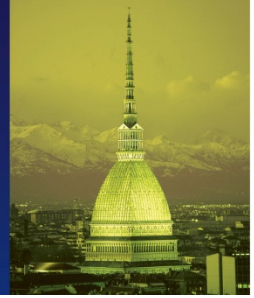
TURIN,
October
25th-27th
2018
Starhotels
Majestic

GIORNATE
CARDIOLOGICHE
TORINESI



UNIVERSITÁ DEGLI STUDI DI TORINO

AZIENDA OSPEDALIERO - UNIVERSITARIA
Città della Salute e della Scienza di Torino

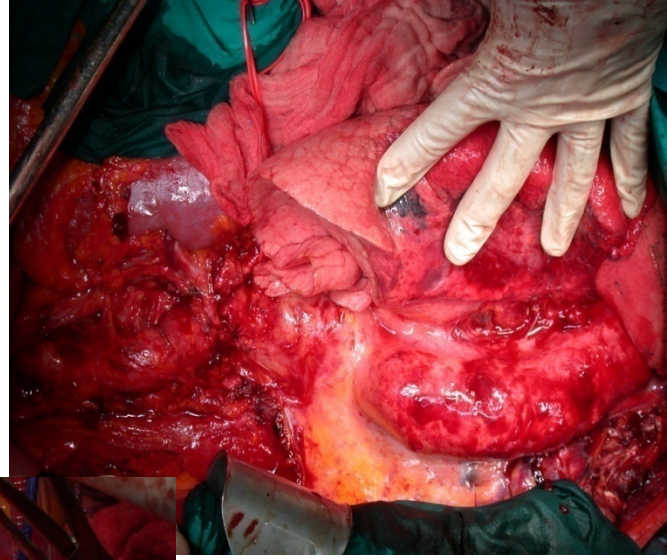
NOVELTIES IN VASCULAR SURGERY

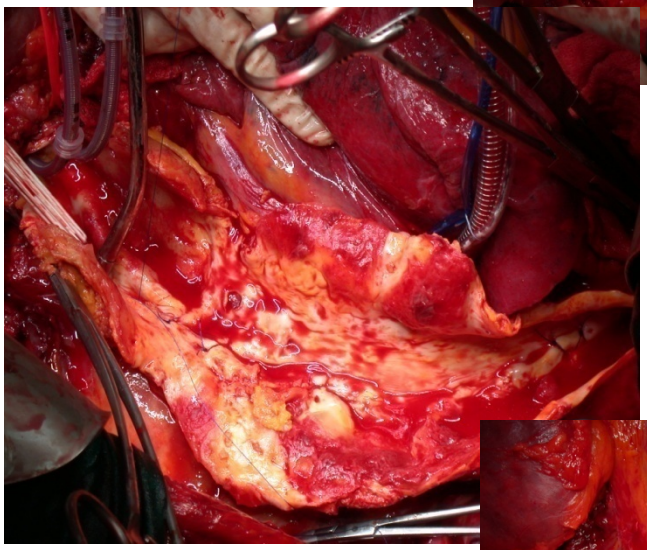
New technologies in the surgical therapy of thoracic aortic disease: new devices, new environments, new teams

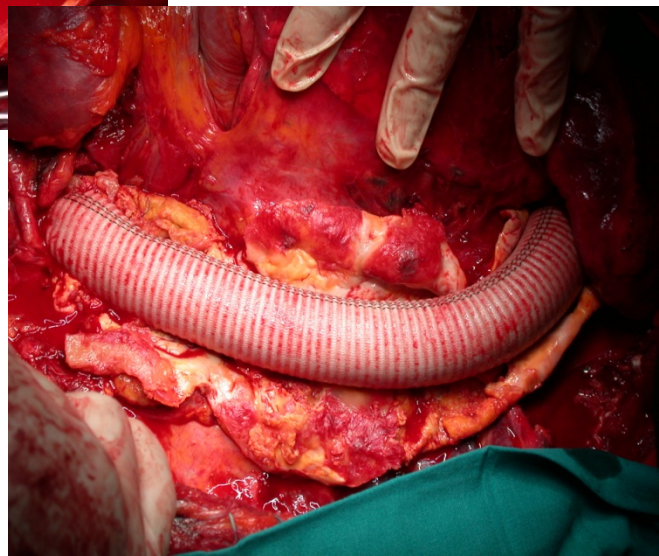
Prof. Fabio Verzini, MD, PhD, FEBVS
Vascular Surgery, Dept of Surgical Sciences
University of Turin
Italy

