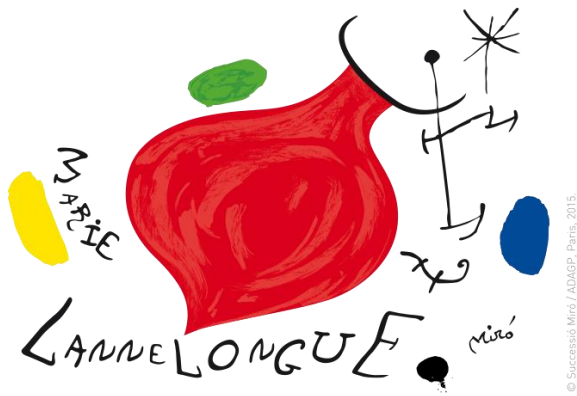


ZBIS - Tips & Tricks

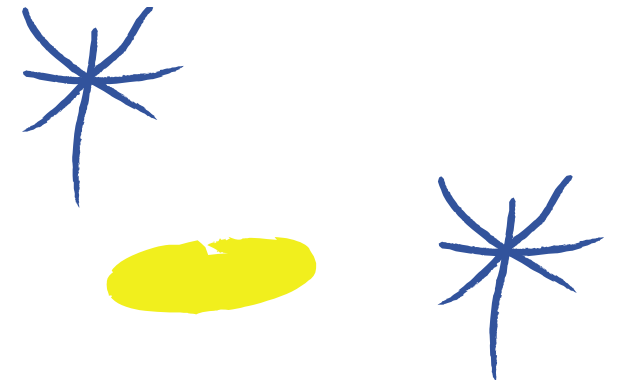
Stéphan Haulon,

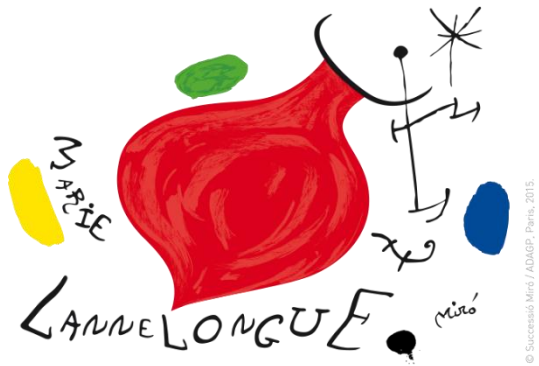
D. Fabre, R. Soler, S. Mussot, O. Mercier, D. Mitilian, E. Fadel

Centre de l'Aorte, Hôpital Marie Lannelongue,
Université Paris Sud, France

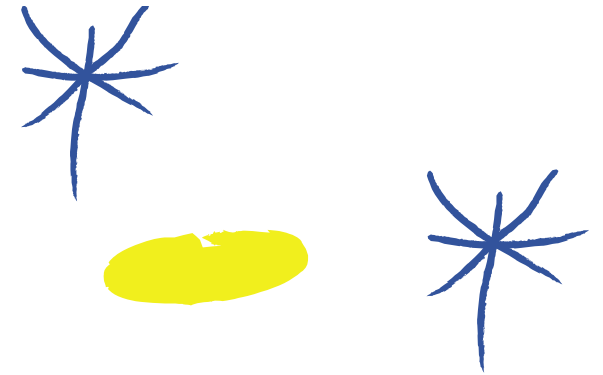


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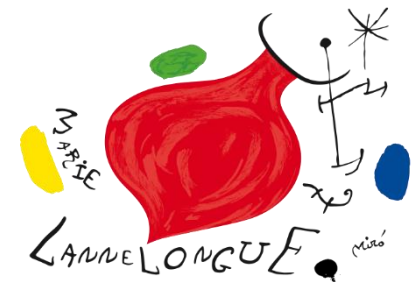
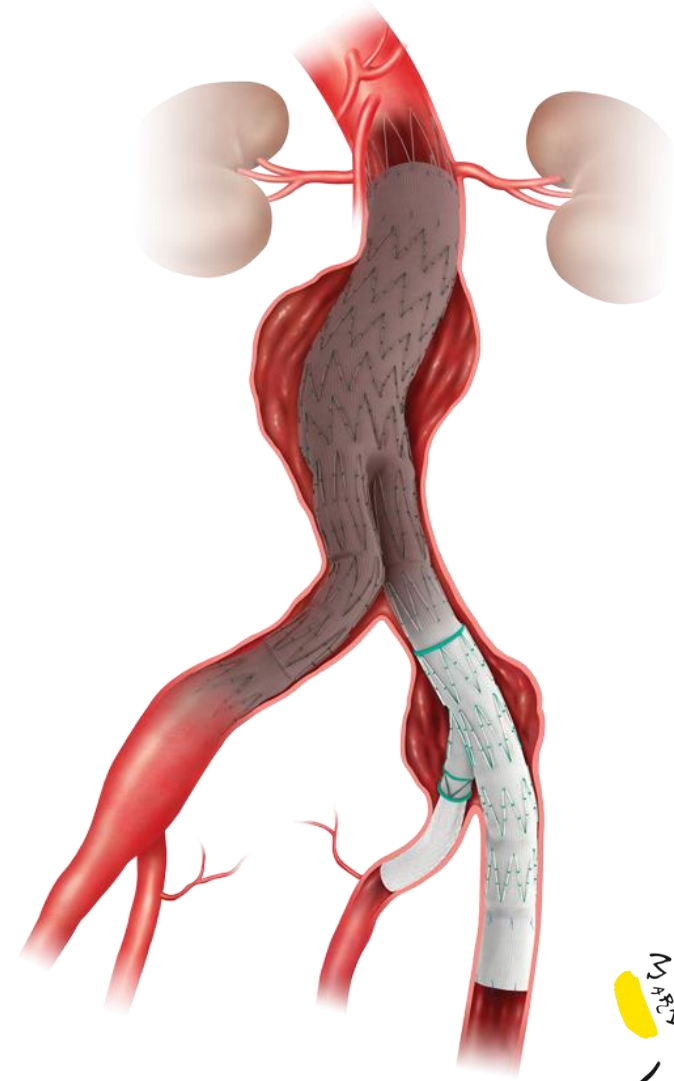
Disclosures



