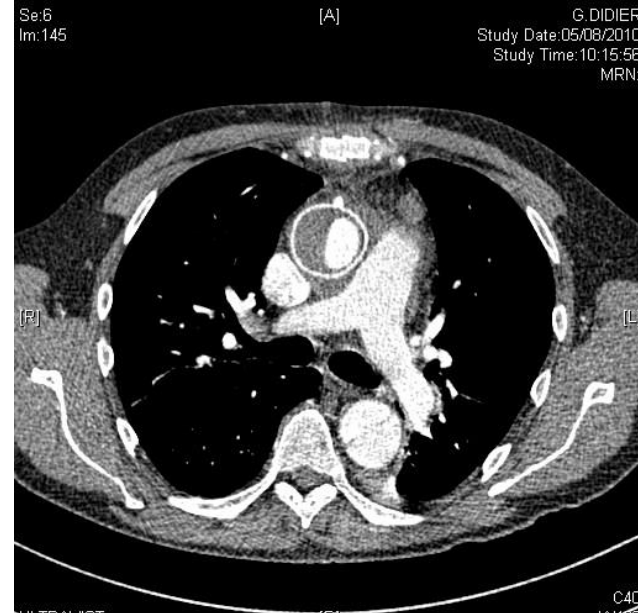
Reapplication of intimal flap n=20/37



Se:4
Im:130
[A]
S. BASILIDE JEAN
Study Date:16/10/2009
Study Time:18:14:05
MRN:



ULTRAVIST
[P]
C200
W600



Se:6
Im:145
[A]
G. DIDIER
Study Date:05/08/2010
Study Time:10:15:56
MRN:



ULTRAVIST
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C40
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MRN:

APPLIED
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C200
W600



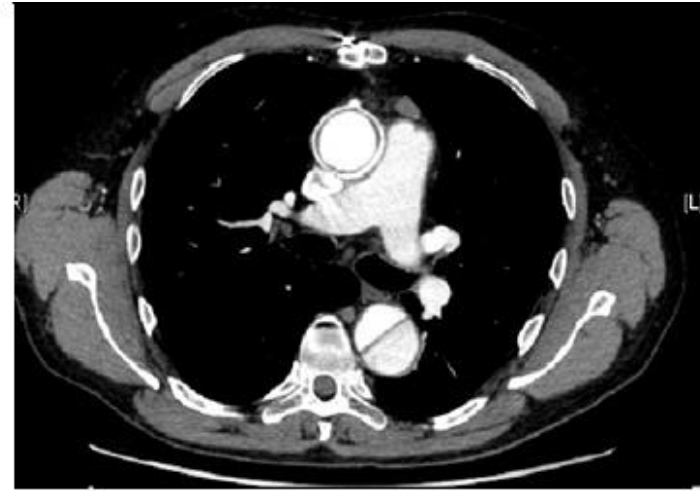
Complete regression of the false lumen in the reinforced ascending aorta

PRE OP

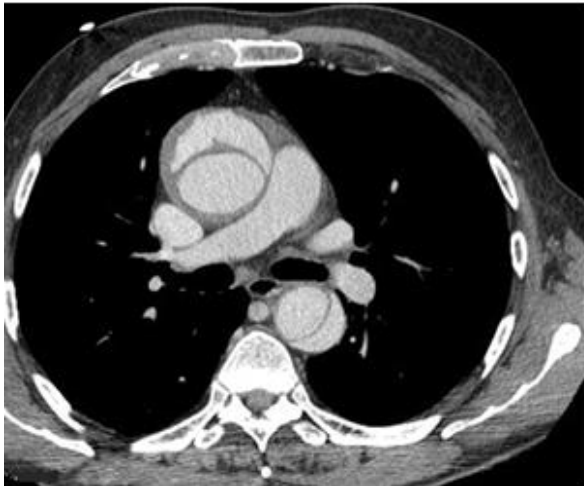
POST OP

6 MONTHS

Case 1

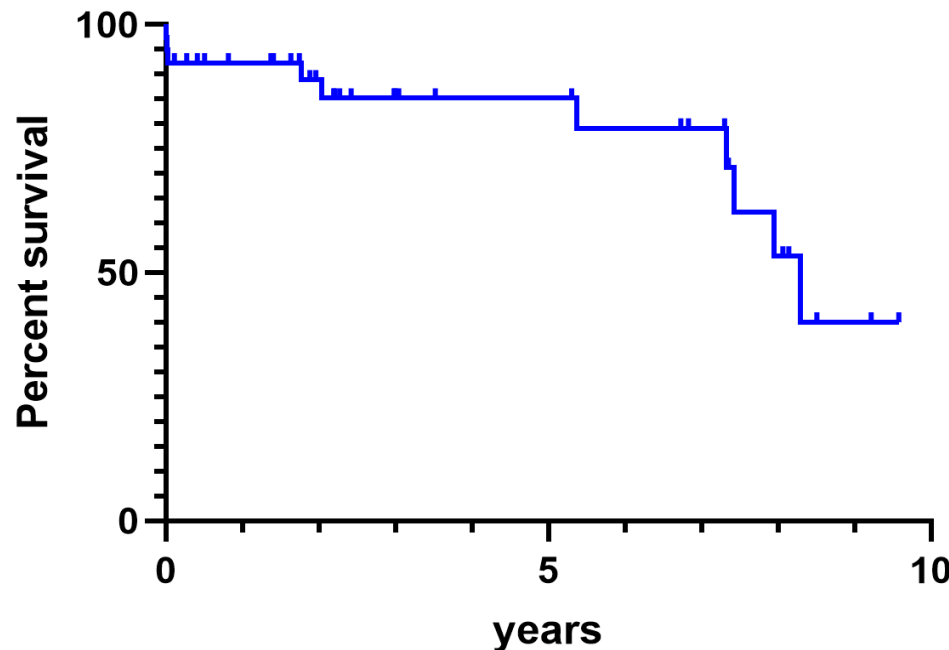


Case 2



Mortality:	N (%)
Intra-operative mortality	0 (0%)
Hospital mortality	3 (7,5%)
Late death (non related to aortic event)	6 (16,2%)