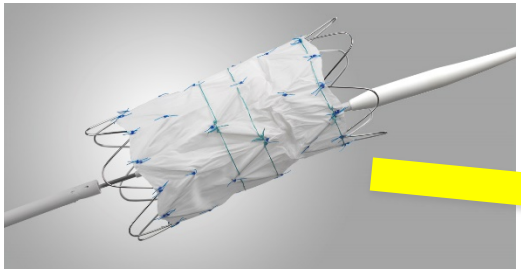
... evolution

Open surgery

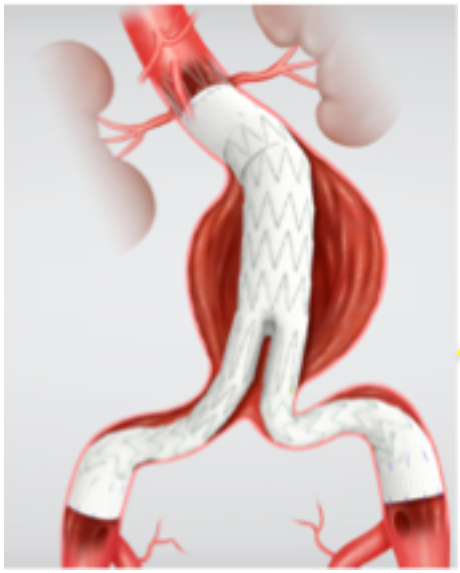


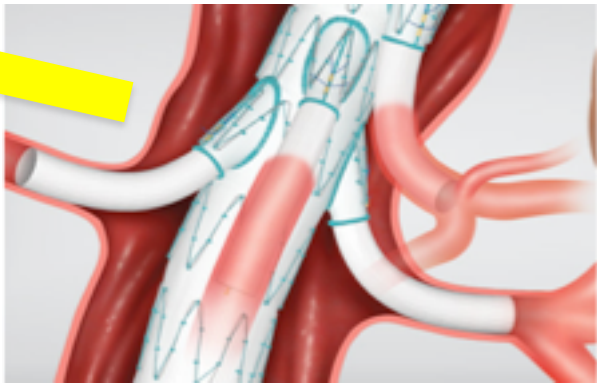


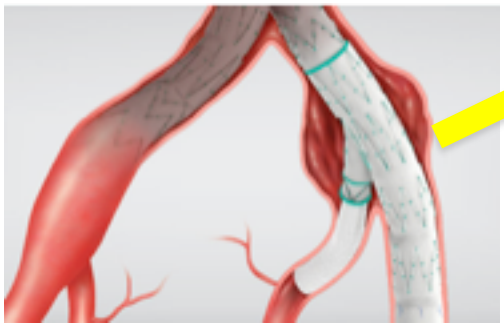




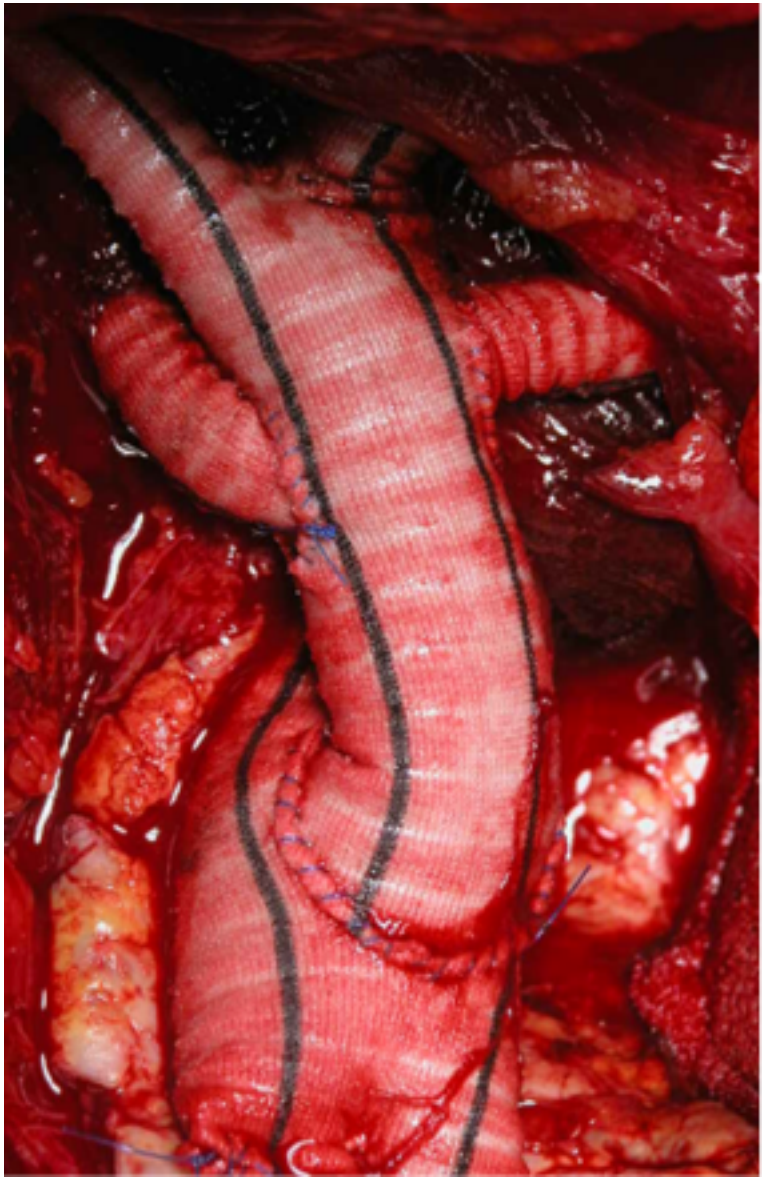

H
F
5mm/div

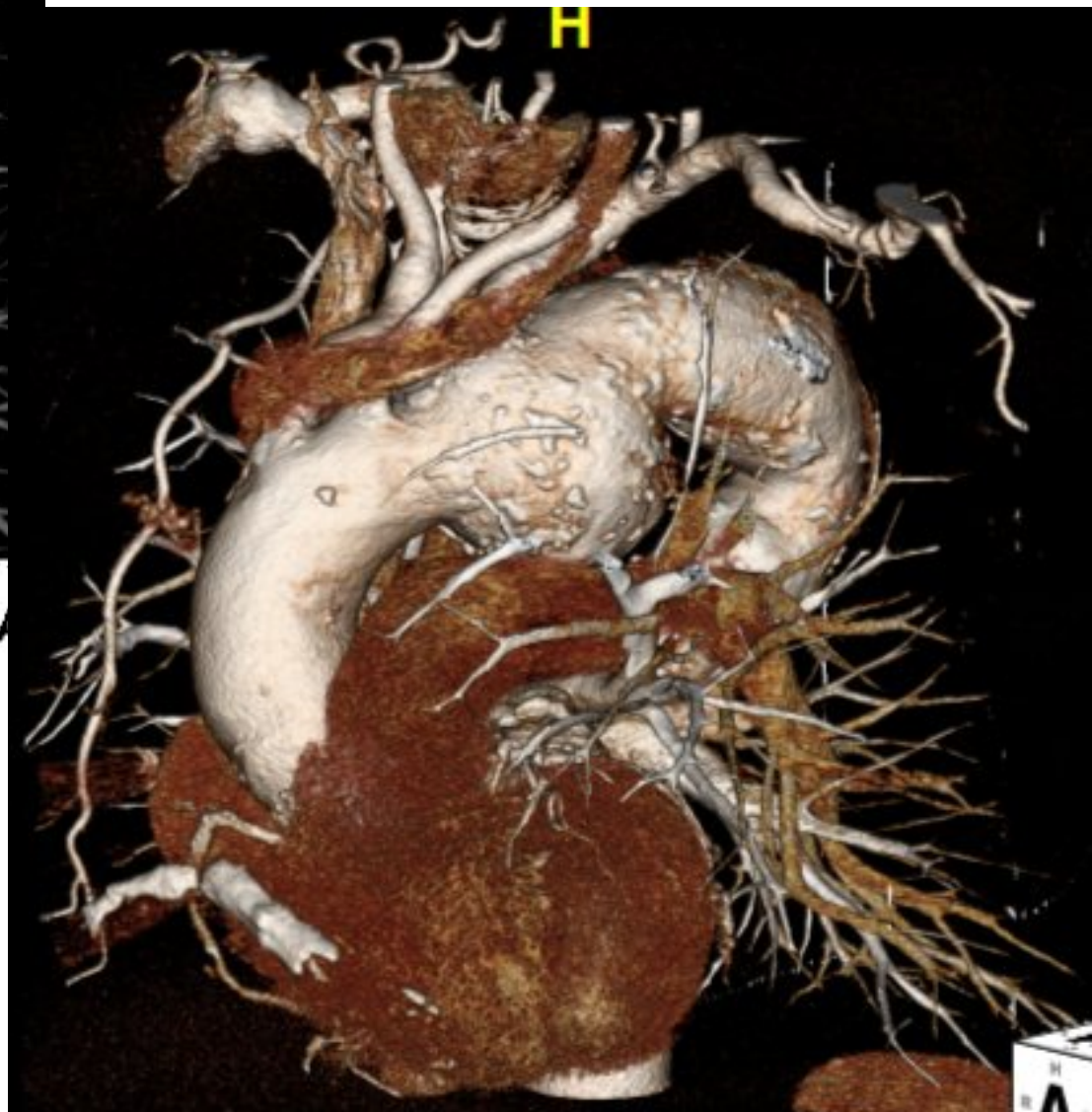




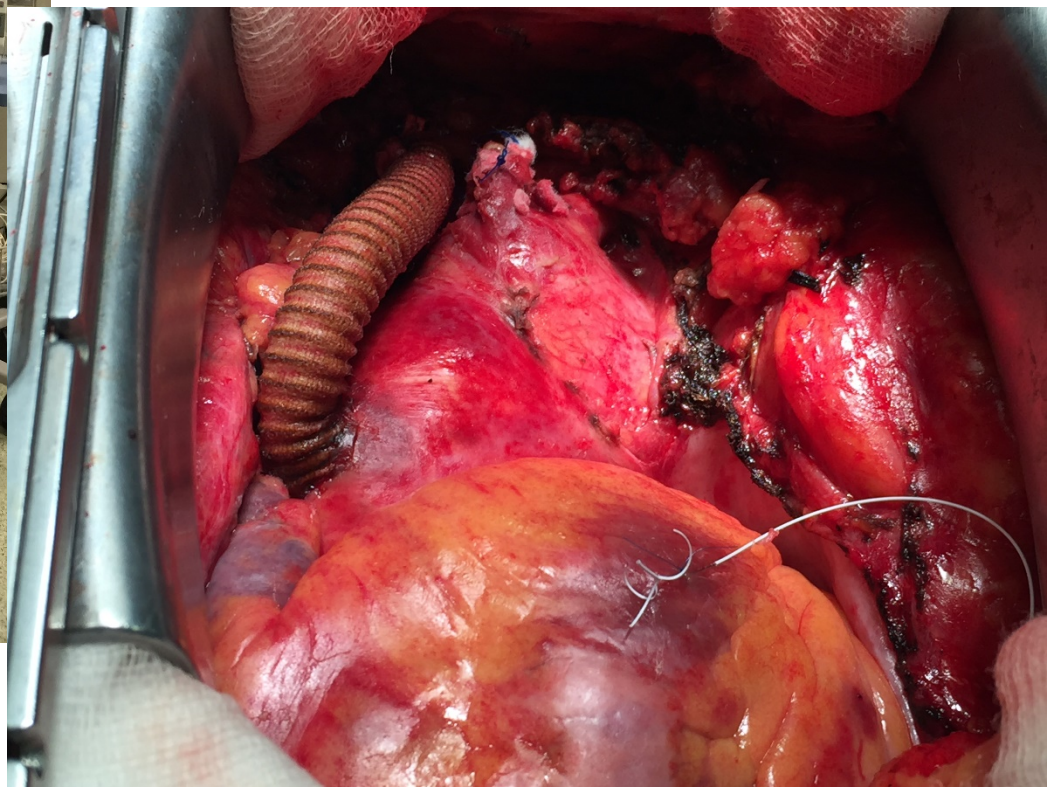


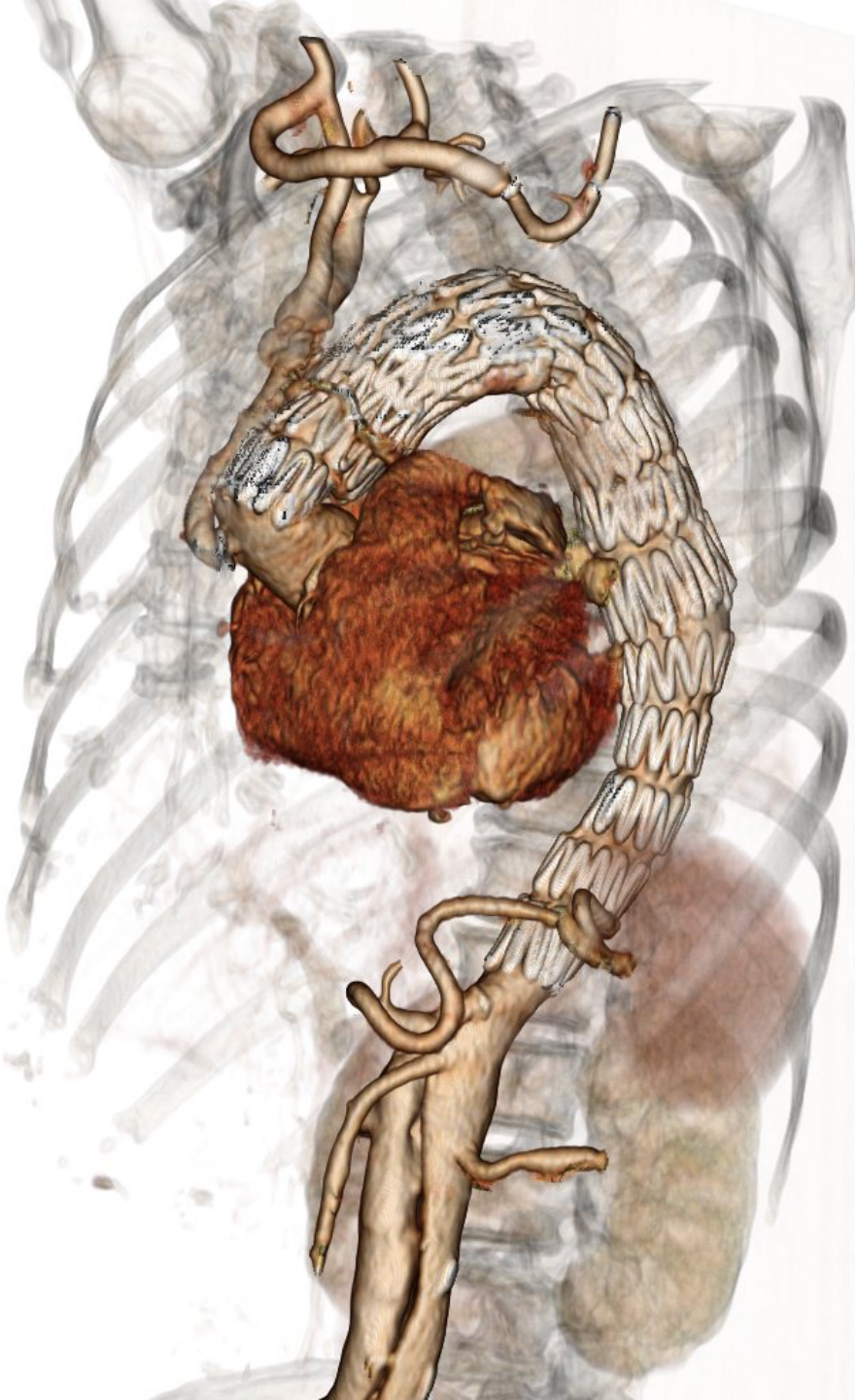
Hybrid procedures

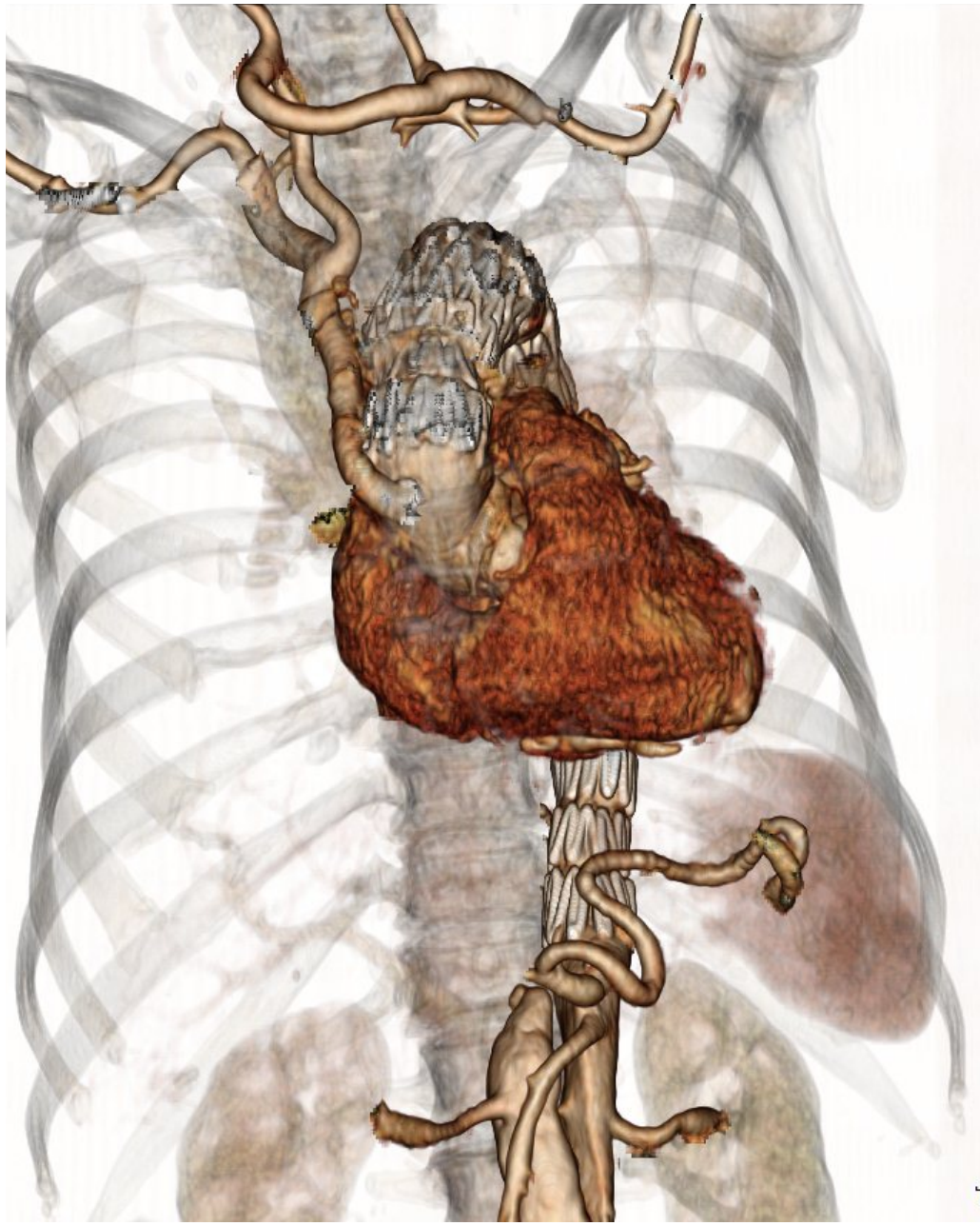



H

Different specialties involved







Top quality environment


GALLINARI MARIA LUISA
80
43
RAO
CAUD
10°
Altez.
5
SID
+6
FD
119
37
Esp
3
Fluo
Bassa
Durata
30.31
DAP
84768
K
840
10:23
132/54
98
(10)
PHILIPS
MAQUET
MAQUET

Contemporary Reviews in Cardiovascular Medicine

Use of the Hybrid Operating Room in Cardiovascular Medicine

Tsuyoshi Kaneko, MD; Michael J. Davidson, MD

(*Circulation*. 2014;130:910-917.)

