How to do it: Complex access in TAVI.

Orbital Endarterectomy

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Disclosures

Disclosure

- Speaker name:
- Nilo J Mosquera, MD.
- I have the following potential conflicts of interest to report:
- ☑ **Consulting: Lombard Medical, Cook Medical, WL Gore, Cordis, Abbott Vascular, Artivion, Scitech, Bentley.**
- Employment in industry
- Stockholder of a healthcare company
- Owner of a healthcare company
- ☑ **Other(s): Spanish National Health Service Employee**

- I do not have any potential conflict of interest

The beggining of Multidisciplinary Aortic Team in Santiago 2021!!!

Setup: Hybrid room/suitable angiosuite

1. Vascular Surgeon & Int radiologist with experience in aorta endovascular repair.

2. Cardiac Surgeon/Interventional Cardiologist with experience in Structural Heart therapy.

3. Dedicated Anesthesiologist

Aortic Multidisciplinary Team: is there a need for such a thing? THE AORTIC WORLD

It has been always a good way to manage aortic disease: now is mandatory

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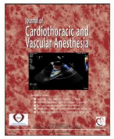

Editorial

Multidisciplinary Teams: Better Together

Implementation of a Comprehensive Endovascular Aortic Programme and Maintenance of Clinical Excellence during Fenestrated Branched Endovascular Aortic Repair in Two Centres

Lucas Ruiter Kanamori [a], Andrea Vacirca [a,b], Dora Babocs [a], Emanuel R. Tenorio [a], Guilherme B.B. Lima [c], Bernardo C. Mendes [c], Ying Huang [a], Steven Maximus [a], Anthony Estrera [a], Gustavo S. Oderich [a,*]

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Editorial

Interdisciplinary Aortic Care Teams: Bring on the A-Team

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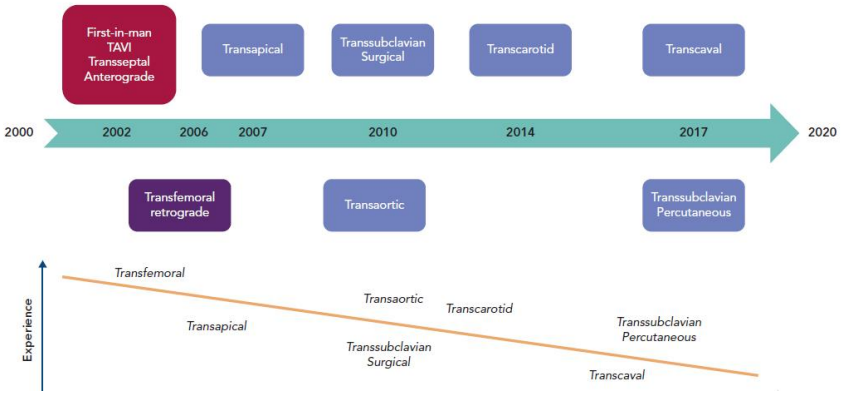
See article by McClure et al., pages 1484-1498 of this issue.

"The major benefit for patients can be achieved by combining the expertise of an interdisciplinary team for aortic pathologies"

Access in TAVR: Choice of Access.

Figure 1: Timing of published cohorts regarding alternative approaches for transcatheter aortic valve implantation and relative experience with respect to the abundance of data of each alternative approach



Delivery Systems ARE DESIGNED for transfemoral

Go for Femoral!!!

TABLE 1 | Procedural outcomes according to the access site.

Access	Procedural success(%)	30 D mortality	Major and life-threatening bleeding	Neurological events (TIA/Stroke)	New pacemaker implantation (%)
Trans-femoral (3–14)	95–100	2.1–5%‡ 5.2–9.7%†	9.3–28.1%‡ 3.5–11.4%†	6.7% (30 days stroke) 3–4.1% (1 year stroke)	3.4–34.1 5.9–20.1
Trans-axyllarian (16)	97.9		7.8% life threatening	2.1%	24.7
Trans-Aortic (17–24)	87–100	6.1–13%	0.3–12%	0–3.2%	0–14
Trans-Apical (13, 25–28)	90–96	4.6–14%	3.6–6.1%	1.3–4.1%	5.4–11.0
Trans-Carotid (29)	100	6.3%	4.2%	3.1% (all TIAs, stroke not reported)	26.5
Trans-Caval (30, 31)	100	8%	12% (6% transcaval related)	5%	16

It´s 2025: Is not 24F anymore.

SAPIEN 3	14F (23-26) 16F (29)	➢ 5 mm ➢ 5,5 mm
EVOLUT PRO +	14F (23-29) *16F (Evolut R 34) 18F (34)	➢ 5 mm ➢ 5,5 mm ➢ 6 mm
ACURATE 2 NEO	*18 F (S,M,L) iSLEVE 14 F	➢ *5,5mm
NAVITOR	14 F 15F	➢ 5 mm ➢ 5,5 mm
ALLEGRA	18F (23-31 M)	> 6mm

Preliminary results first 6 months of EVART in TAVR…

- Open access reduced by 65%.
- Urgent access repair reduced by 57 %
- 0% Acute complications in Multidisciplinary Team cases.
- 0% procedures aborted due to access issues.
- Local anaesthesia procedures increased.
- Transaxillary/transcarotideal access reduced by 82%.