Survival proportion



89% at 2 years
85% at 5 years

**All survivors are
doing well and are
self catering.**

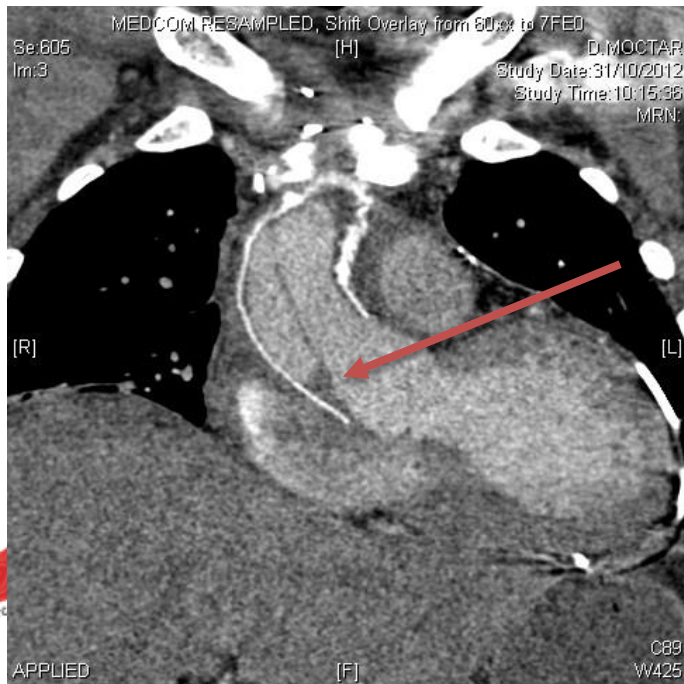
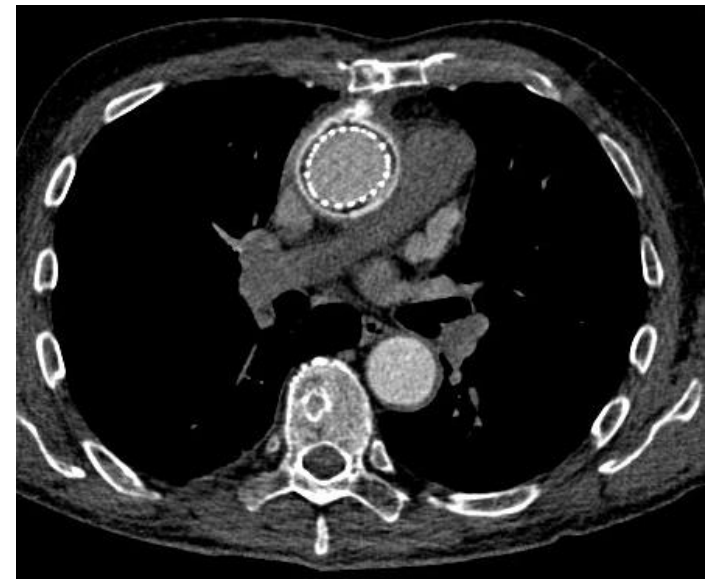
Subjects at risk

39 25 15 14 7 1

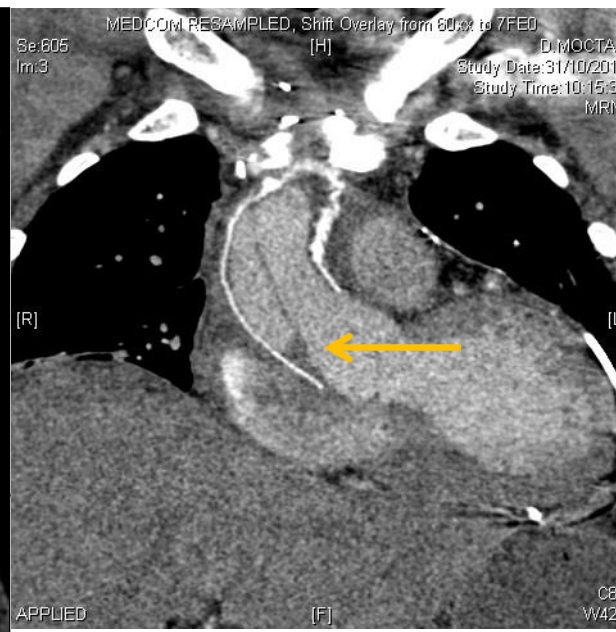
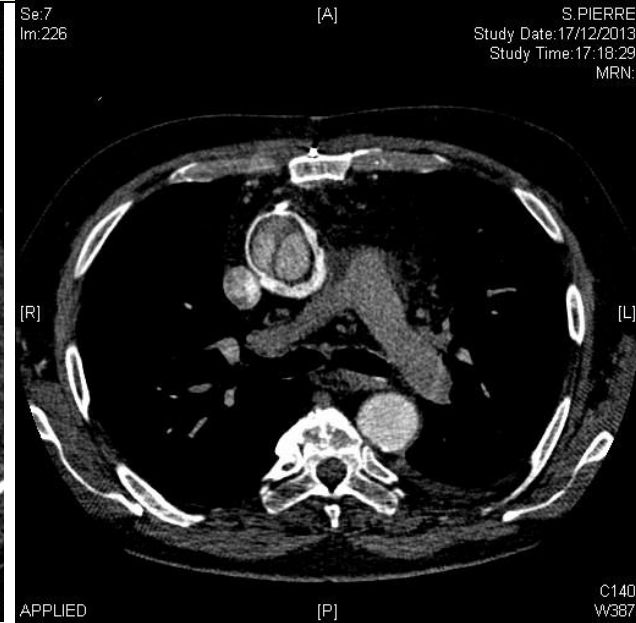
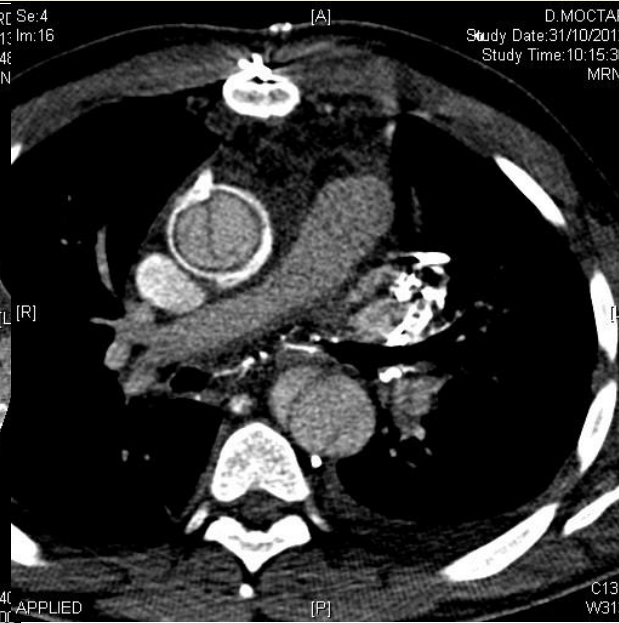
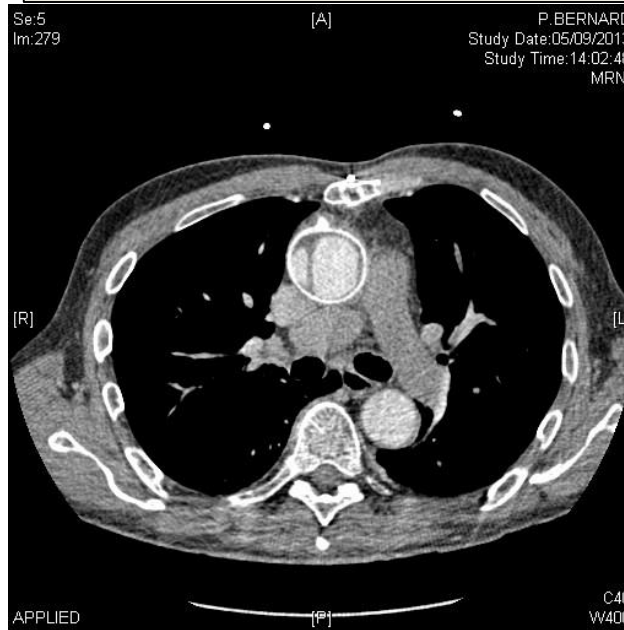
Wrapping of the ascending aorta in acute type A aortic dissection