Benefit of Hybrid OR Compared With Interventional Suite or Traditional OR

- In a traditional interventional suite, emergent conversion to open surgery will raise multiple issues
- Application of sterile technique is more rigorous in the OR environment as mandated by law

Effect on Training

- The rise of hybrid procedures and hybrid ORs has implication for training of both surgical and interventional specialists

Hybrid OR

The natural evolution of the **"Aortic team"** environment

Aortic team should include

Anesthesiologists

Cardiac Surgeons

Cardiologists

Interventional Radiologists

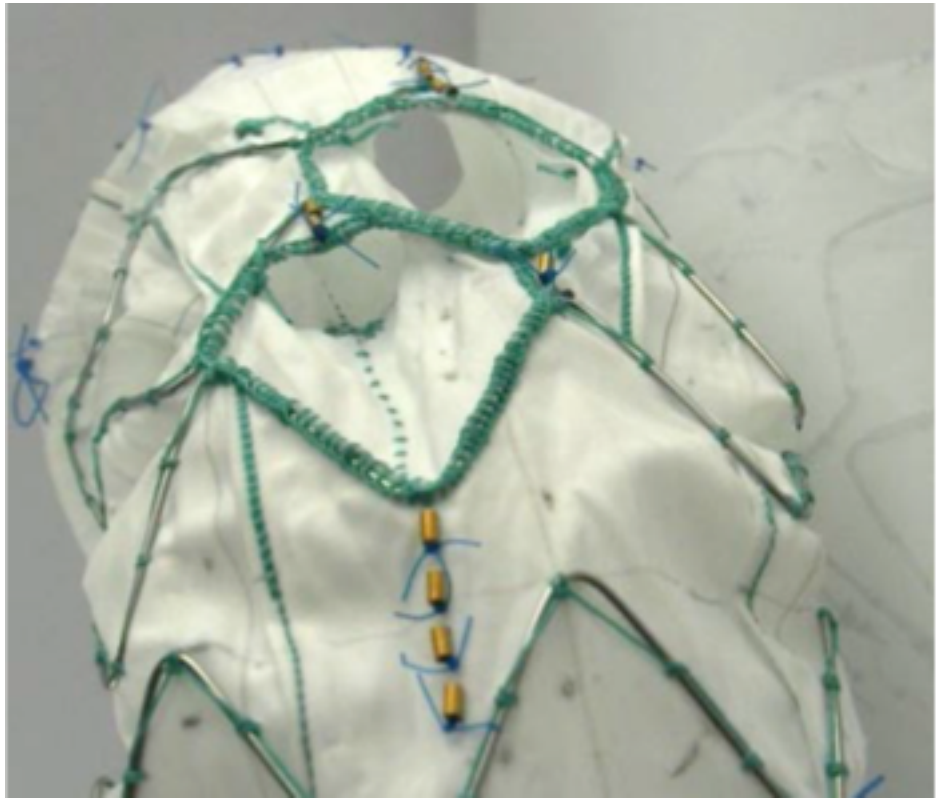
Vascular Surgeons

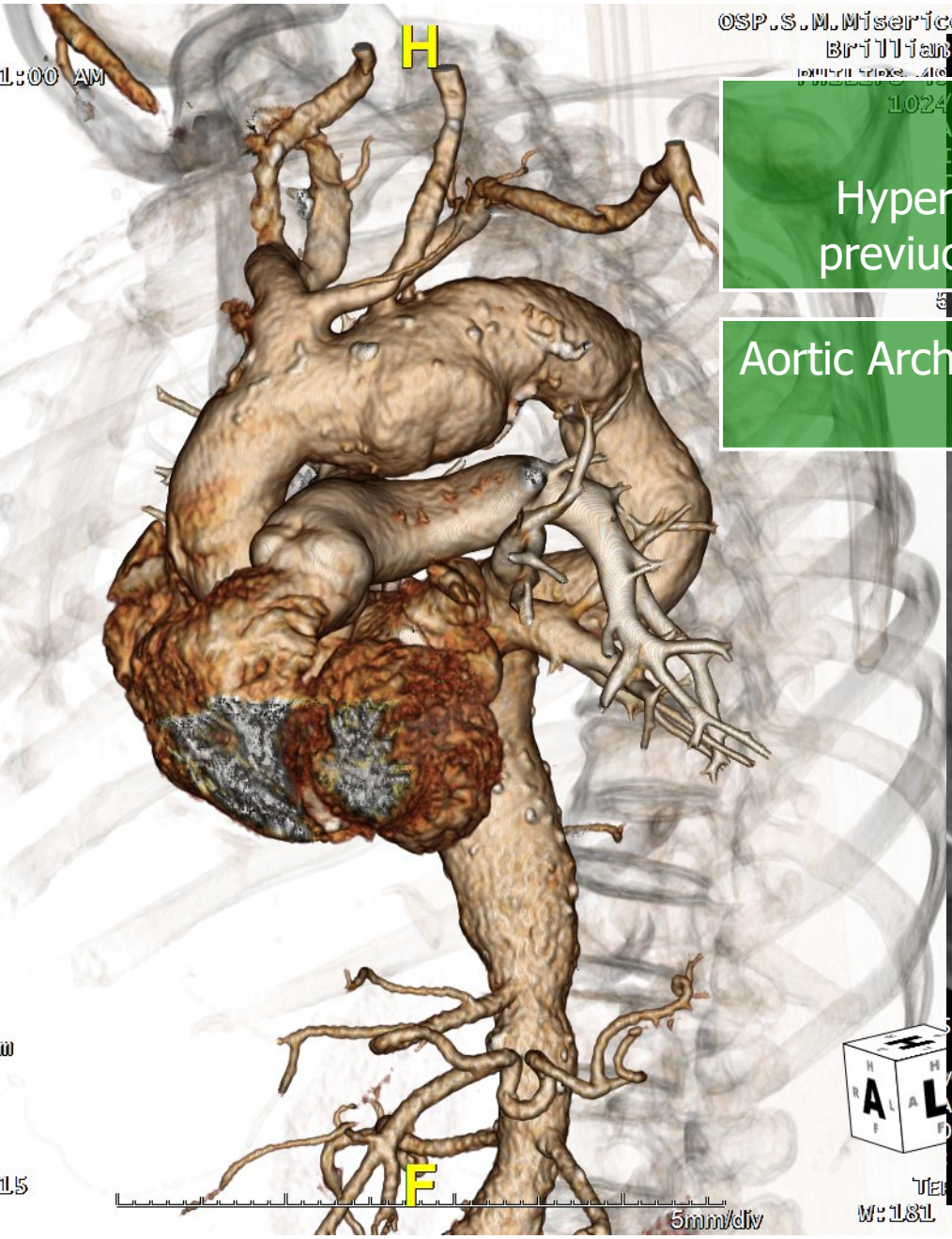
Global experience with an inner branched arch endograft

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]

(J Thorac Cardiovasc Surg 2014;148:1709-16)