- Research support, Consulting
 - Cook Medical, GE Healthcare, Bentley

EVAR challenges

- Up to 40% of abdominal aortic aneurysms have coexisting unilateral or bilateral iliac artery ectasia or aneurysm.
- Iliac Artery Occlusion Leads to Increased Risk of Buttock and Thigh Claudication.
 - Up to 1 in 3 patients with bilateral internal iliac occlusion experience buttock and/or thigh claudication.*

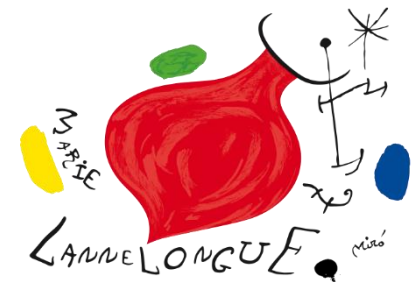


*Bradby MJ, Munneke GM, Belli AM, Loosemore TM, Loftus I, Thompson MM, Morgan RA.
How Safe is Bilateral Internal Iliac Artery Embolization Prior to EVAR? *Cardiovasc Intervent Radiol* (2008) 31:246-253.

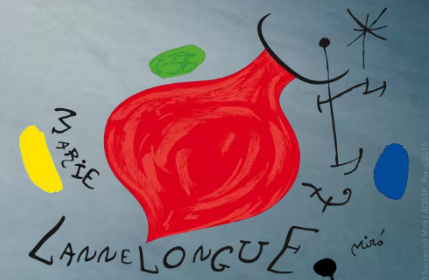
Potential Complications

- In the setting of internal iliac occlusion, up to 30-40% of patients suffer long term morbidity including:
 - Claudication
 - Erectile dysfunction
 - Colon ischemia
 - Spinal cord ischemia

¹ Lee et al. A technique for combined hypogastric artery by pass and endovascular repair of complex aortoiliac aneurysms, *J Vasc Surg* 2002;35:1289-91.



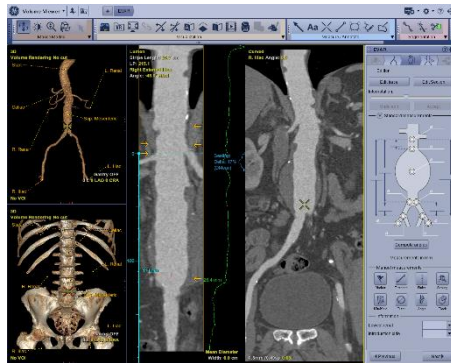
GE Discovery IGS 730 Hybrid Room



EVAR ASSIST 2



Planning *Pre-op*



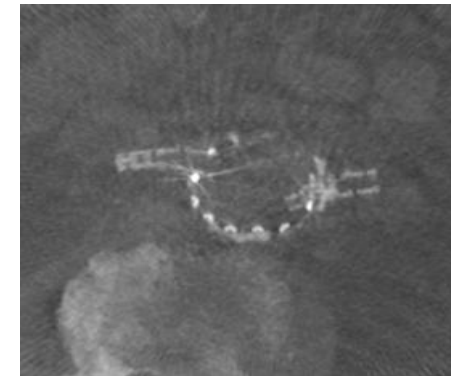
- Case selection
- Case preparation:
 - Sizing
 - Landmarks
 - Fusion mask