- Prevents intrapericardial rupture of the ascending aorta
- Reduces post-operative morbidity and mortality
- Provides early recovery in the elderly





Persistent circulating false lumen in 3 patients



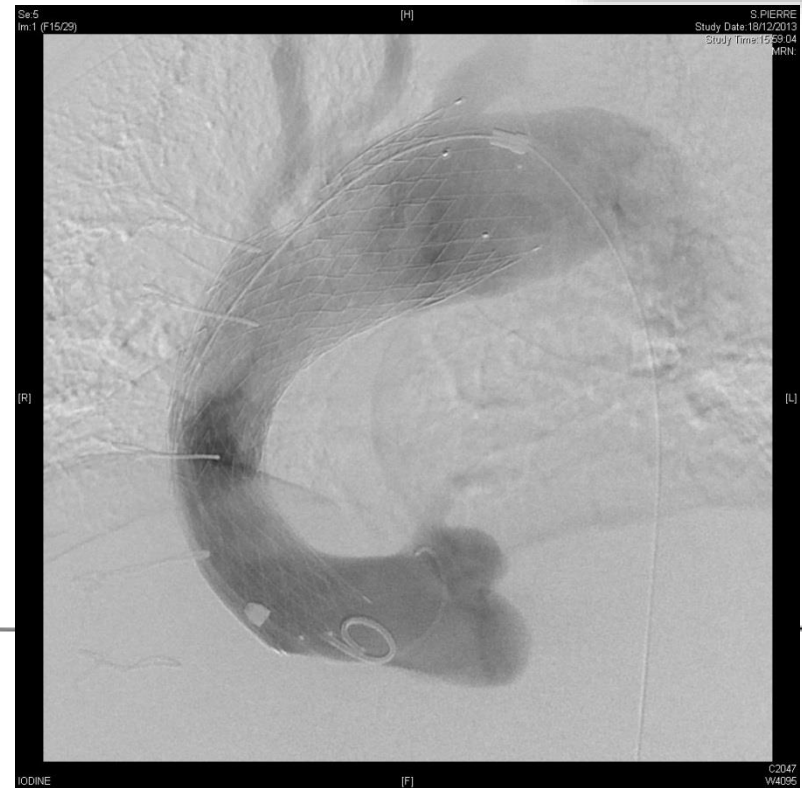
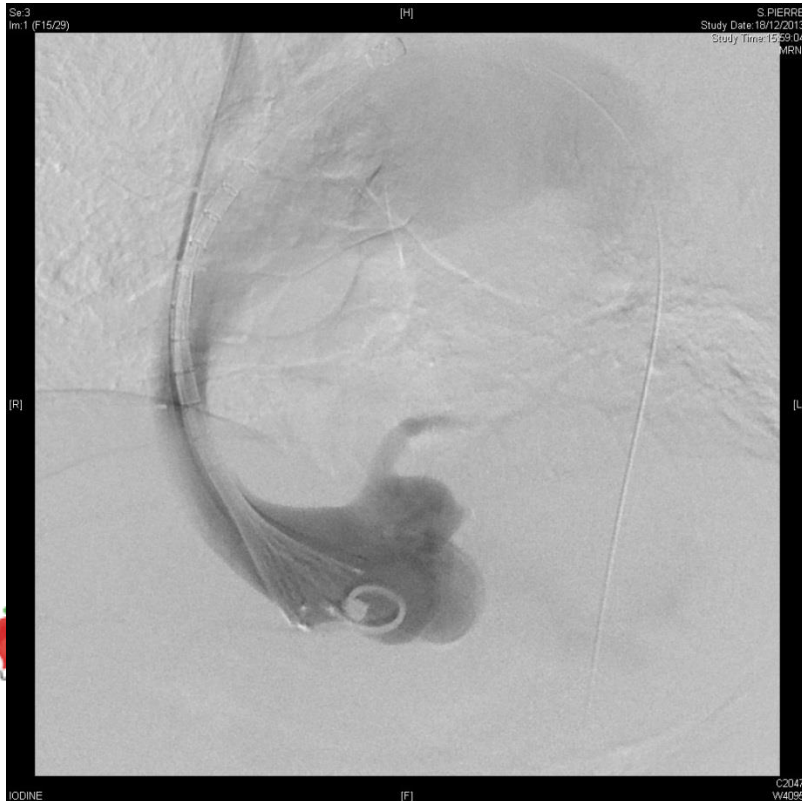
Percutaneous stenting of the reinforced ascending aorta