38 patients
Tech success 84.2%
Early death 13.2%

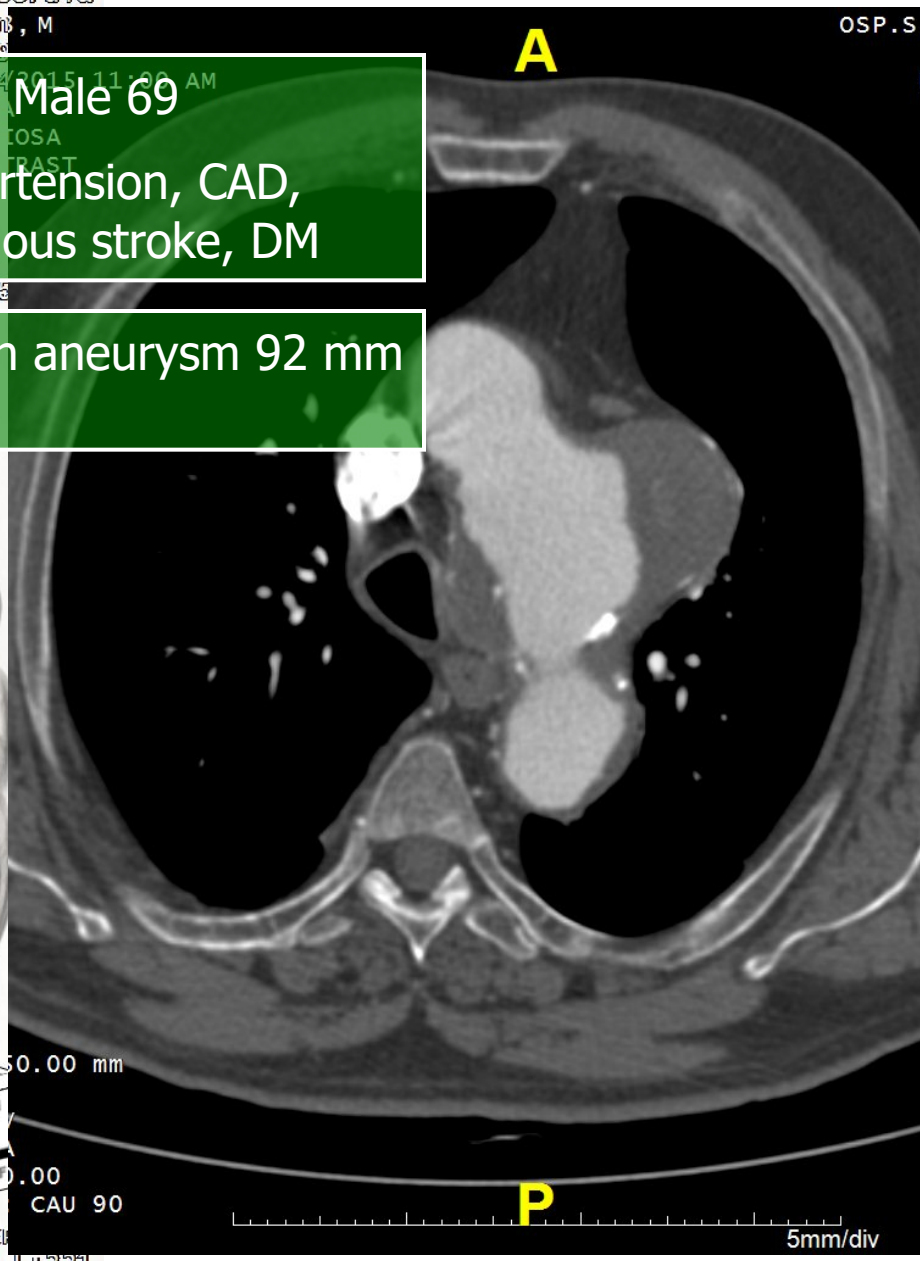


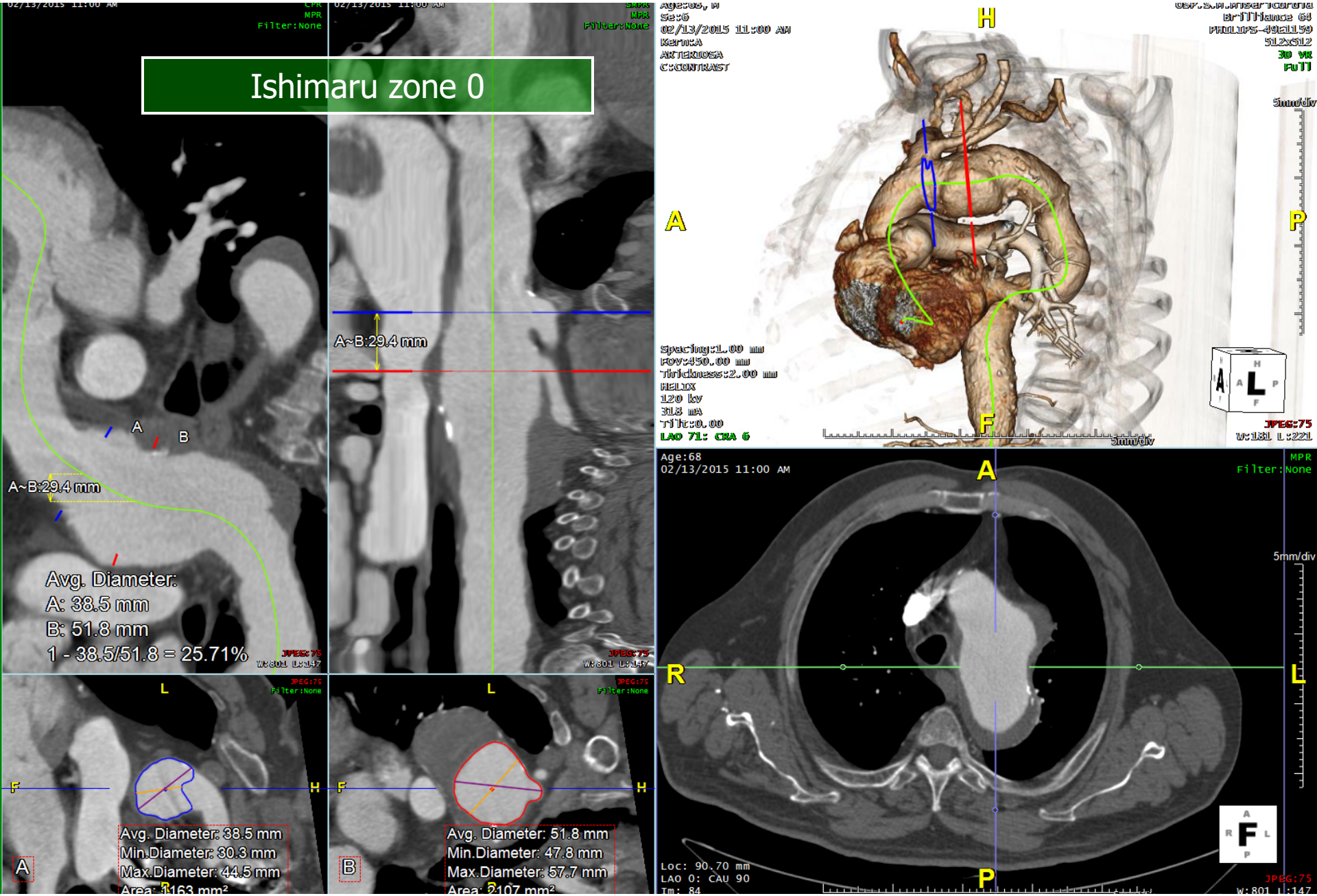


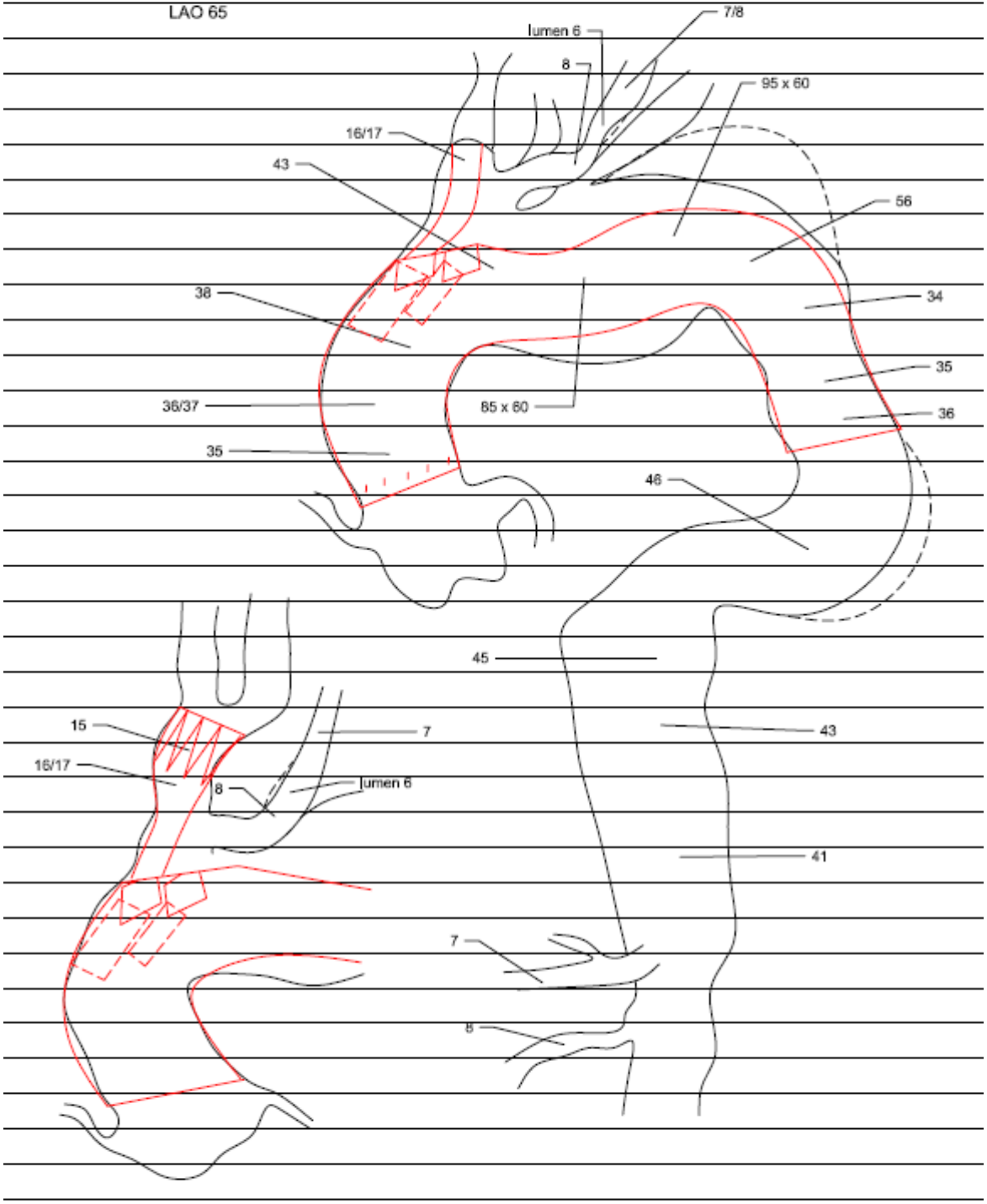
Male 69

Hypertension, CAD, previuous stroke, DM

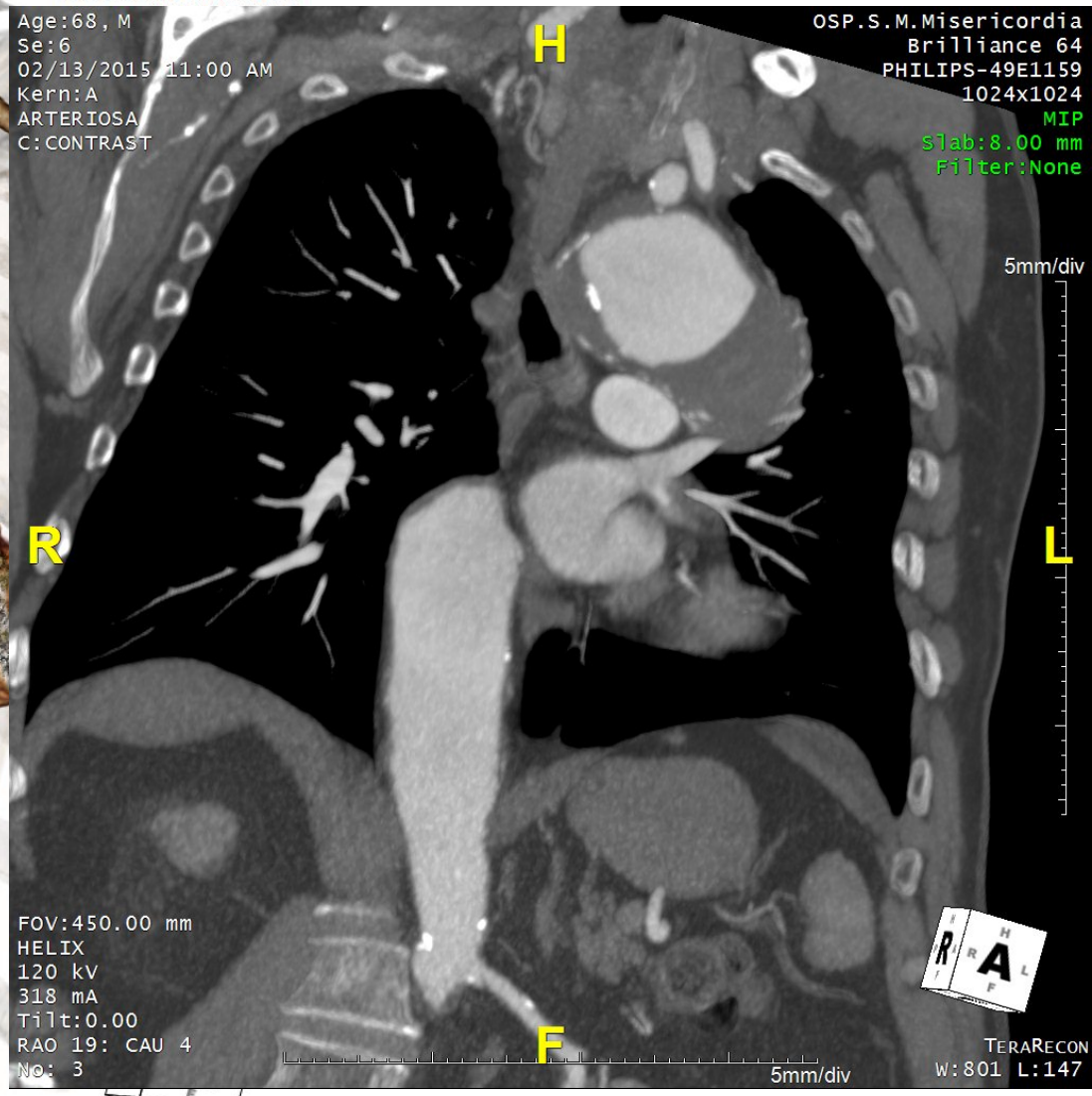
Aortic Arch aneurysm 92 mm



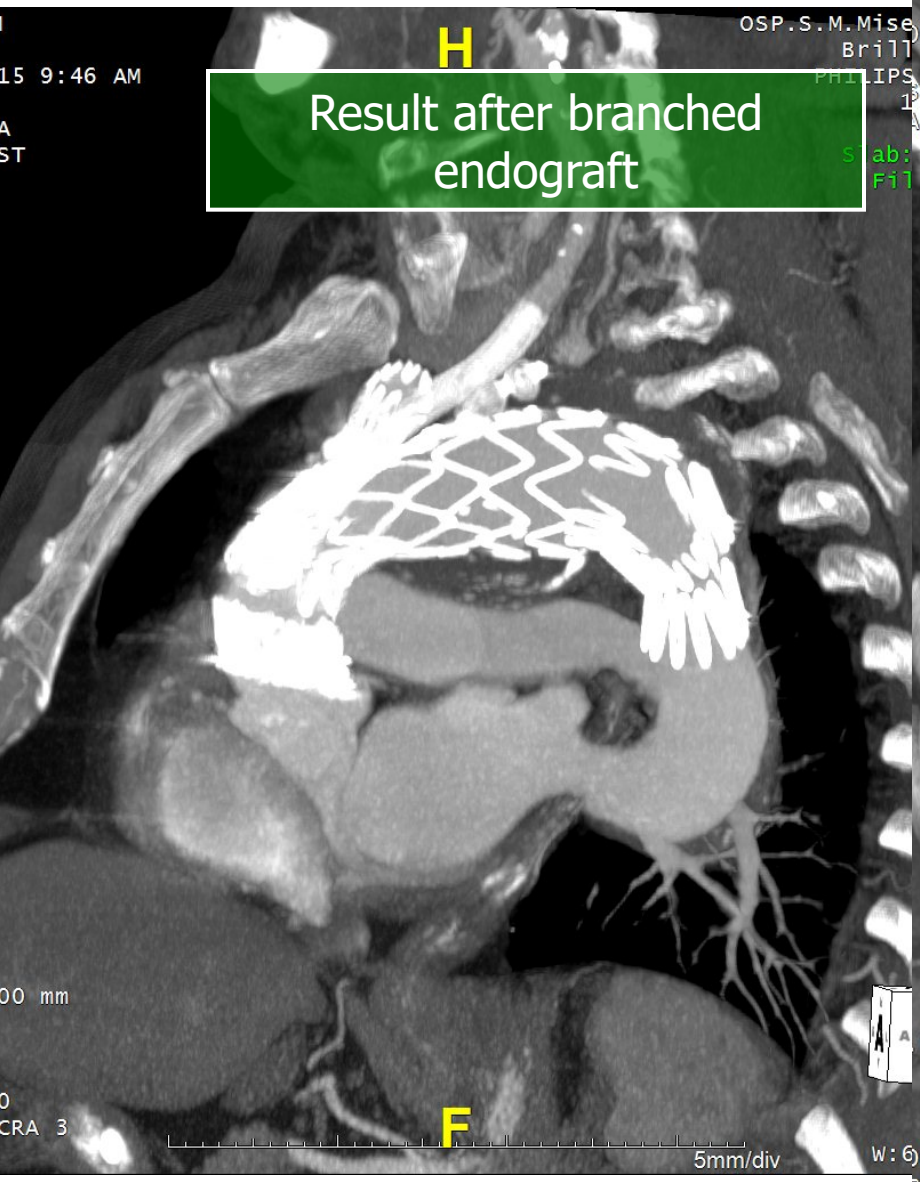

Ishimaru zone 0
A~B:29.4 mm
A
B
A~B:29.4 mm
Avg. Diameter:
A: 38.5 mm
B: 51.8 mm
1 - 38.5/51.8 = 25.71%
Avg. Diameter: 38.5 mm