More than the access…
What if the you find AAA or AAT: Aortic Integral treatment

EVART Concept: EndoVascular aorta and Access Repair+ TAVR

- Treat the Aorta as a organ: The value of the Aortic Team
- Secure the access, treat the iliacs, reduce complications

AORTIC TEAM 2023/2024							
Femoral	43	EVAR 8	FENESTRATED/EVAR 1	CERAB 1	ILIAC STETING 1	ORBITAL 3	SHOCKWAVE 1
Axillary	2	BBX 1	Begraft 1				
Transaortic	3	Bypass de AMI a DA 1					

and minimize impact on your patients

"Optimizing Complex Access in TAVI: The Aortic Team Experience (2019-2023/2024)"

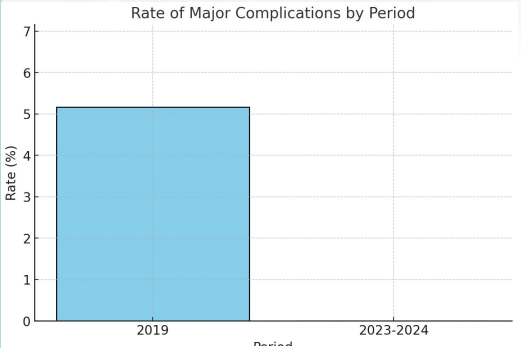
TAVI 2019			
Access Type	Nº Of pacientes	Complic…	…ess rate
Femoral puncture		37	75
Axillar	2	0	100
Open fe…oral	2	0	100

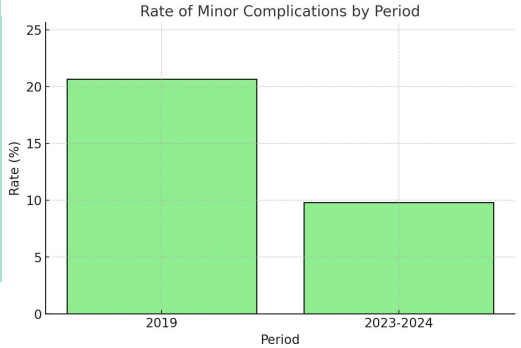
25 % complications 5% Major

Aortic Team – Complex Access 2023/…			
Access Type	Nº Of pac…	C…	…ess
Femoral …		3	93
Axilla…	5	2	60
Transac…	3	0	100

7 % complications 0% Major in complex access

Complication	2019	2023-2024
Aortic dissection	1	0
Femoral dissection	1	0
Stroke	3	0
Pseudoaneurysms	7	0
Hematomas	17	3
Closure device failure	5	2
Deaths	3	0
Bleeding	1	0
Vascular trauma	2	0





Aortic Team Era – Regular Access 2023/2024			
Access Type	Nº Of pacientes	Complications	Success rate
Femoral puncture	256	11	96

4 % complications 0% Major in standard access

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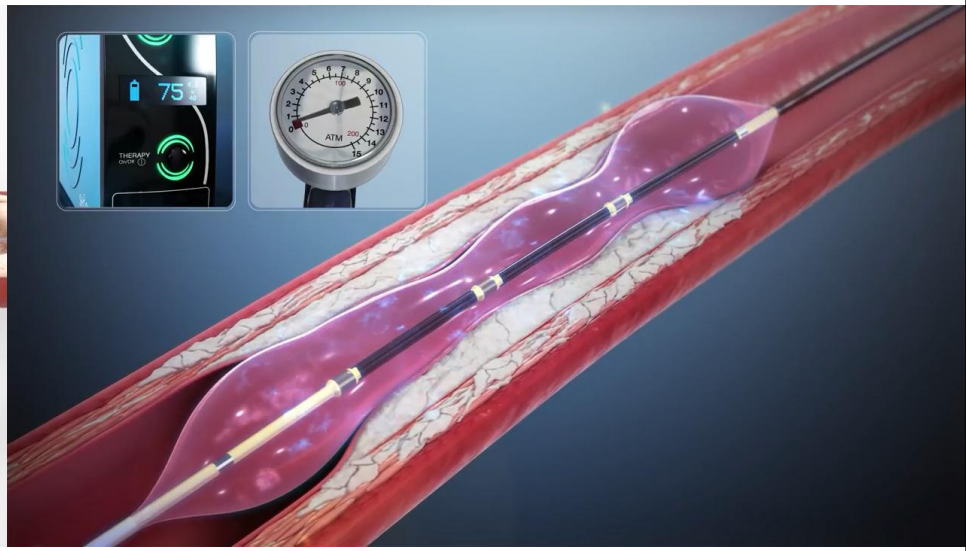
Calcified access and pathway the worst enemies!!!