Under local anesthesia

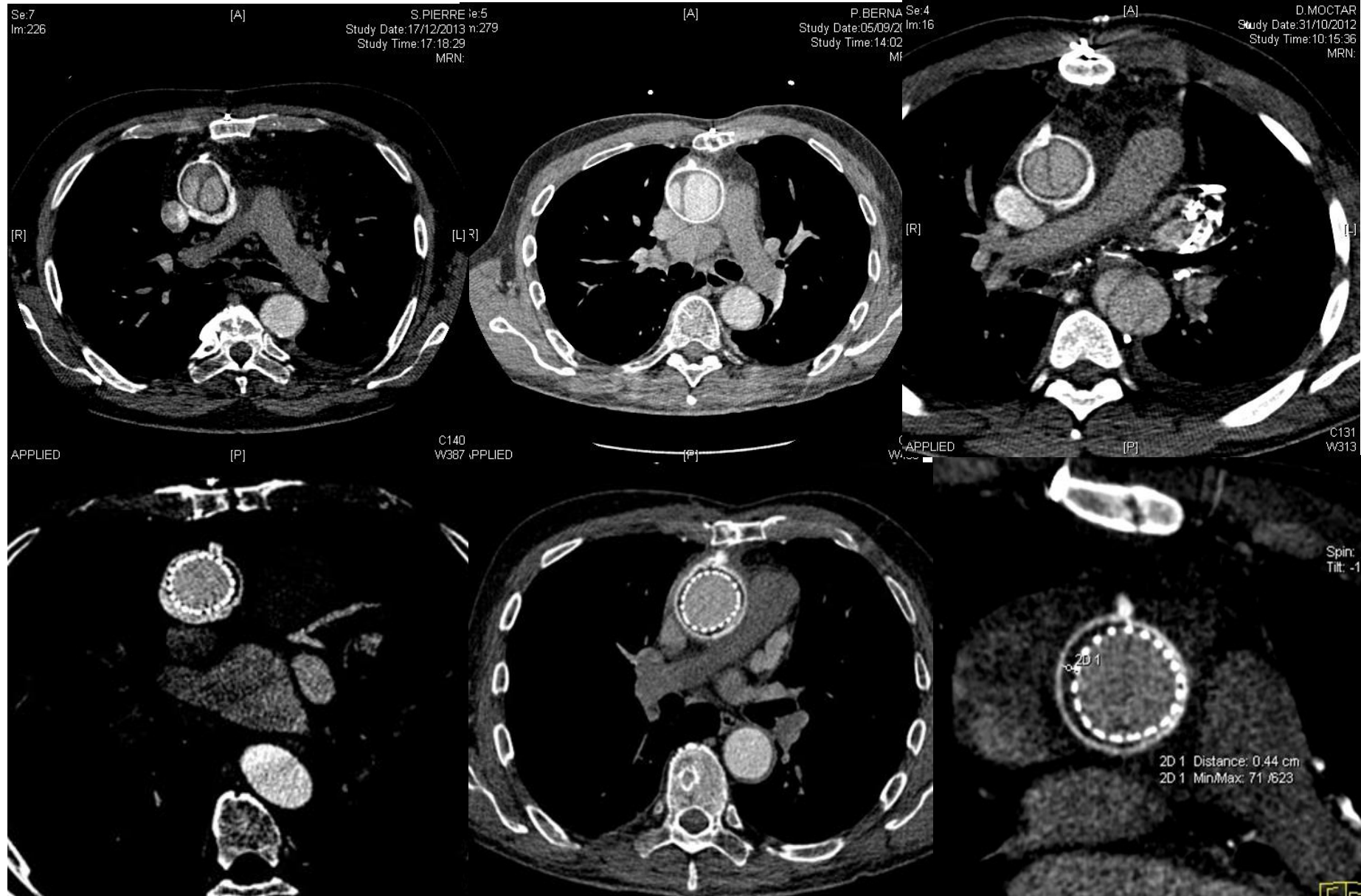
Through the femoral artery approach (10F catheter)

Aortography through a pigtail probe confirmed the true lumen

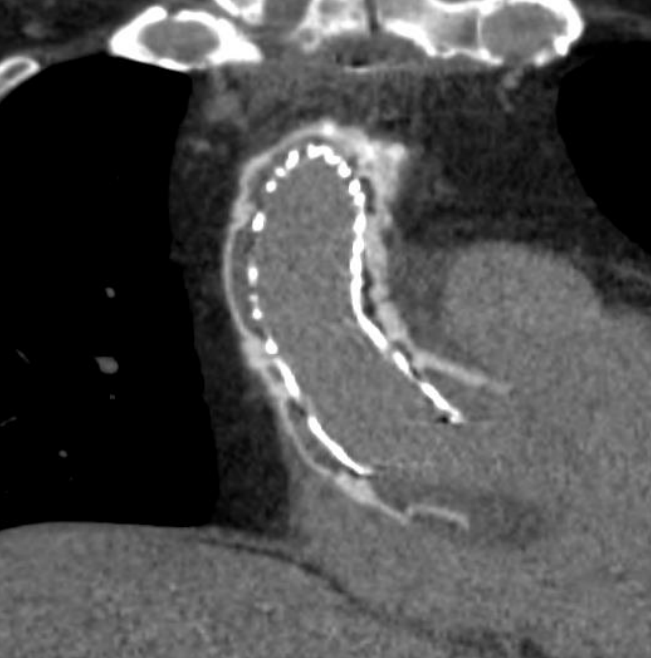