Min.Diameter: 30.3 mm
Max.Diameter: 44.5 mm
Area: 1163 mm²
Avg. Diameter: 51.8 mm
Min.Diameter: 47.8 mm
Max.Diameter: 57.7 mm
Area: 2107 mm²
H
A
P
F
Spacing:1.00 mm
FOV:450.00 mm
Thickness:2.00 mm
HELIX
120 kv
318 mA
Tilt:0.00
LAO 71: CRA 6
5mm/div
Age:68
02/13/2015 11:00 AM
MPR
Filter:None
R
L
Loc: 90.70 mm
LAO 0: CAU 90

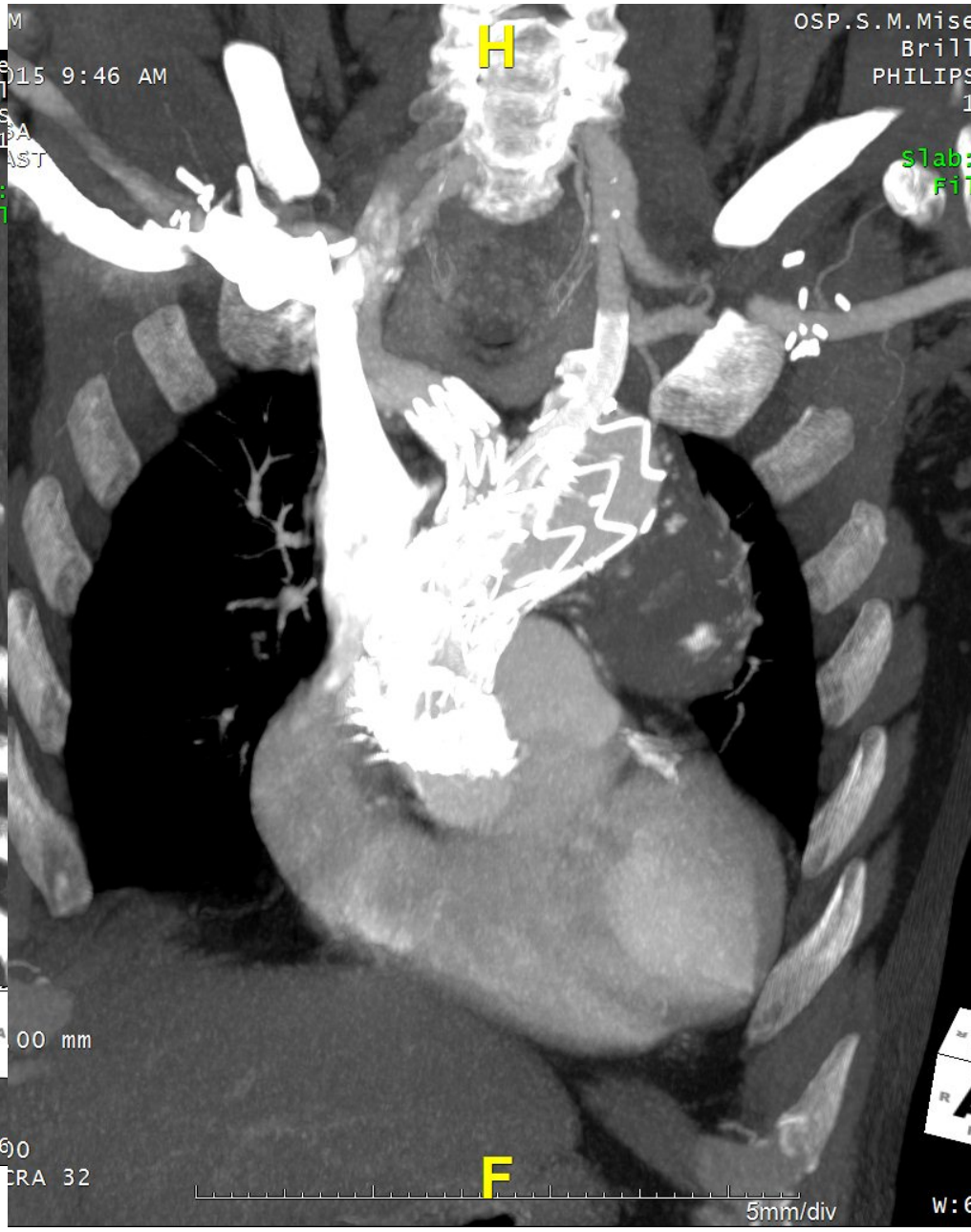

LAO 65
lumen 6
7/8
8
95 x 60
16/17
43
56
38
34
35
36/37
85 x 60
36
35
46
45
15
7
43
16/17
8
lumen 6
41
7
5