Guidance *In the OR*



- Fusion registration
- Endograft deployment

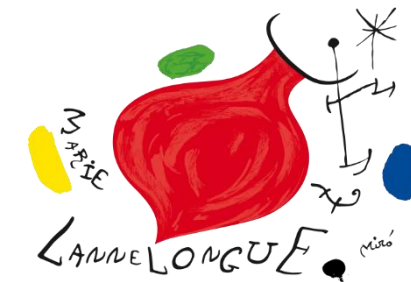
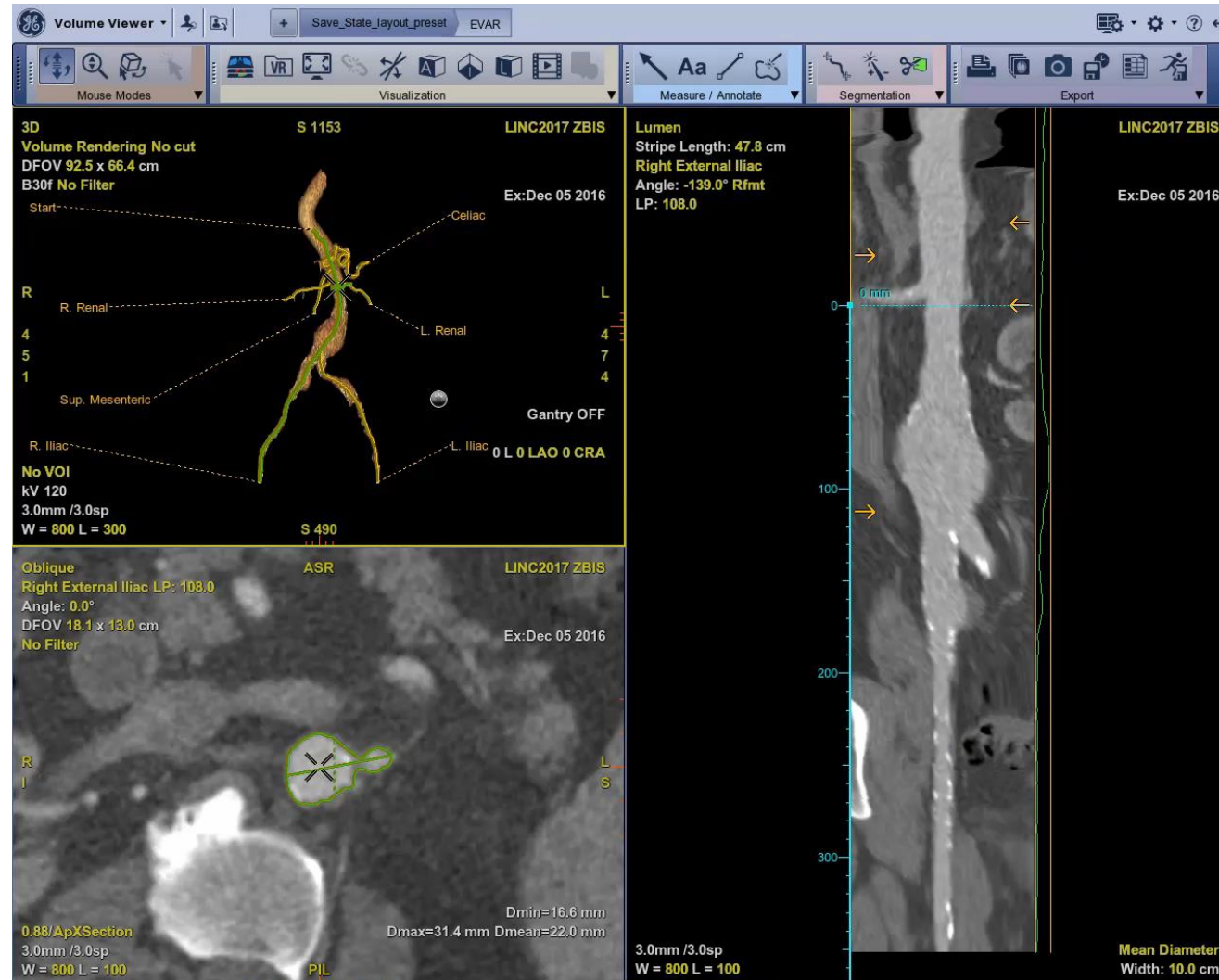
Assessment *In the OR*