Orbital Atherectomy

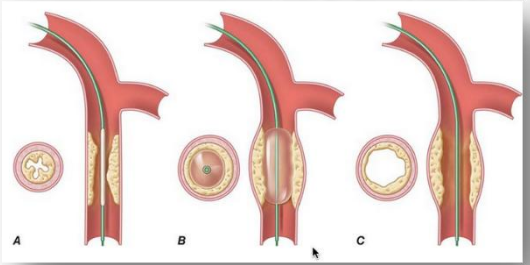
IVL



Our preference

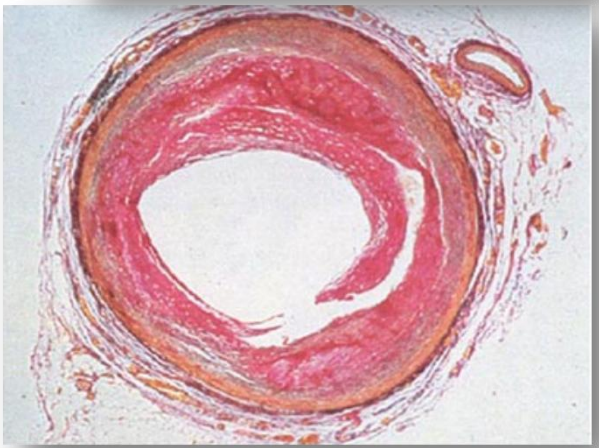
STEALTH 360° PERIPHERAL ORBITAL ATHERECTOMY SYSTEM

DEBULKING in Vessel Prep



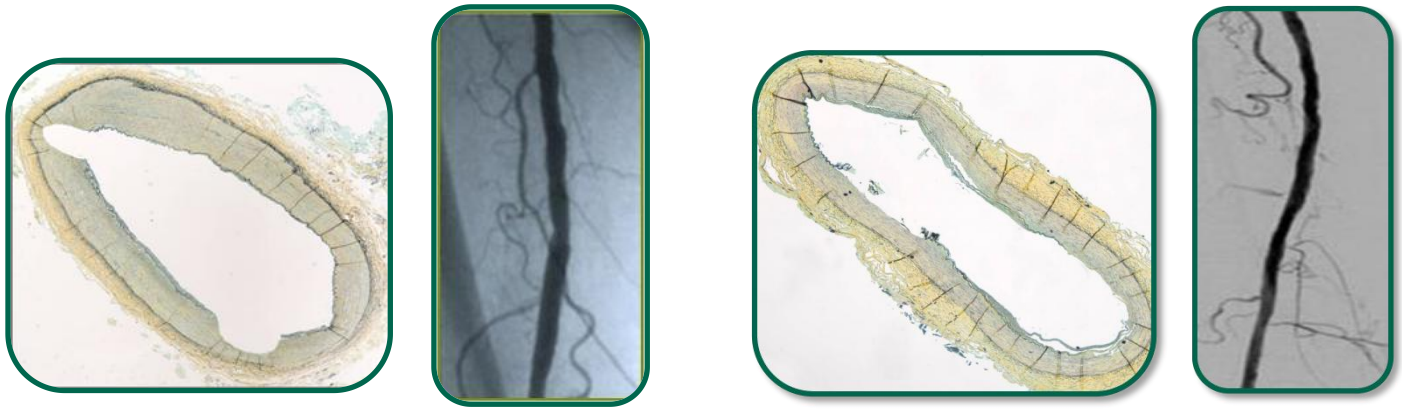
Debulking Atherectomy – Benefits:

- Uniform angioplasty
- Less vessel trauma.
- Less recoil.
- *Less stenting*.
- Before DEB.



Benefits rotational atherectomy vs cutting:

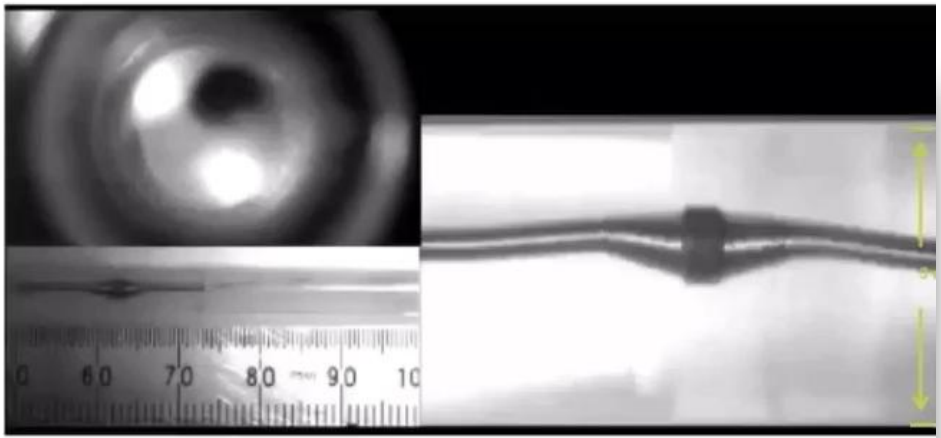
Less trauma on median layer



Demonstration Of Physics And Performance

High speed videos show classic crown in orbit

- 1.25 mm Classic Crown orbiting in a 3 mm glass tube
- Crown orbiting to tube diameter



For EVART cases we use basically just the biggest SOLID crown

Case 1

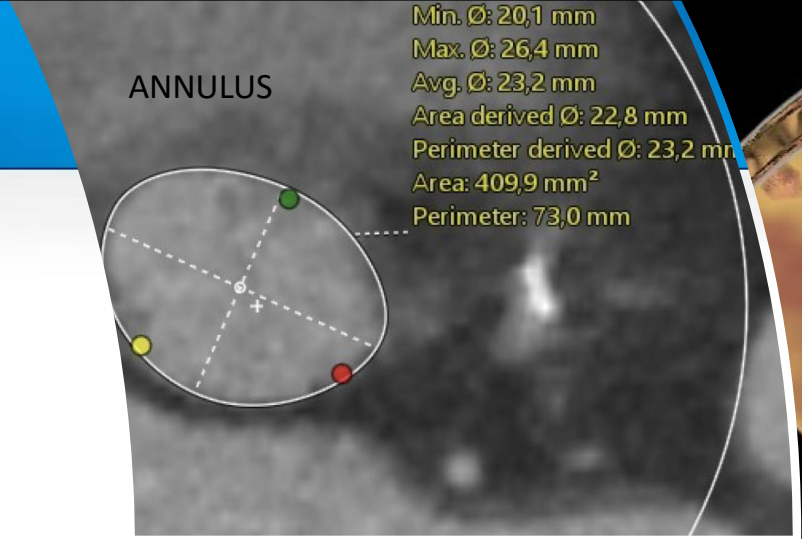
75 yr Female.