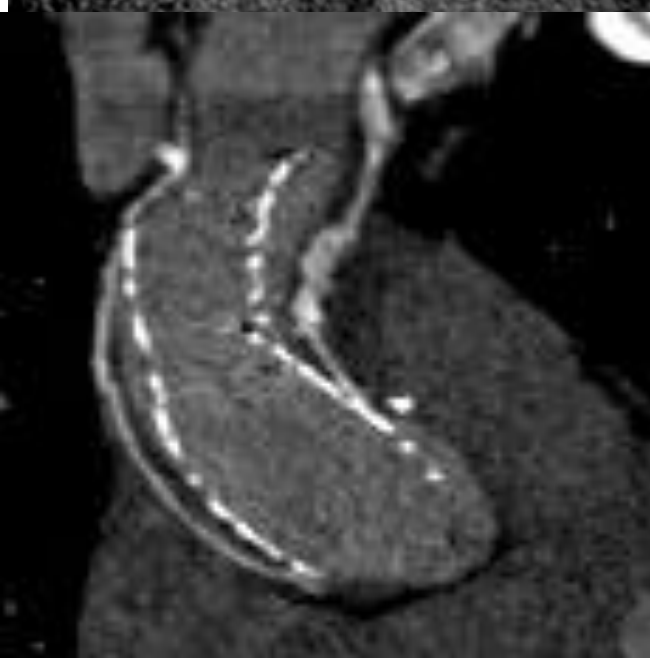
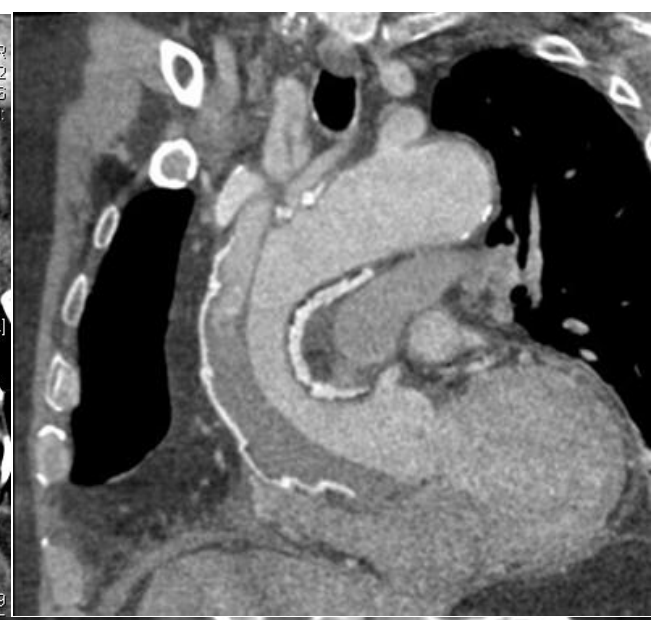
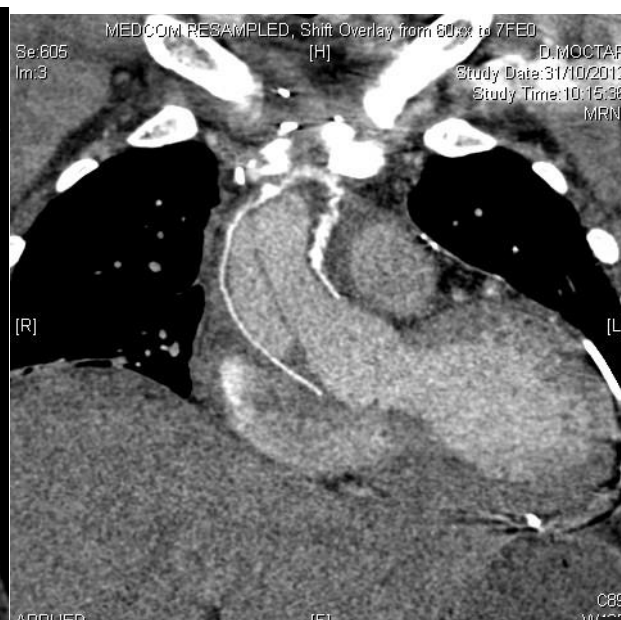
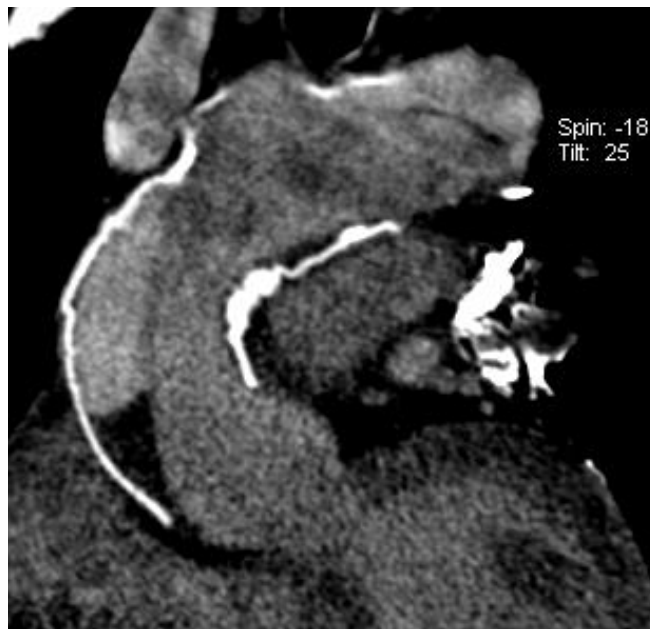
Non-covered nitinol self expandable stent was deployed in the true lumen