- CBCT evaluation
- On the spot correction of stent kinks or endoleaks



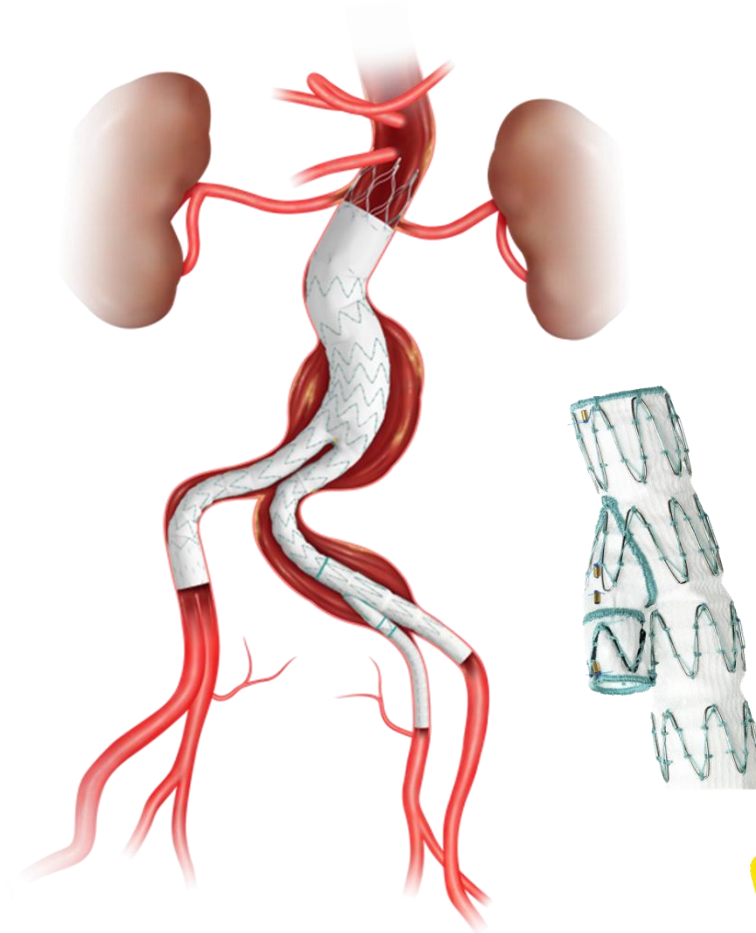
Case planning EVAR ASSIST 2



Zenith Alpha abdominal and Zenith Iliac Branch devices

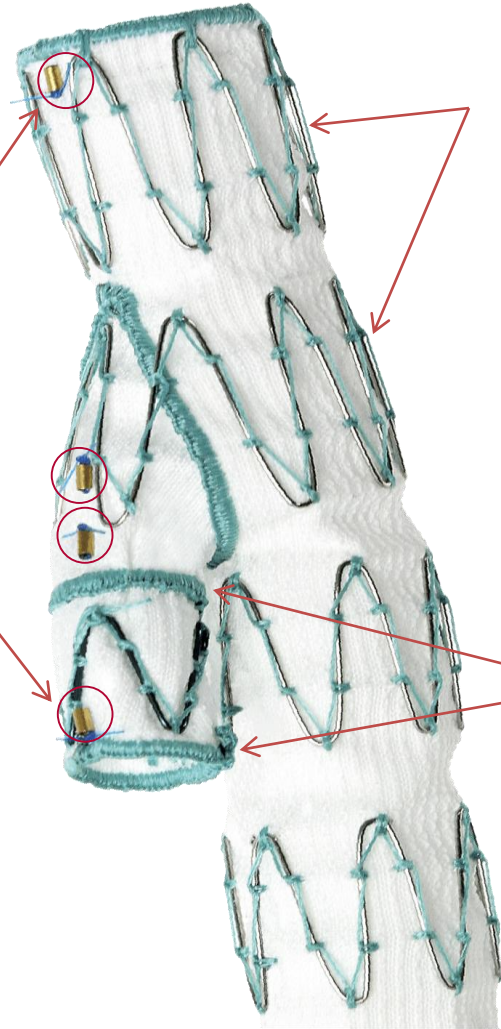
A good combination...Provide abdominal solutions

- Durability
- Portfolio Approach
- Healthy Seal Zone
 - Proximal
 - Distal
- Wide patient applicability



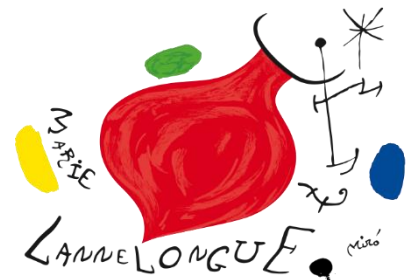
Device Design Attributes

Radiopaque markers help with precise positioning



Cook Z-stent design helps secure and seal bridging stent

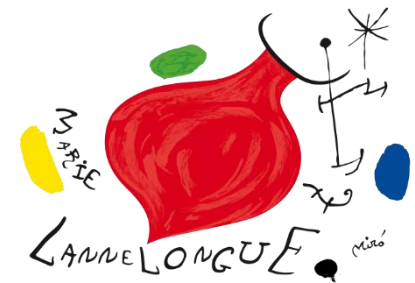
Sealing rings help secure internal iliac bridging stent and maintain lumen patency during access