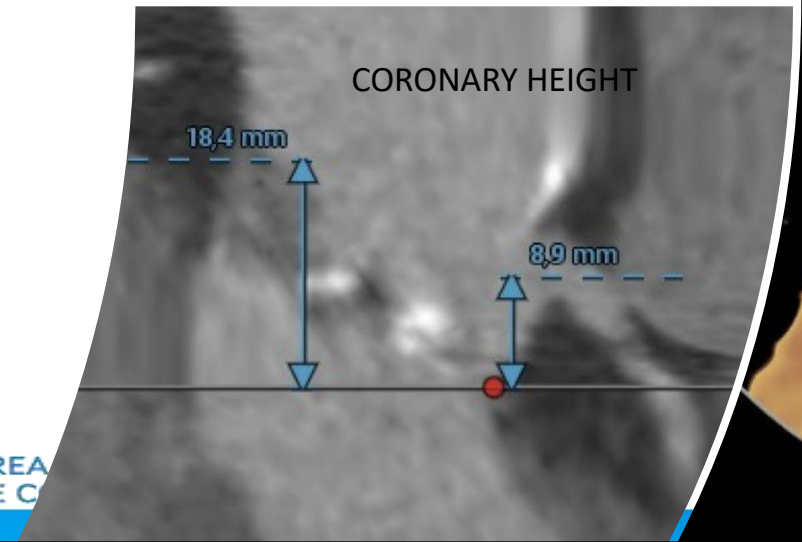
HT, DL.

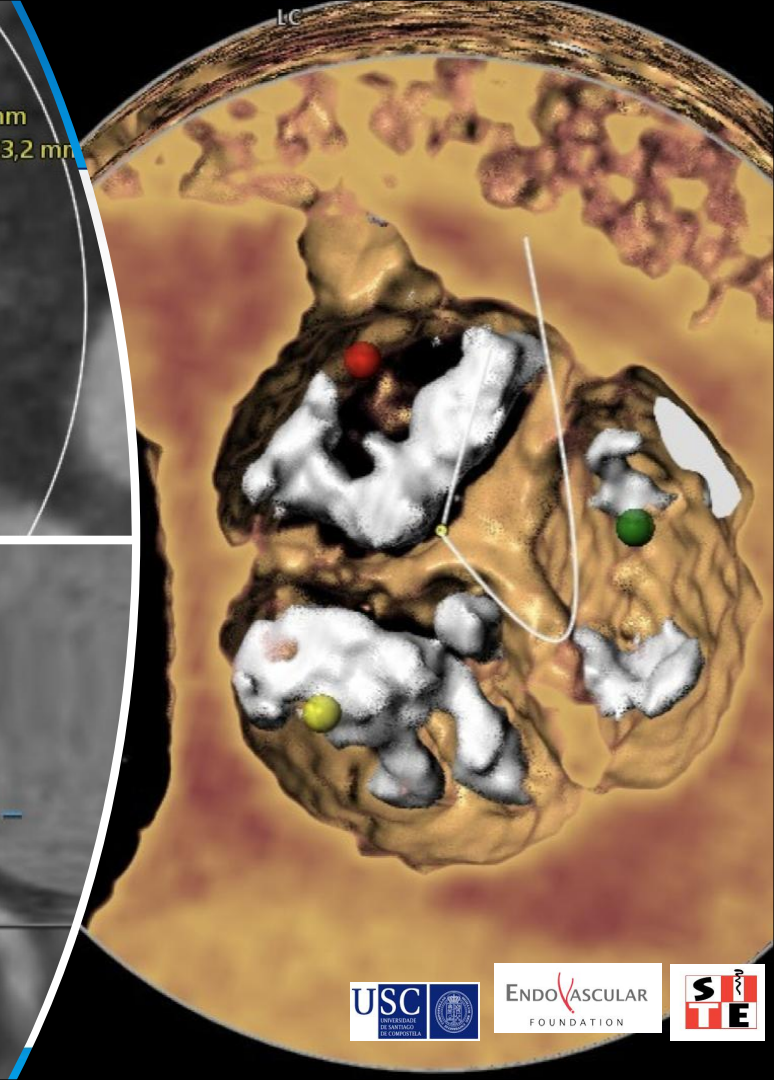
Hypersensitivity Pneumonitis.

Osteoporosis.

Histerectomy.