OSP.S.M.Misericordia
Brilliance 64
PHILIPS-49E1159



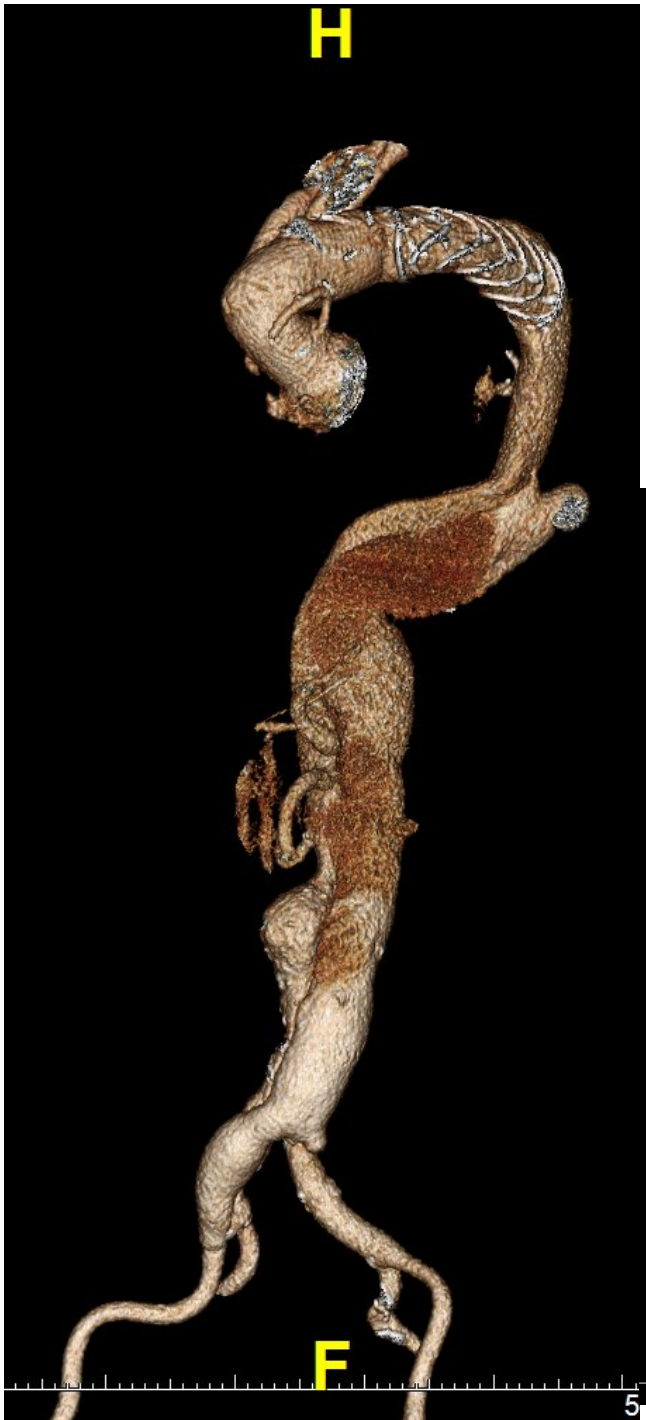
TeraRecon
W:181 L:221


Result after branched endograft
H
F
5mm/div


H
F
5mm/div


H
OSP.S.M.M
Br
PHIL
5 9:46 AM


A
OSP.S.M.Mise
Brill
PHILIPS
46 AM
P
5mm/div

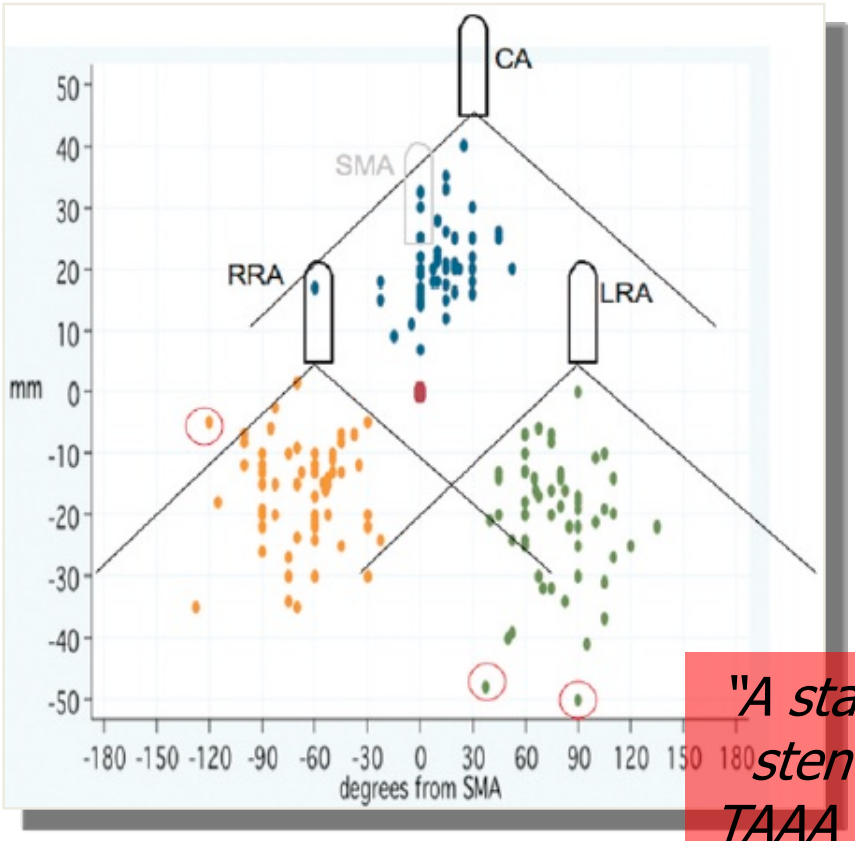


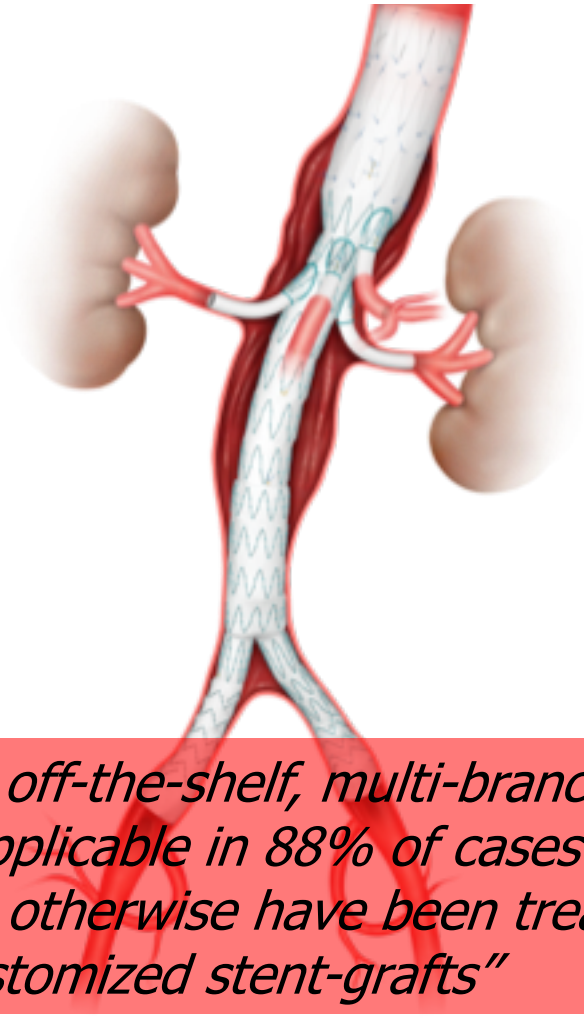
Male, 72 yo
CTBAD with 8 cm
Prox Thoracic
Aneurysm

A Standardized Multi-Branched Thoracoabdominal Stent-Graft for Endovascular Aneurysm Repair

Matthew P. Sweet, MD, MS[1]; Jade S. Hiramoto, MD[1]; Ki-Hyuk Park, MD, PhD[2]; Linda M. Reilly, MD[1]; and Timothy A.M. Chuter, DM[1]

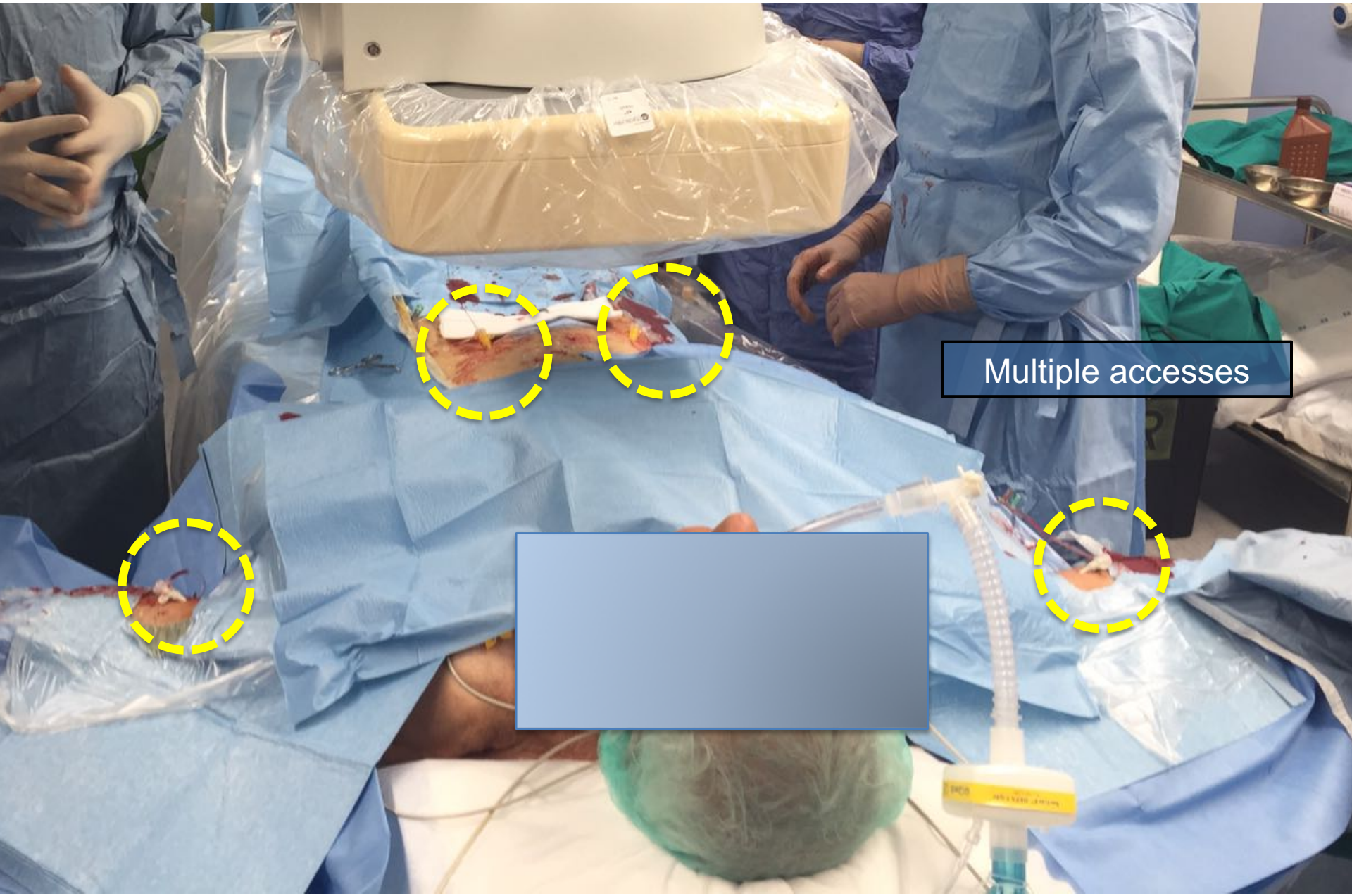
J ENDOVASC THER.
2009;16:359–364





"A standardized, off-the-shelf, multi-branched stent-graft is applicable in 88% of cases of TAAA that would otherwise have been treated using customized stent-grafts"

Graft availability


Multiple accesses

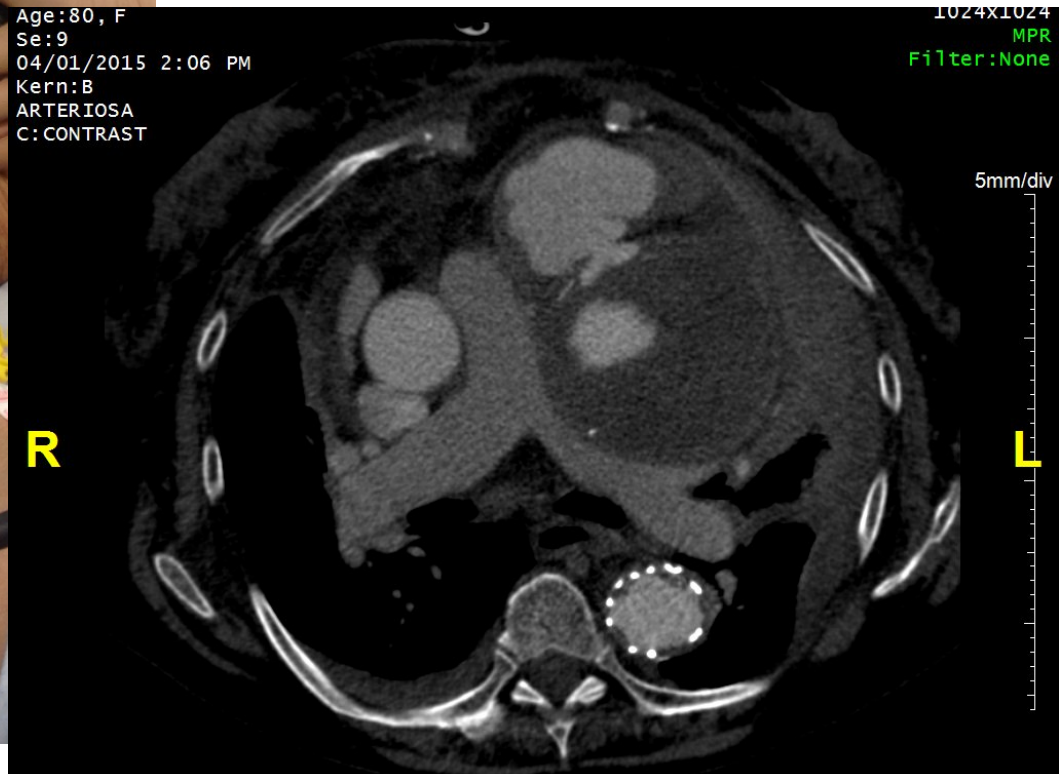
Increasing hi tech in Hybrid OR

- Rapid Pacing, TOE
- MEPs – SSEPs, NIRS
- LiquoGuard
- IVUS

Monitoring systems

EV1000 clinical platform from Edwards Lifesciences presents the physiologic status of the patient

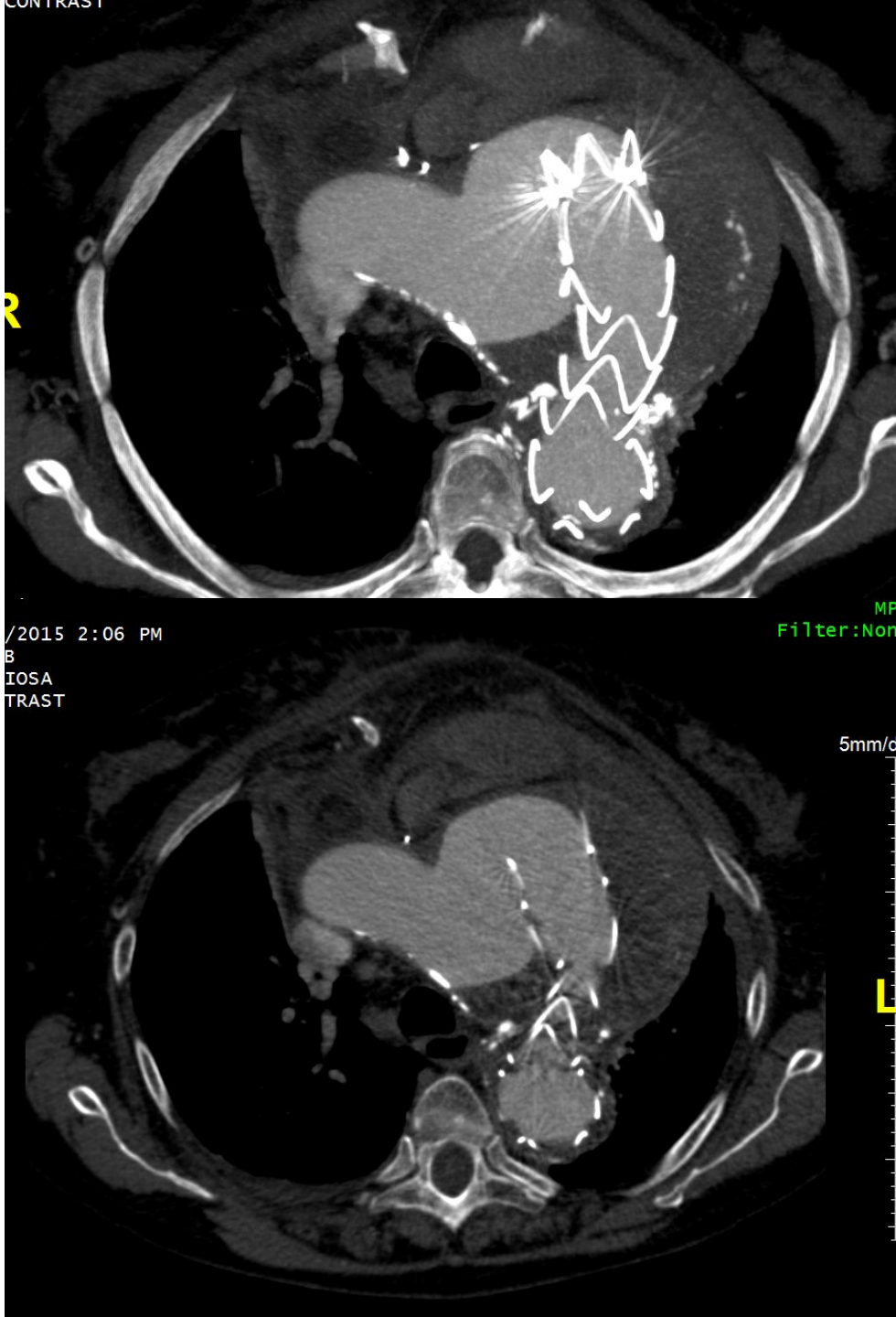
Female, 84 y.o.
Ruptured arch aneurysm
Previous TEVAR + LCA debranching and LSA exclusion