Non covered stenting in the reinforced ascending aorta

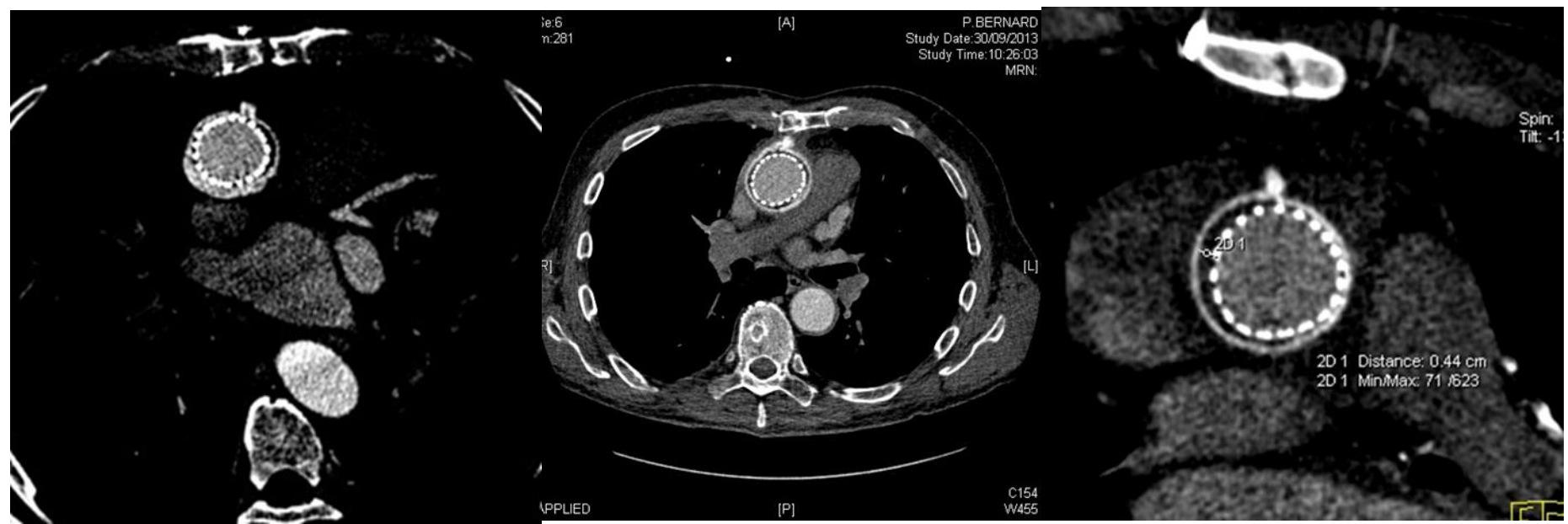


Non covered stenting in the reinforced ascending aorta

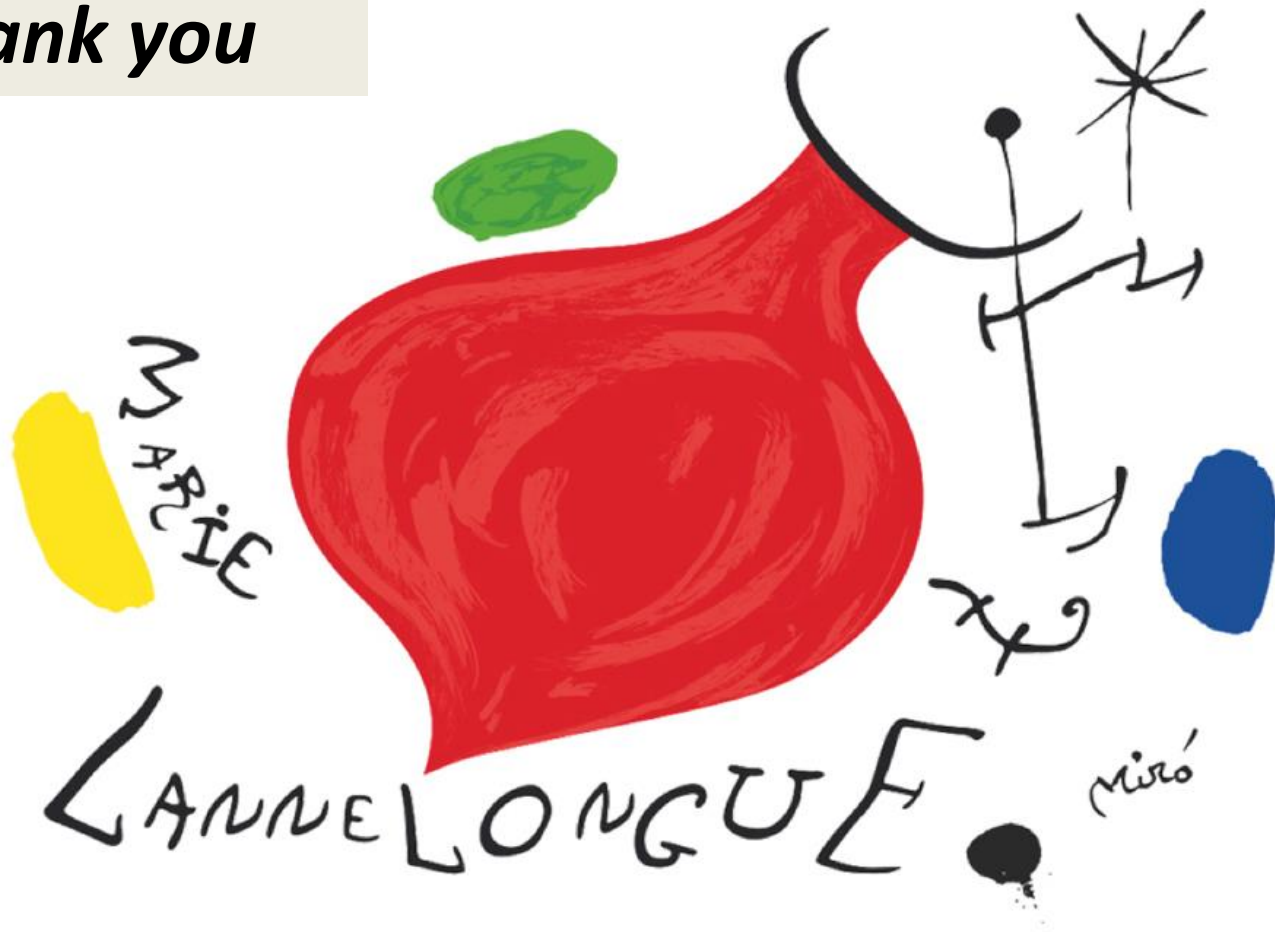


Off pump wrapping associated with percutaneous stenting of the ascending aorta

- is safe and feasible
- could be an alternative in high risk patients
- we describe the first in man 3 cases in acute type A aortic dissection



Thank you



Hôpital Marie Lannelongue

Beirut, Lebanon

Se:4
Im:257

[A]

M. RAYMOND
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Study Time: 17:49:11
MRN:

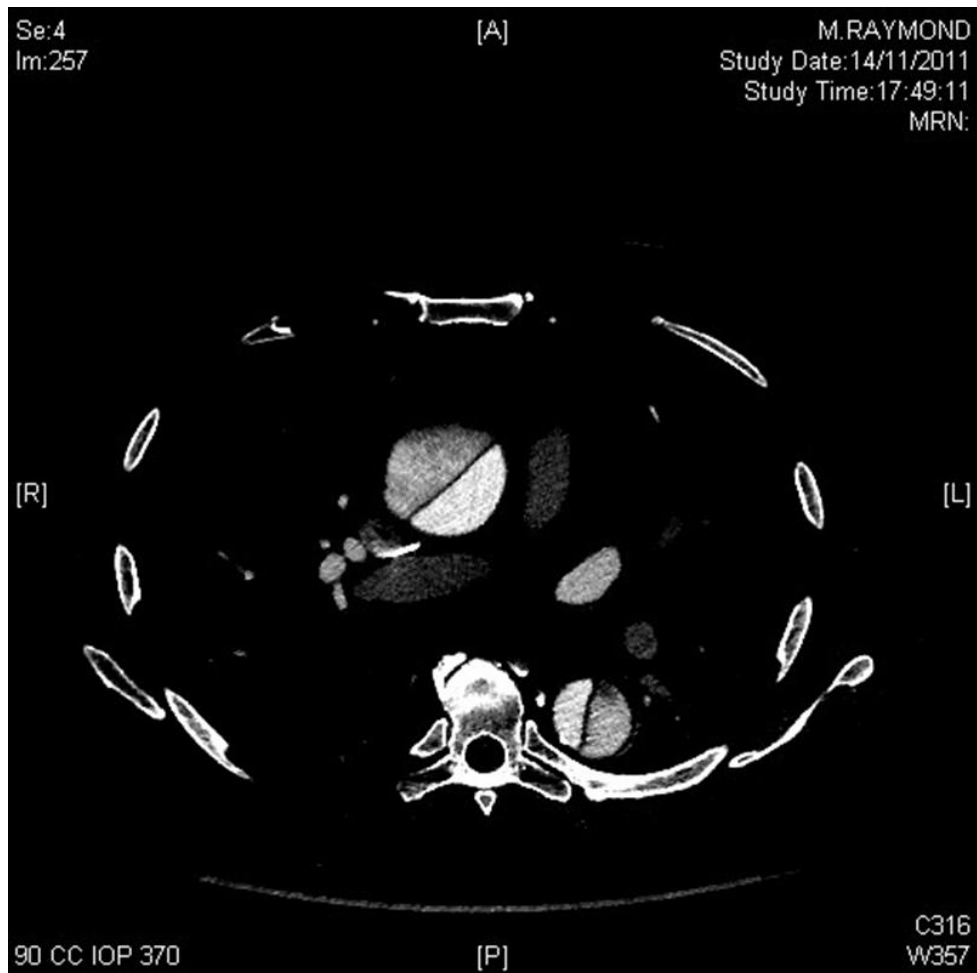
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[L]