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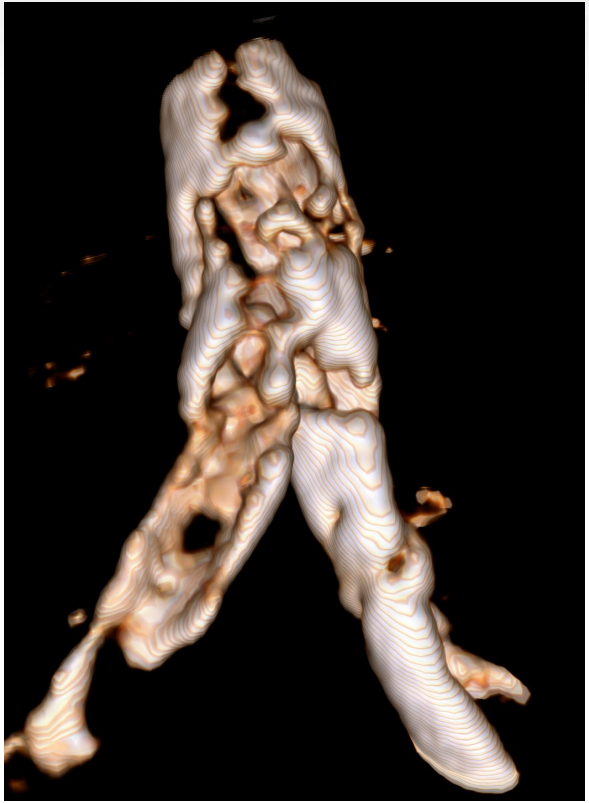
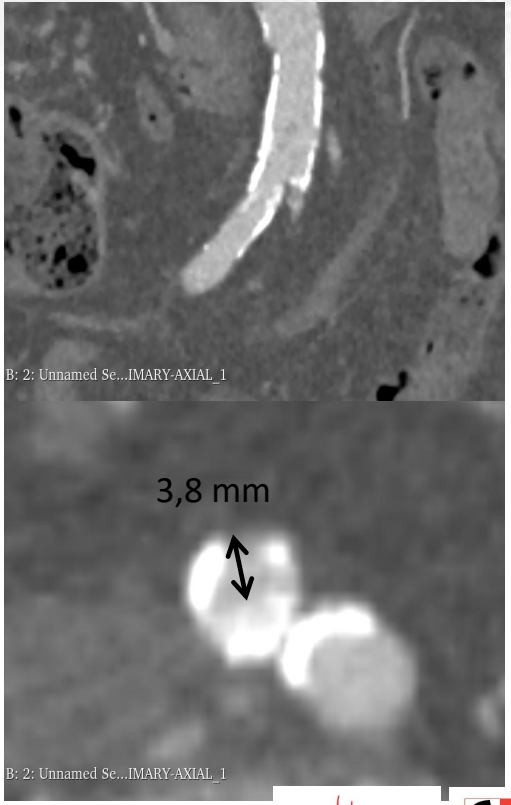
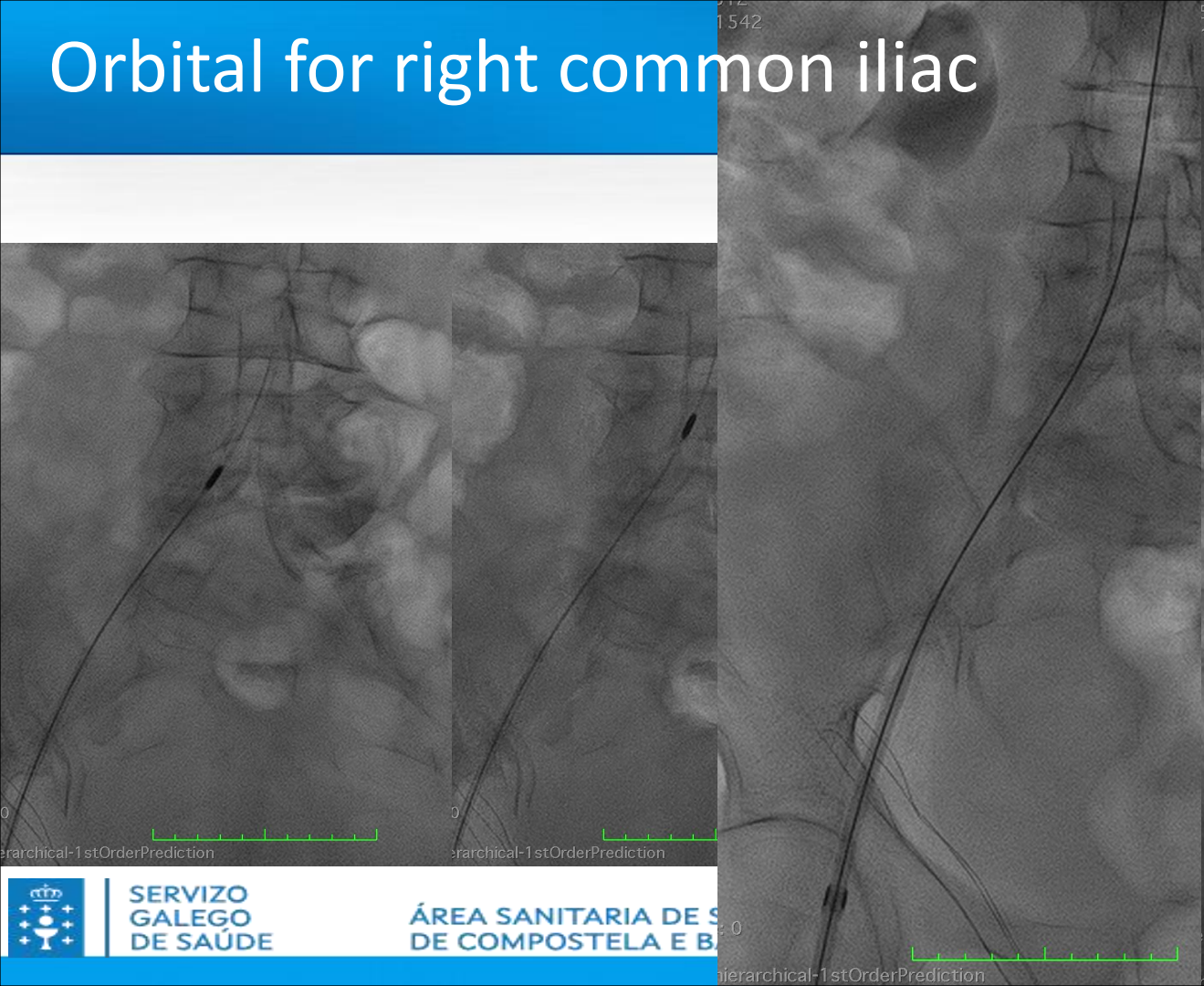
CT pre-procedure