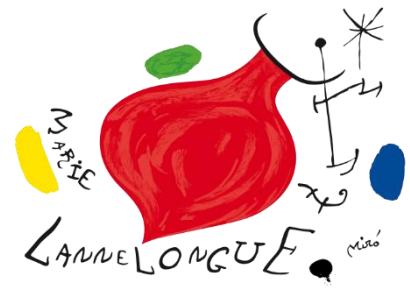
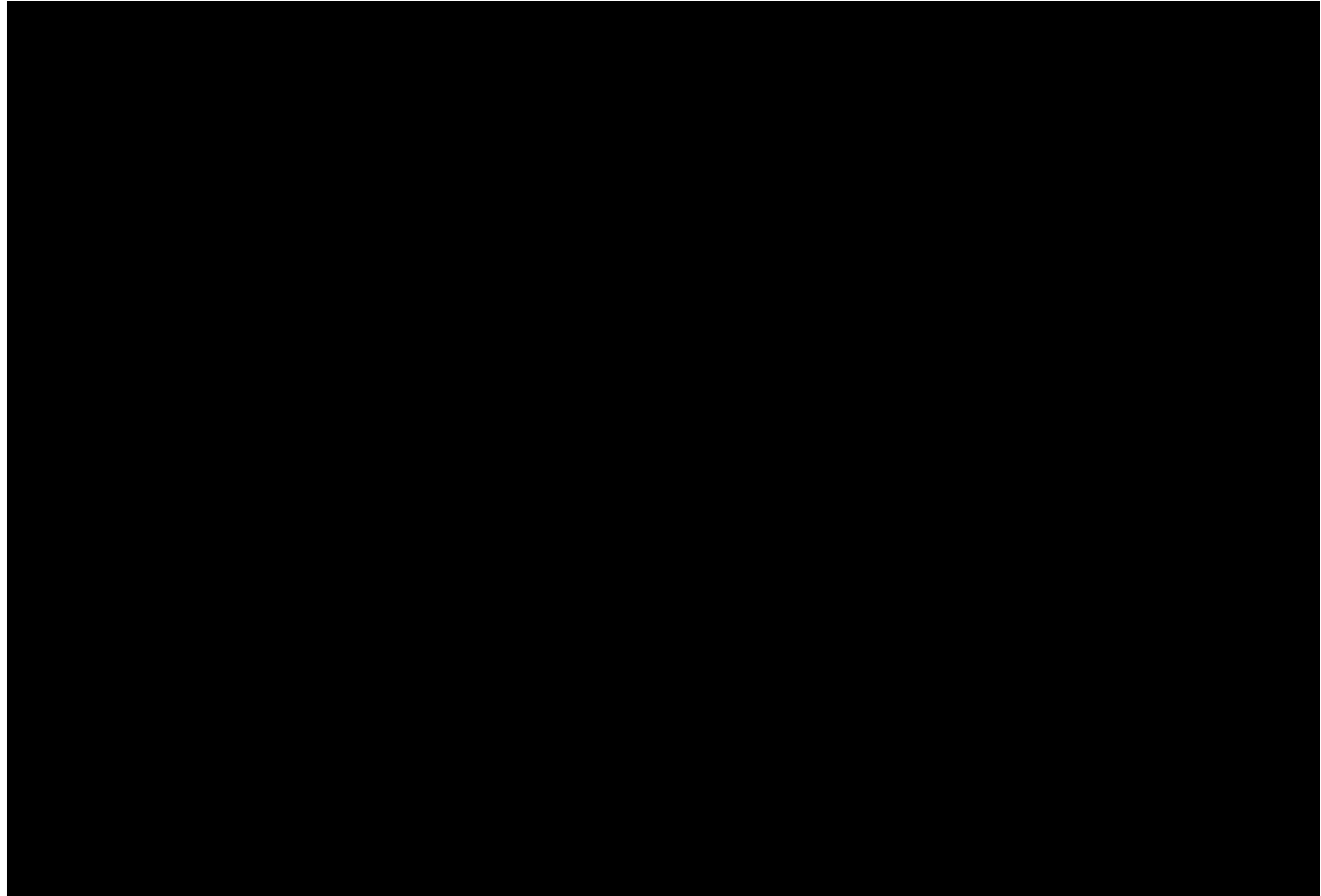


Device Overview

Available sizes:

- Common iliac segment:
L1 = 45 or 61 mm
D1 = 12 mm
- External iliac segment:
L2 = 41 or 58 mm
D2 = 10 or 12 mm
- Sidebranch segment:
Length = 14 mm
Diameter = 8 mm

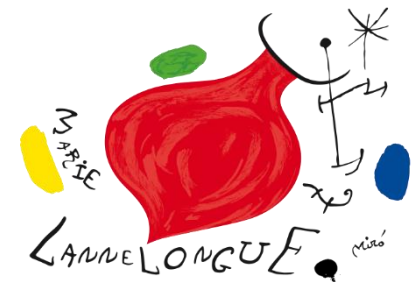




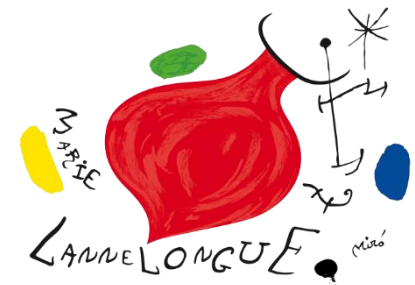
Case - AAA + CIAA

Patient history

- High BMI 110 Kg
- AAA (54 mm)
- Right common iliac aneurysm (34mm)
 - Narrowing just above iliac bifurcation
 - Internal iliac origin stenosis
- No landing zone in Left common iliac (25mm)