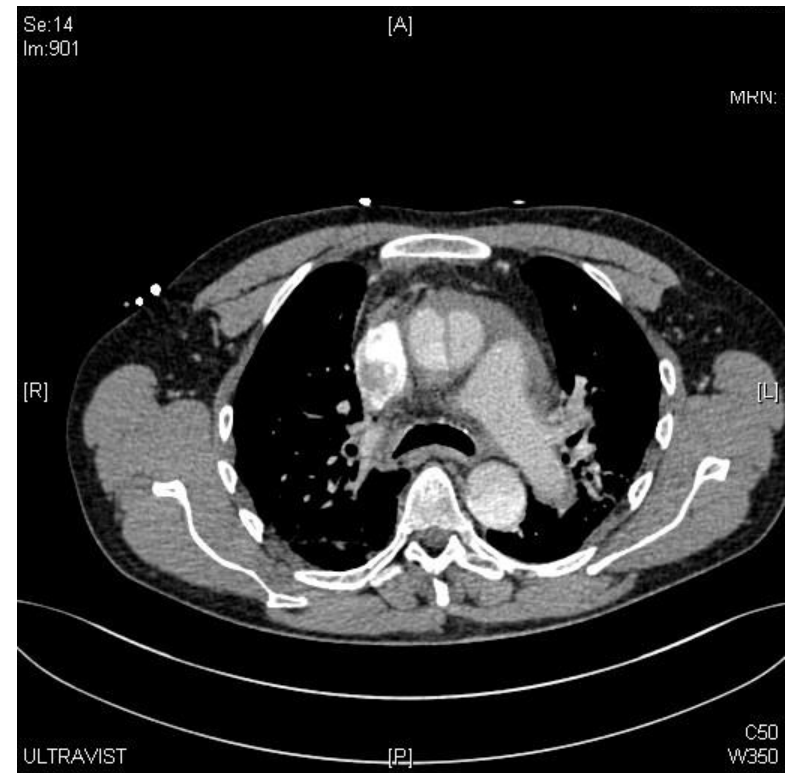
90 CC IOP 370

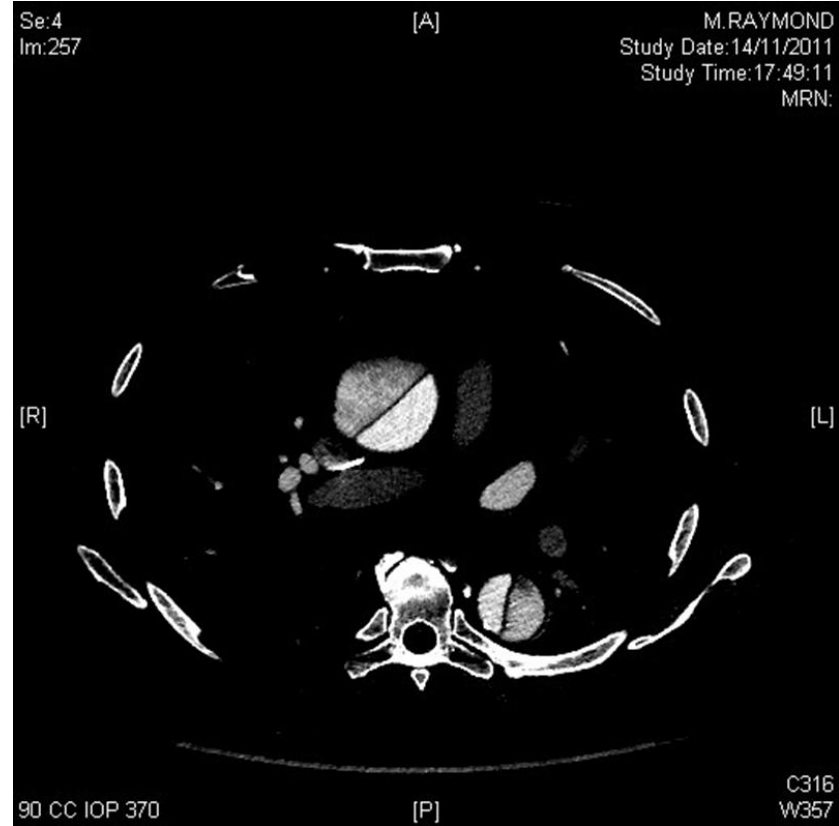
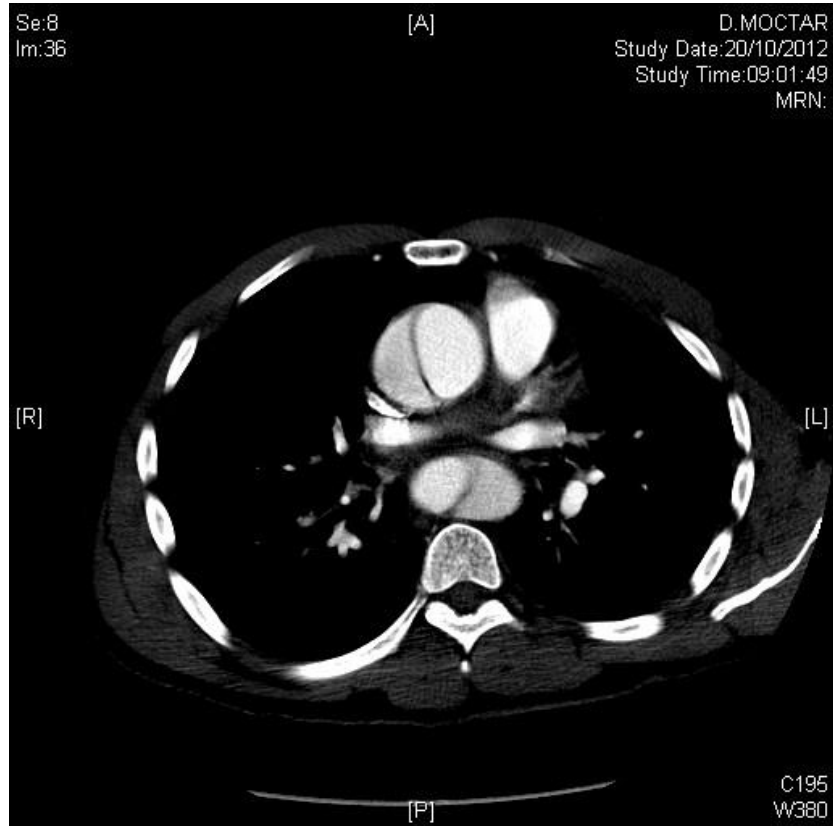
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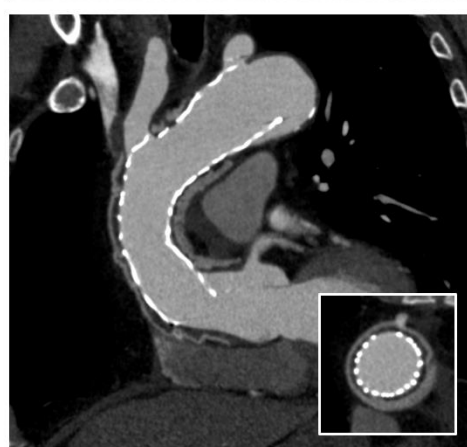
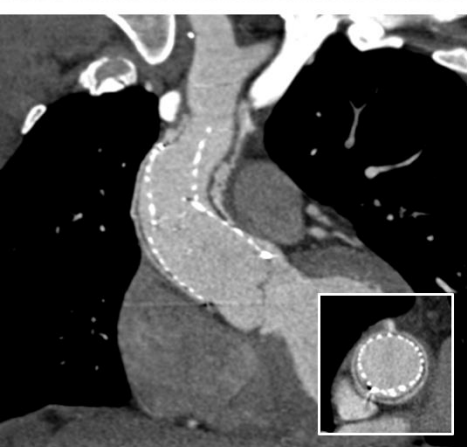
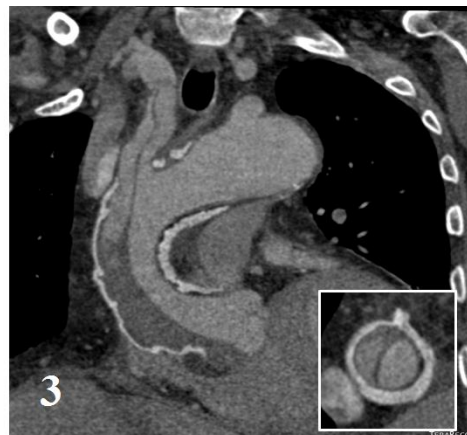
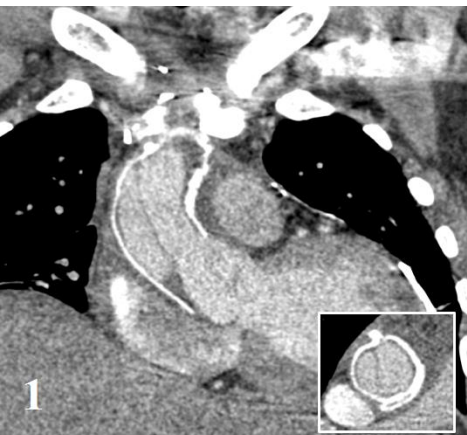
C316
W357