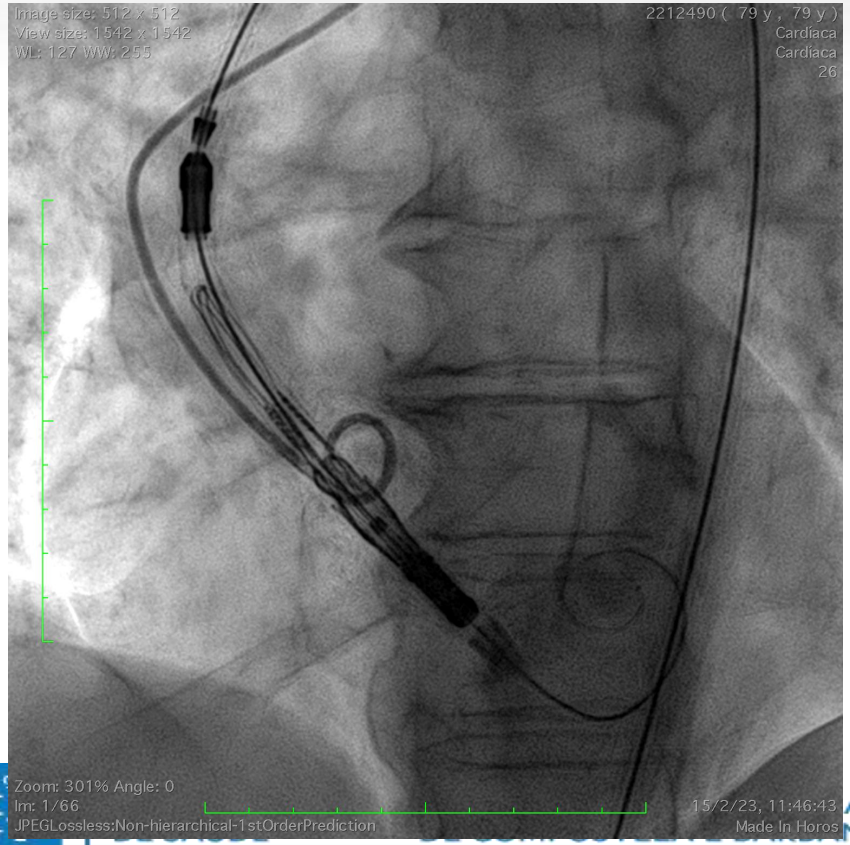




Orbital for right common iliac



TAVR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26
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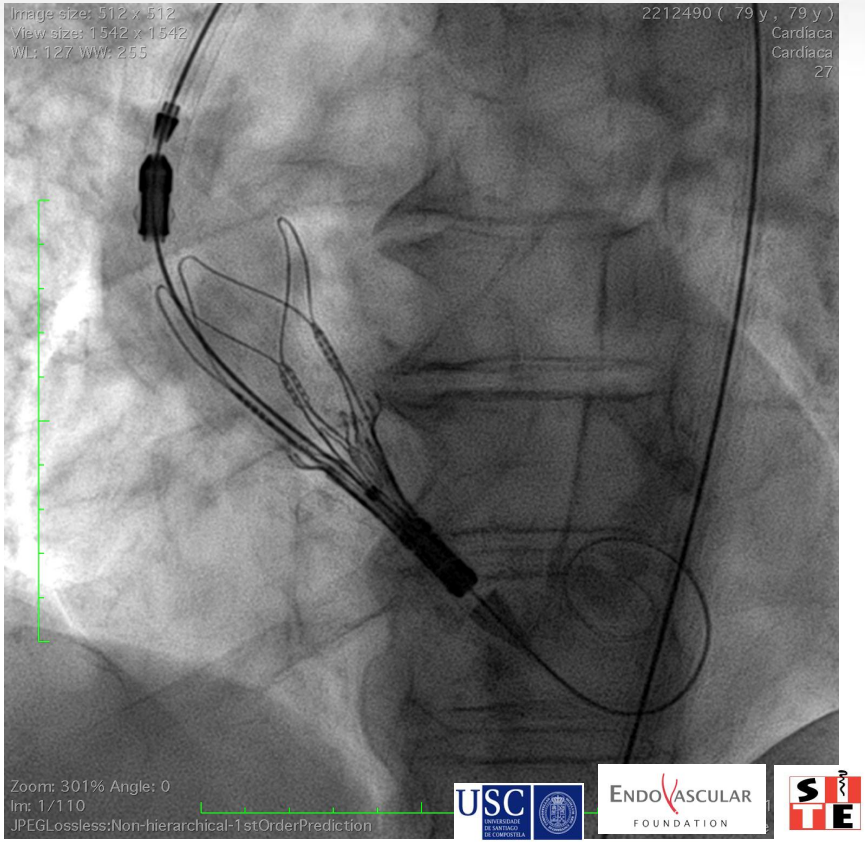
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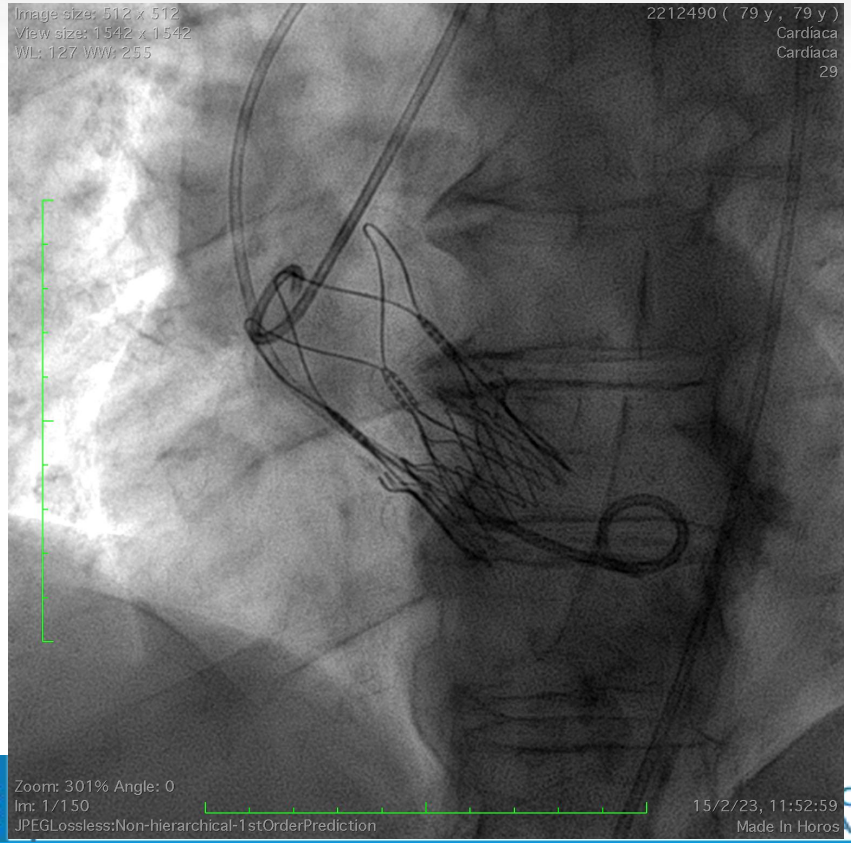
Final check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29