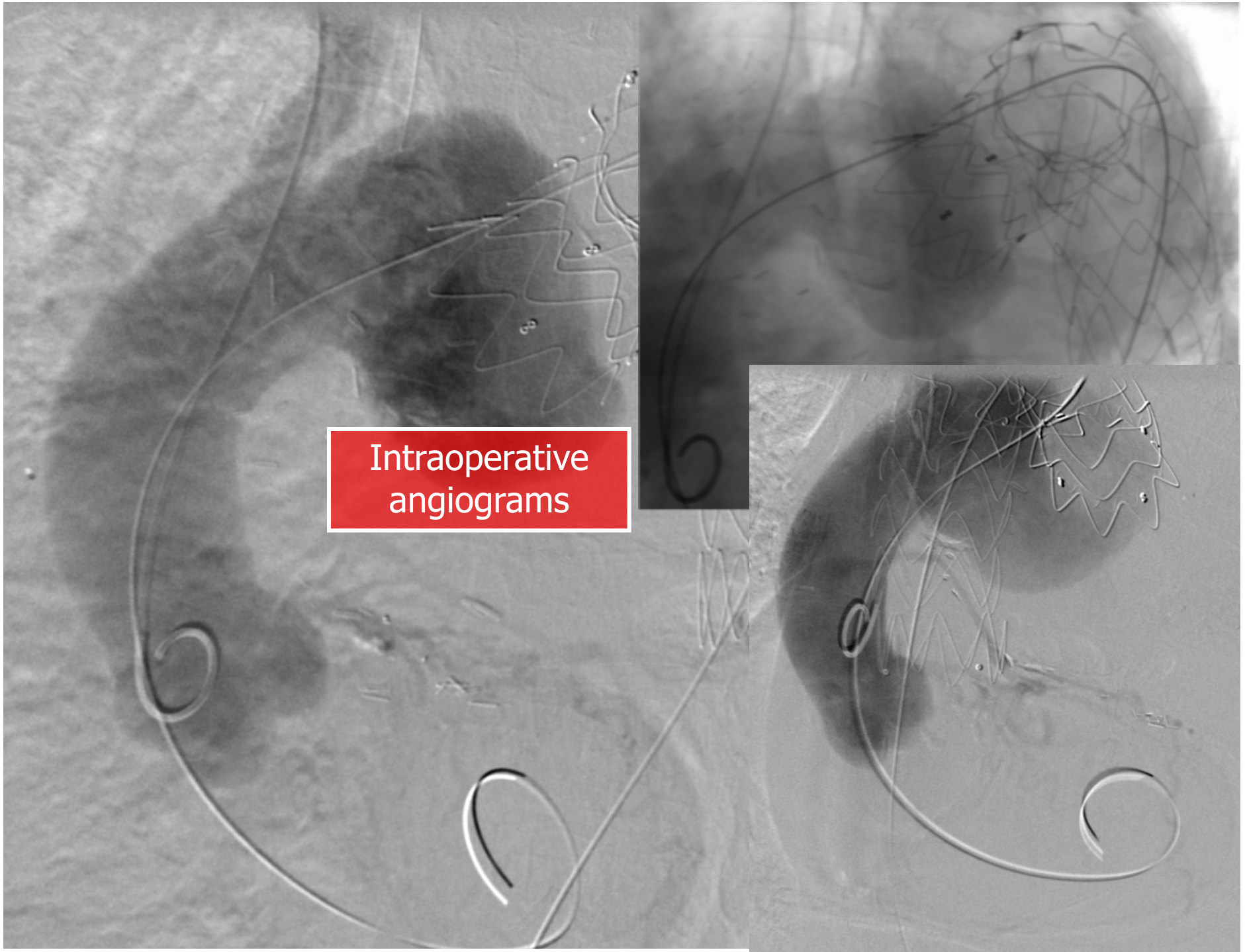


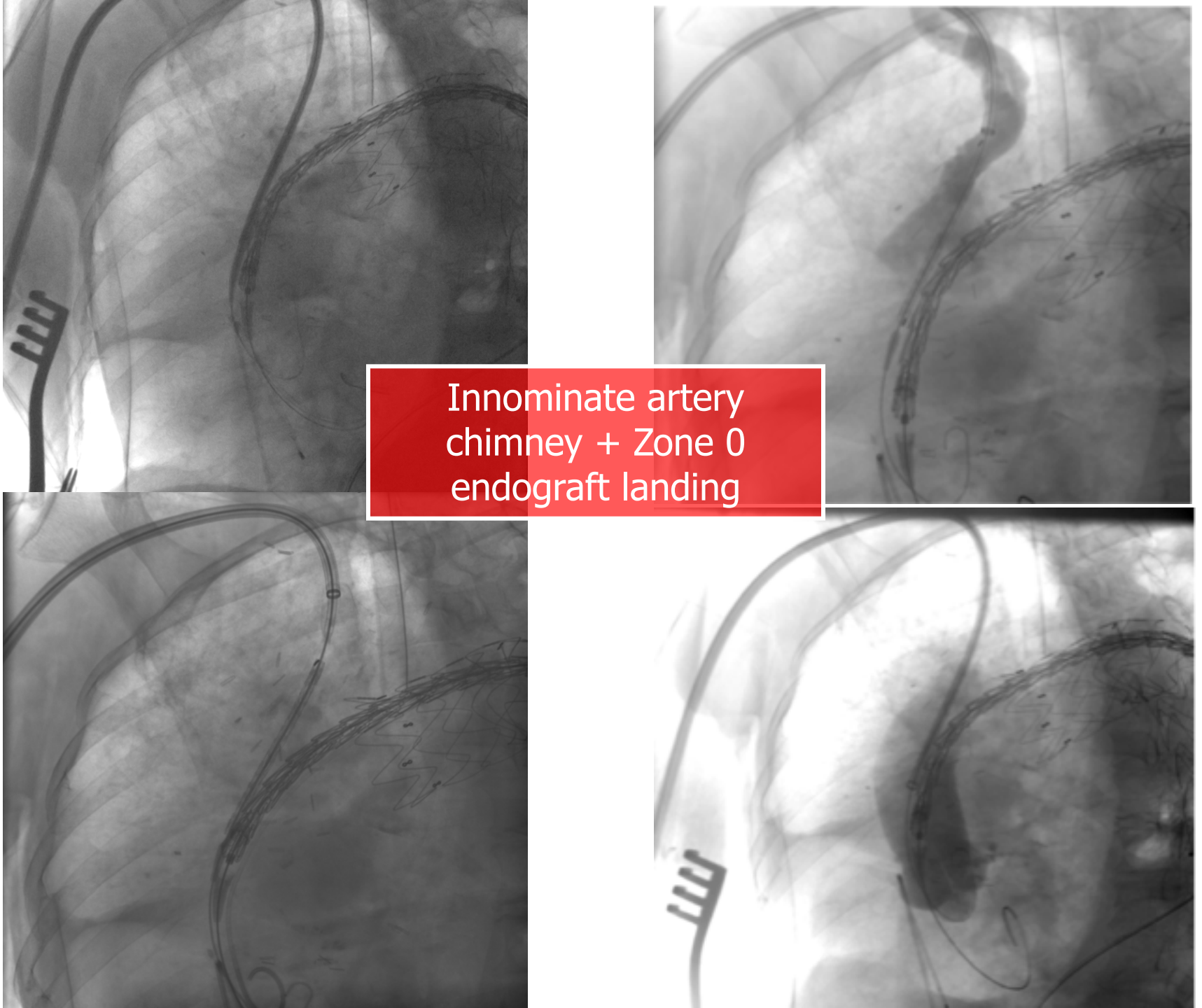

F
5mm/div

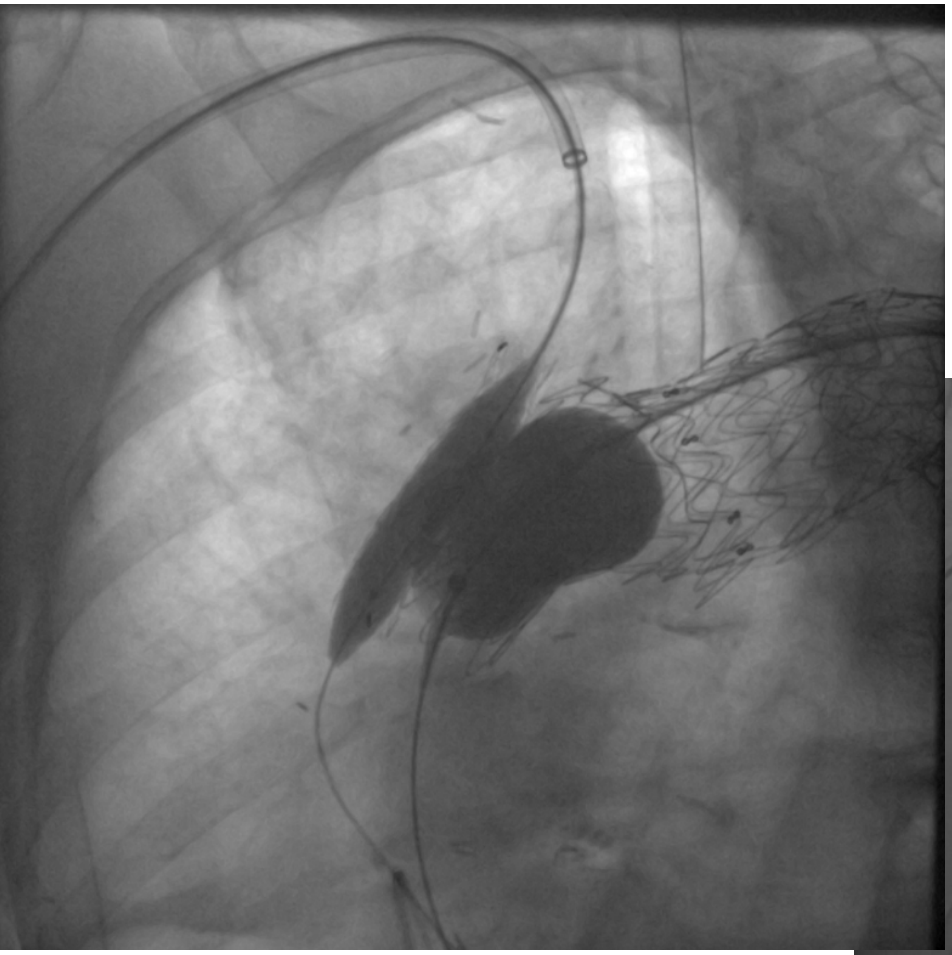

F
5mm/div


PM
Shock
Free mediastinic rupture
Type I endoleak and migration


CONTRAST
R
/2015 2:06 PM
B
IOSA
TRAST
Filter:Non
5mm/c

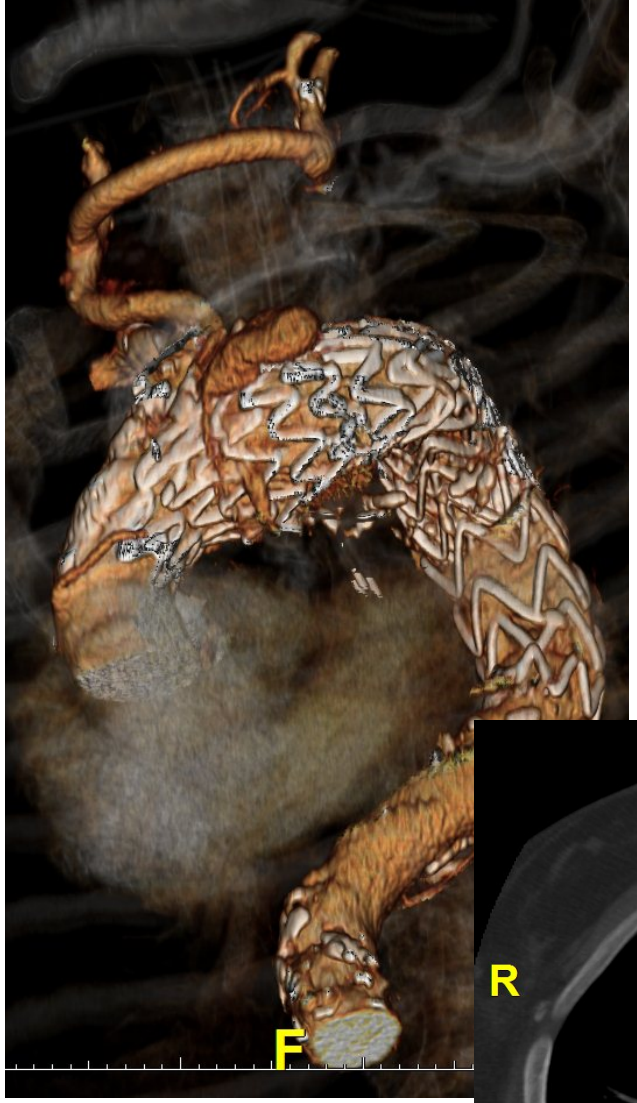

Intraoperative angiograms


Innominate artery
chimney + Zone 0
endograft landing

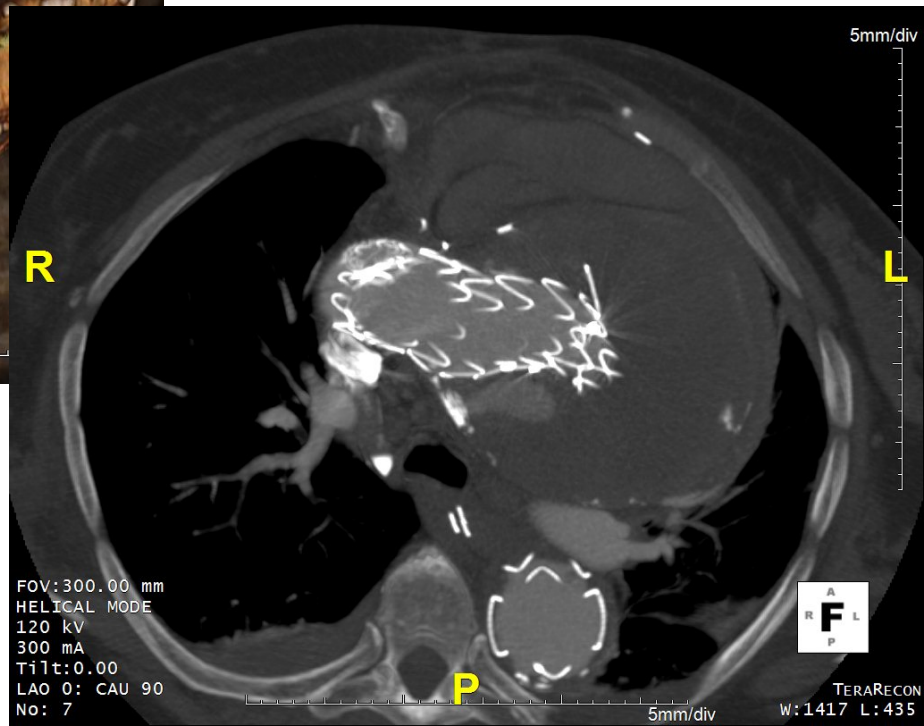