2D-3D bi-view registration





16592233
25-Jan-2017

LINC2017
ZBIS

Revue

Exam 3 | Séq 1
Img 20 / 20

--BPM



30 cm

104 cm



↓22 cm



0 deg

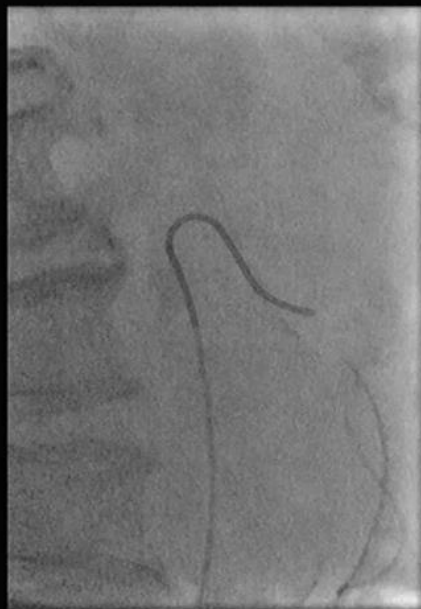
LAO 0 deg

CRA 0 deg



S

Scopie



P
R

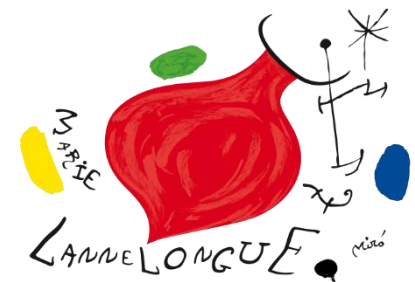
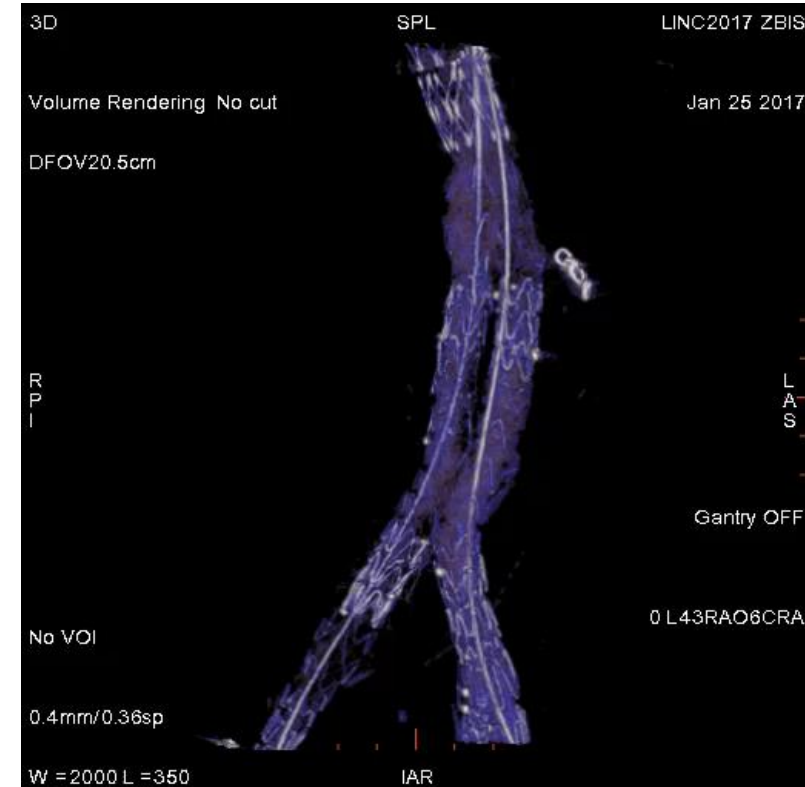
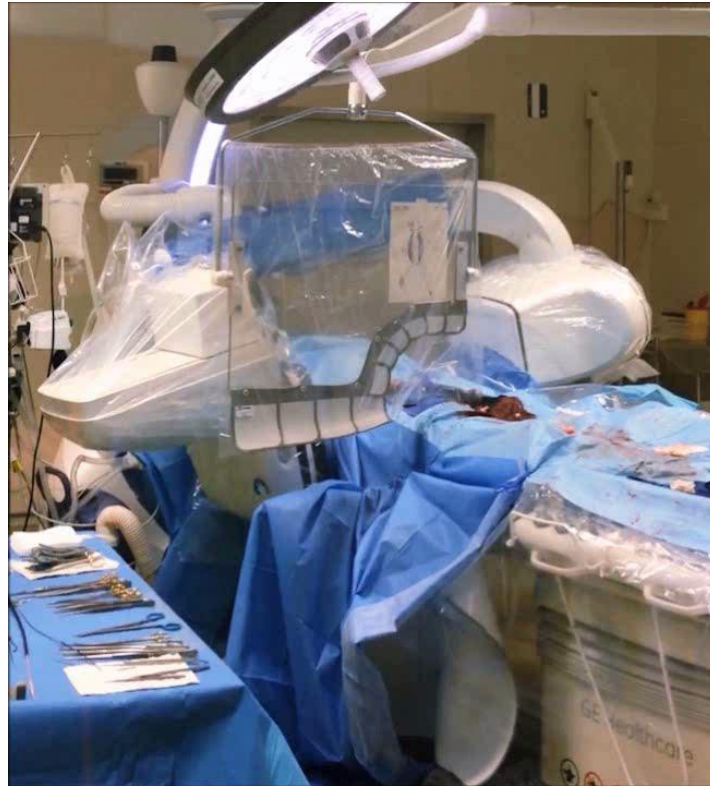
A
L