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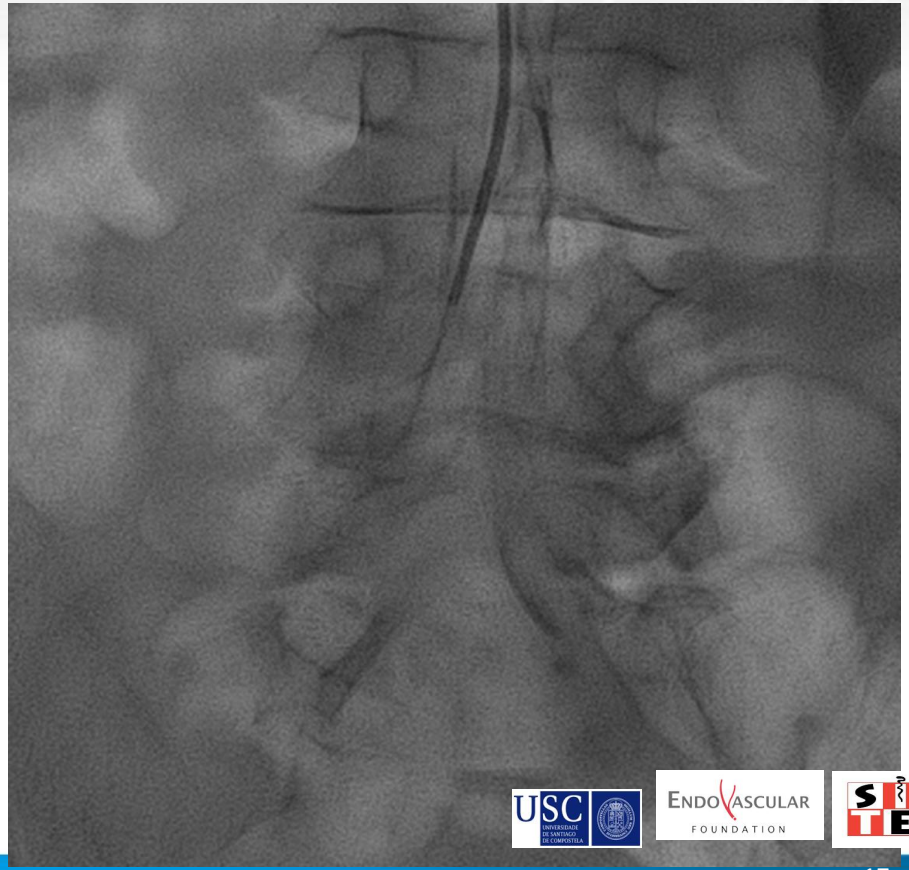


Case 2. More than TAVR…

Leave-nothing behind strategy not a chance in this case

80 years old female

Repeat coronary ischemic events.

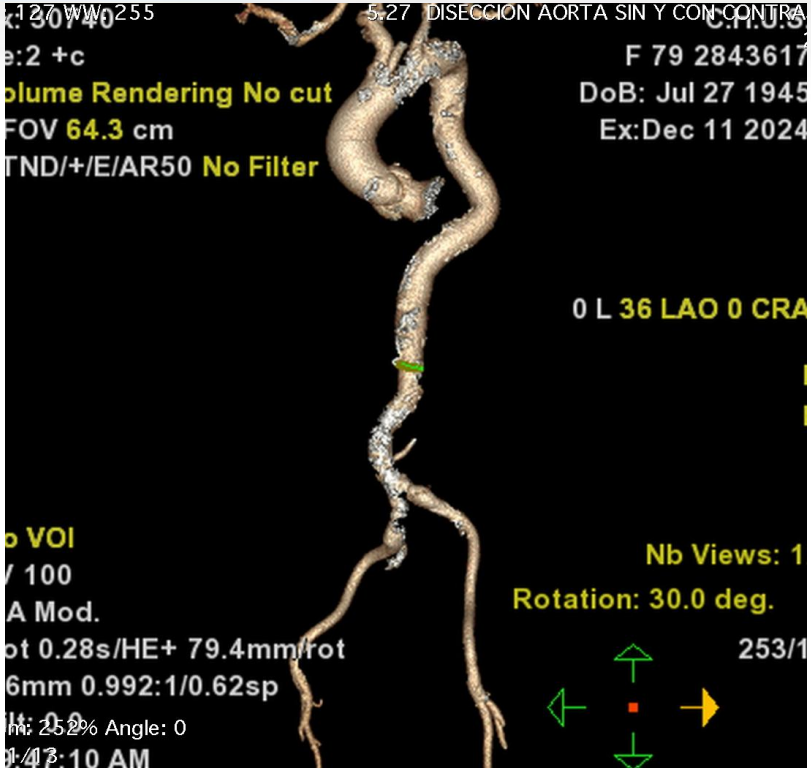
No upper arm access (radial or humeral)

Extensive infrarenal and iliac calcification.