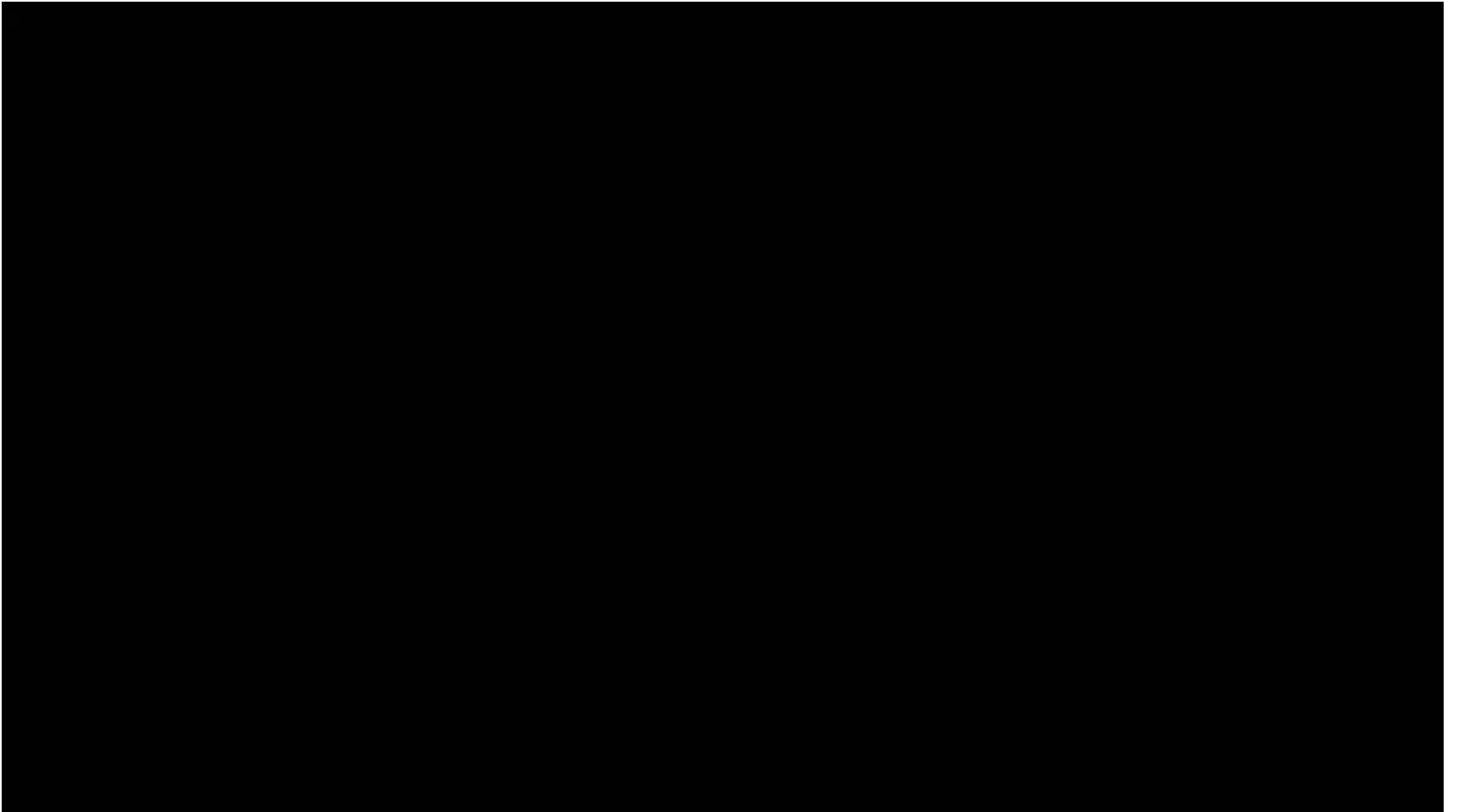


RETROGRADE TYPE A AORTIC DISSECTION









Marie Lannelongue

Beirut, Lebanon