Kissing balloon

Final angio

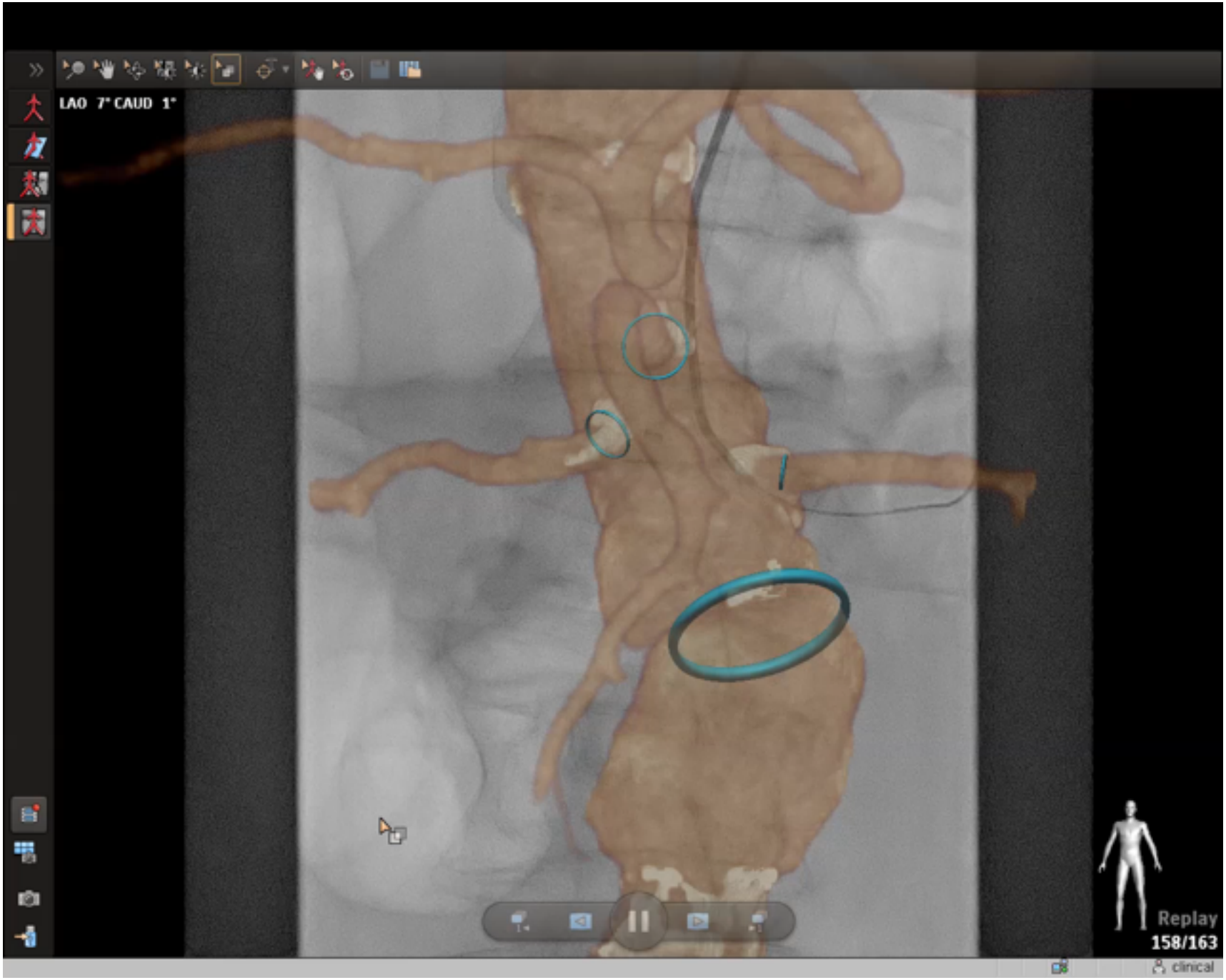


Control CT scan

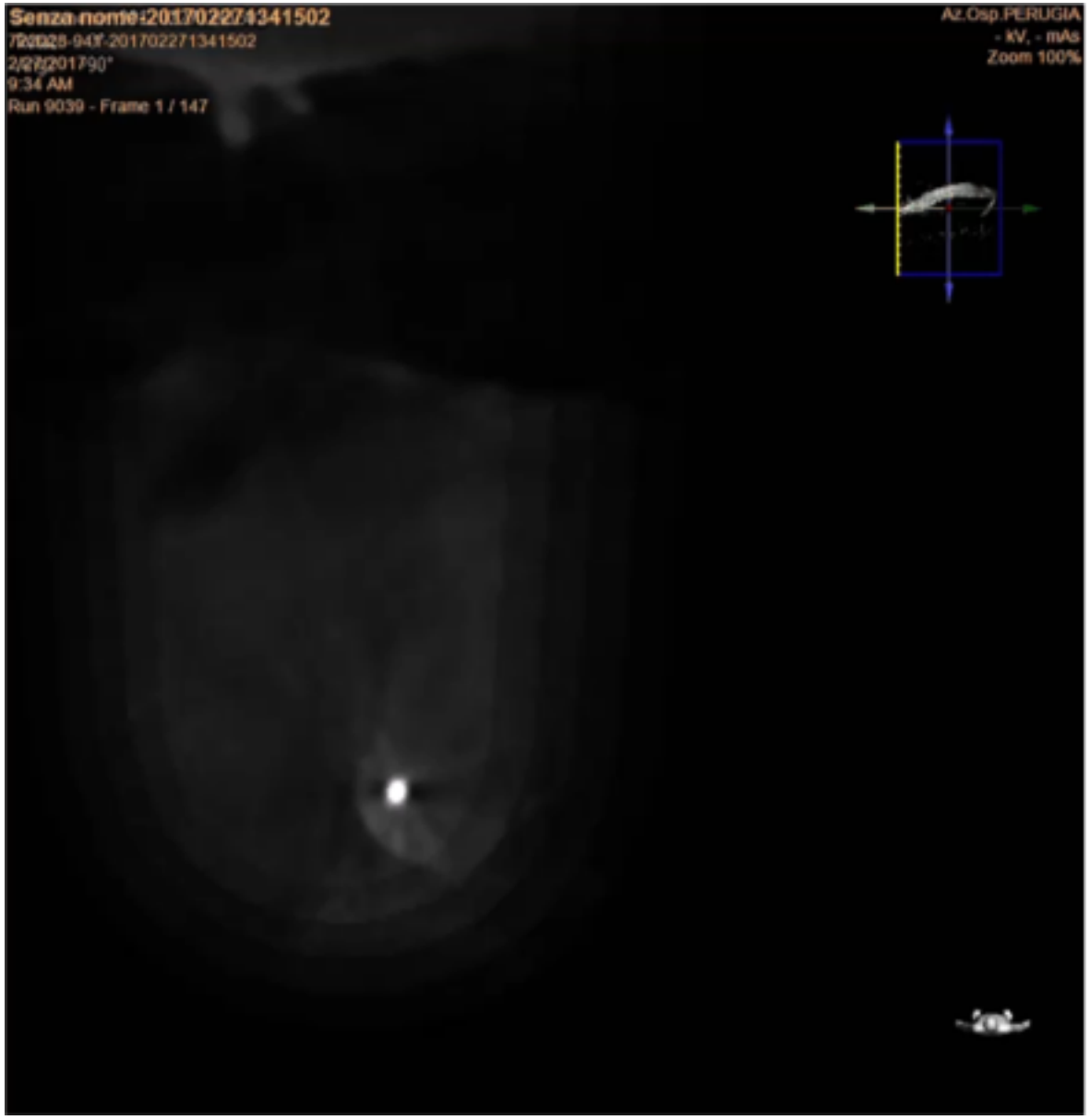


Open conversions

Major traumas


LAO 7° CAUD 1°
Replay
158/163
clinical

Cone beam CT intra-operative control



Future developments

Aortic Team: efficient way of combining knowledges and skills in **Hybrid OR**

- Integration
- Cross training
- Hybrid Specialists