Lower limb critical ischemic condition after femoral coronariography (aborted by lower limb pain).

CERAB/KISSING?

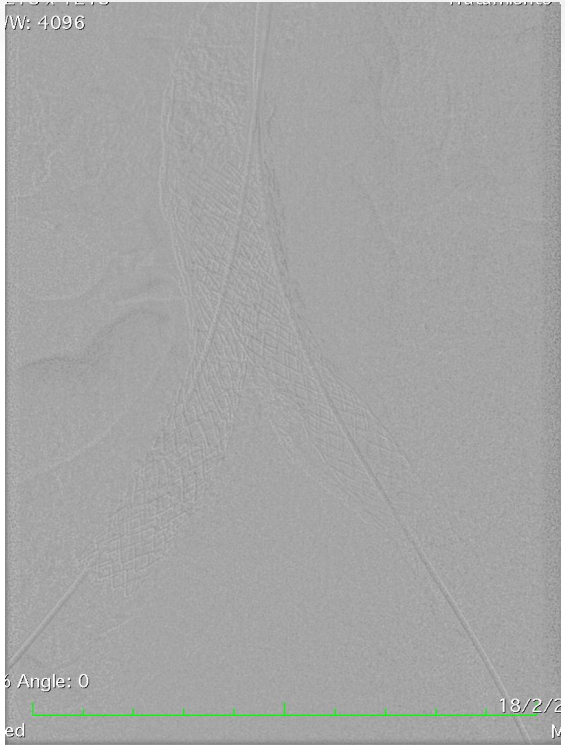
Case 2. More than TAVR…

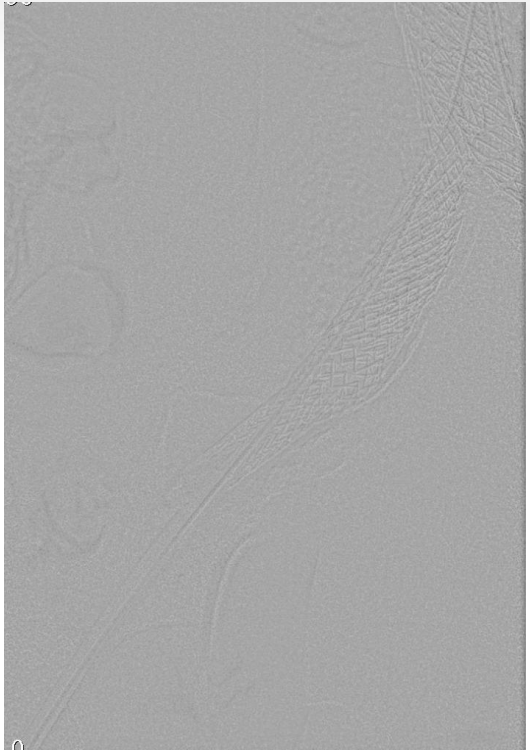


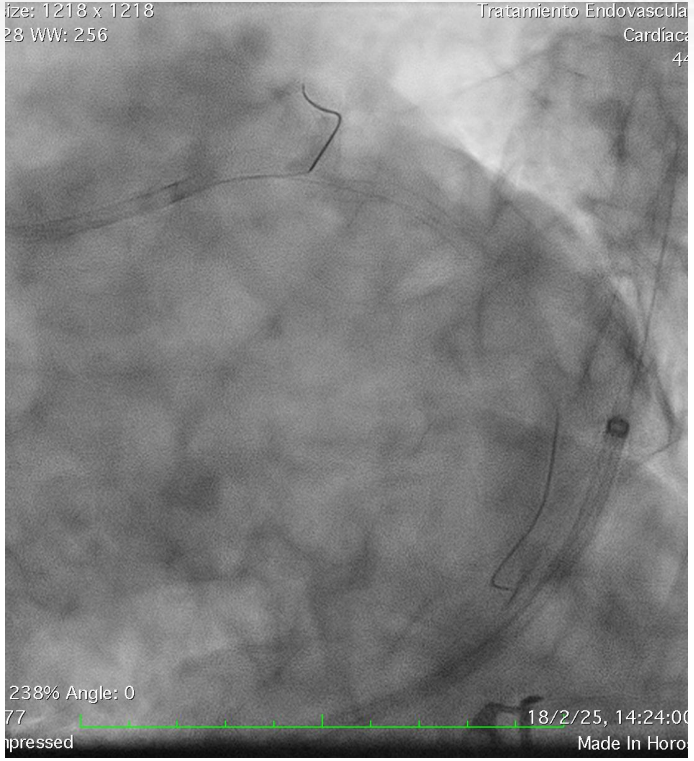
Preop CT scan

CO2 diagnostic run confirms “issues”

All-in-one procedure







More than conclusions: 3 Take-Home Message

- Pre-procedure **CT planning** is critical and Multidisciplinar approach to **Explore Complete Vascular Route**. Not only puncture site.

- Morphometric análisis for complex cases is critical: Assess **calcium burden** and distribution. Messure **mínimum lumen** diameters whole iliac-femoral axis. Evaluate vessel **tortuosity**

- Peripheral **plaque modification techniques** can help: VESSEL PREP techniques rule!!! Orbital endarterectomy is our favourite.

Thanks for your attention and be invited!!

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