FOV 30 cm
RAO 67 deg
CAU 0 deg
L 0 deg

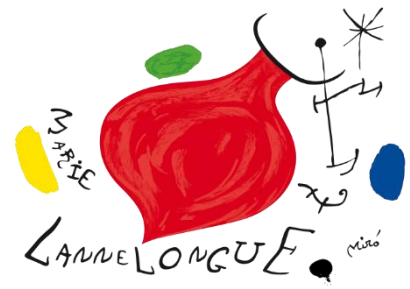
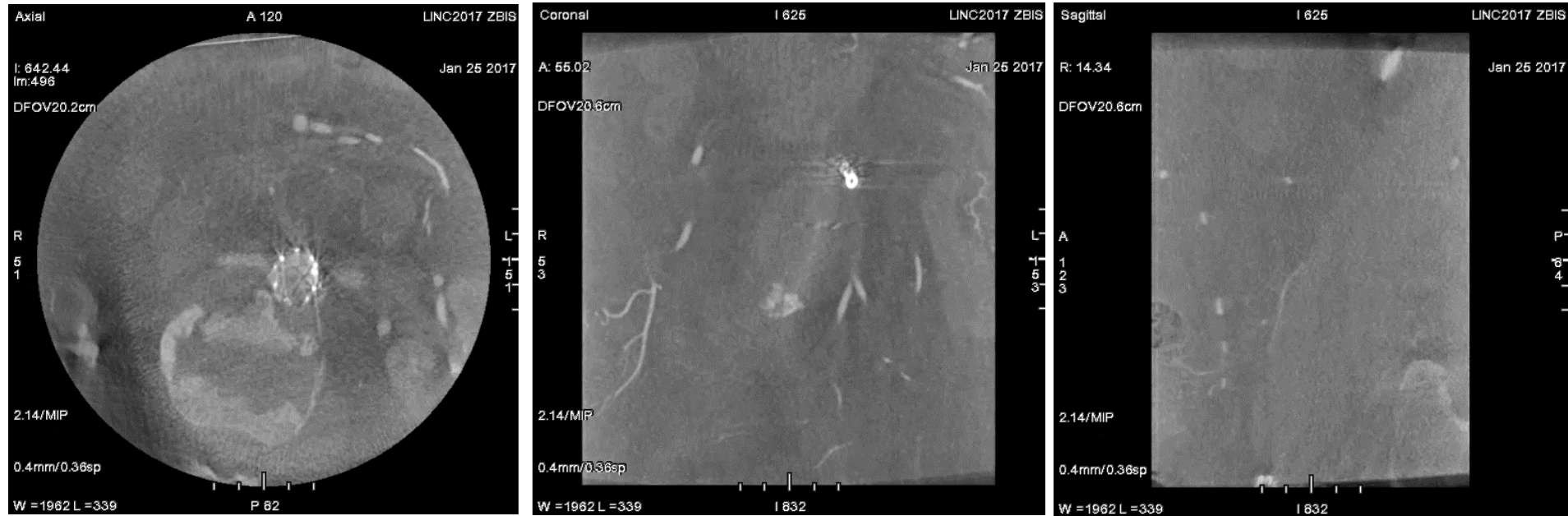
Contrast enhanced Cone-beam CT

Immediate assessment

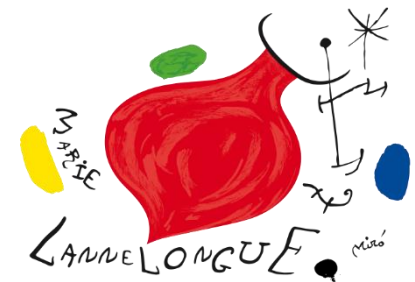


Contrast enhanced Cone-beam CT

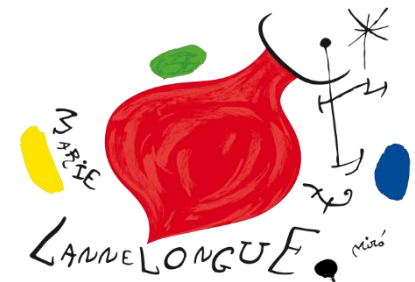
Immediate assessment



Positioning of Iliac branch device

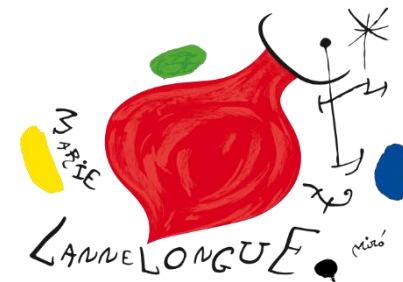
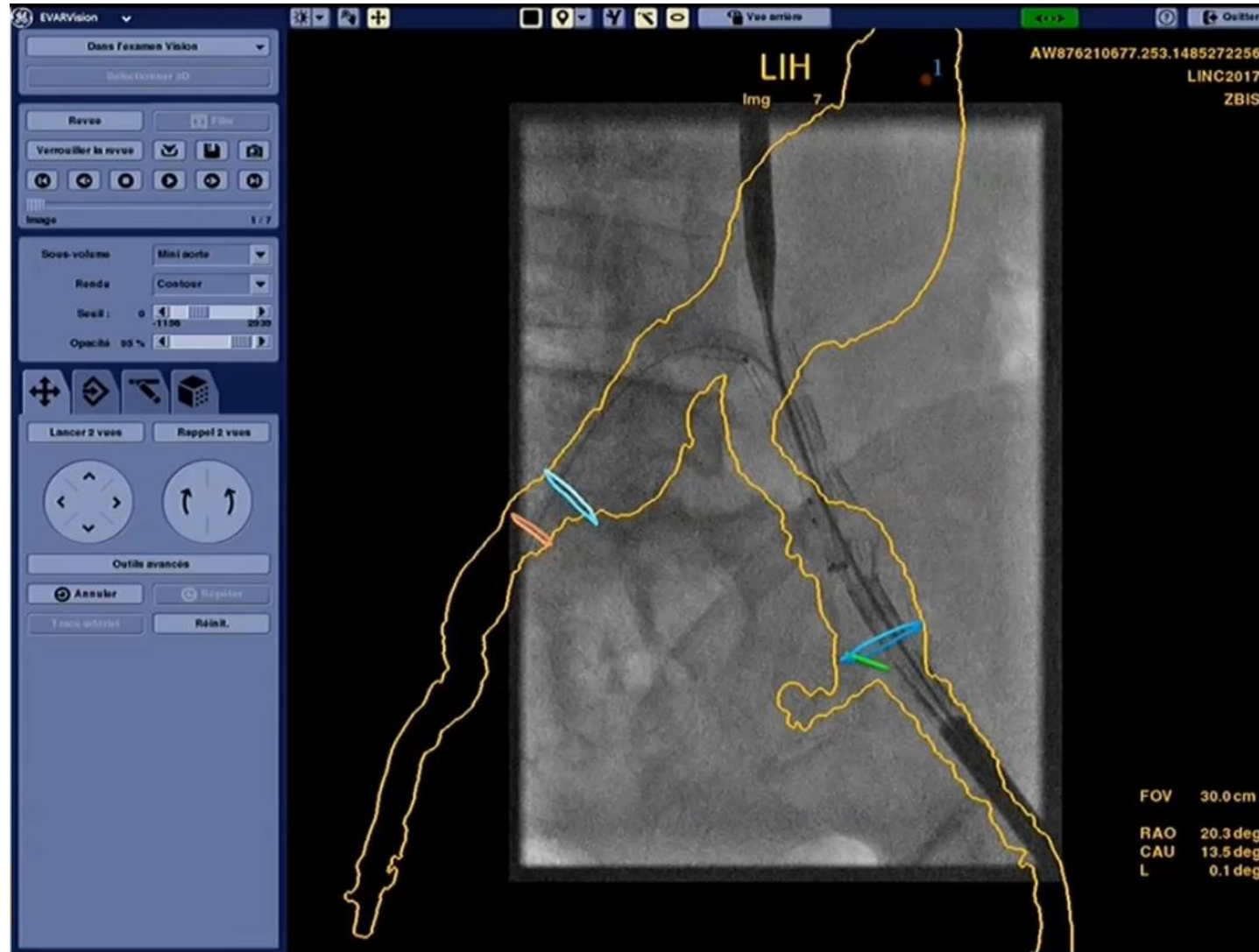


Preset positions for best working views



Digital zoom + collimation

Minimize radiation



Conclusion

- Concomitant Iliac aneurysms are frequent (impact on outcomes)
- A proper distal seal zone as a key to durability
- Preservation of the hypogastric artery (QOL)
- High technical success rate (after learning curve) + patency rate
- Proven design with long term outcomes

