



CONTROVERSIES & UPDATES IN VASCULAR SURGERY

JANUARY 25-27 2018



MARRIOTT RIVE GAUCHE & CONFERENCE CENTER, PARIS, FRANCE

Single catheter system with
ultrasound guidance:
the French experience



**L'INSTITUT
MUTUALISTE
MONTSOURIS**

Percutaneous Arteriovenous Fistula Creation

*Alexandros Mallios MD
Vascular Surgeon
Paris – France*

- No potential conflict of interest



L'INSTITUT MUTUALISTE MONTSOURIS

L'INSTITUT
MUTUALISTE
MONTSOURIS

- Department of Vascular Surgery
- Group of 4 vascular surgeons
- 2500 OR cases per year
- 50% - vascular access cases
- 400 AVF creations per year

This is what
we do.....



This is what we don't like:



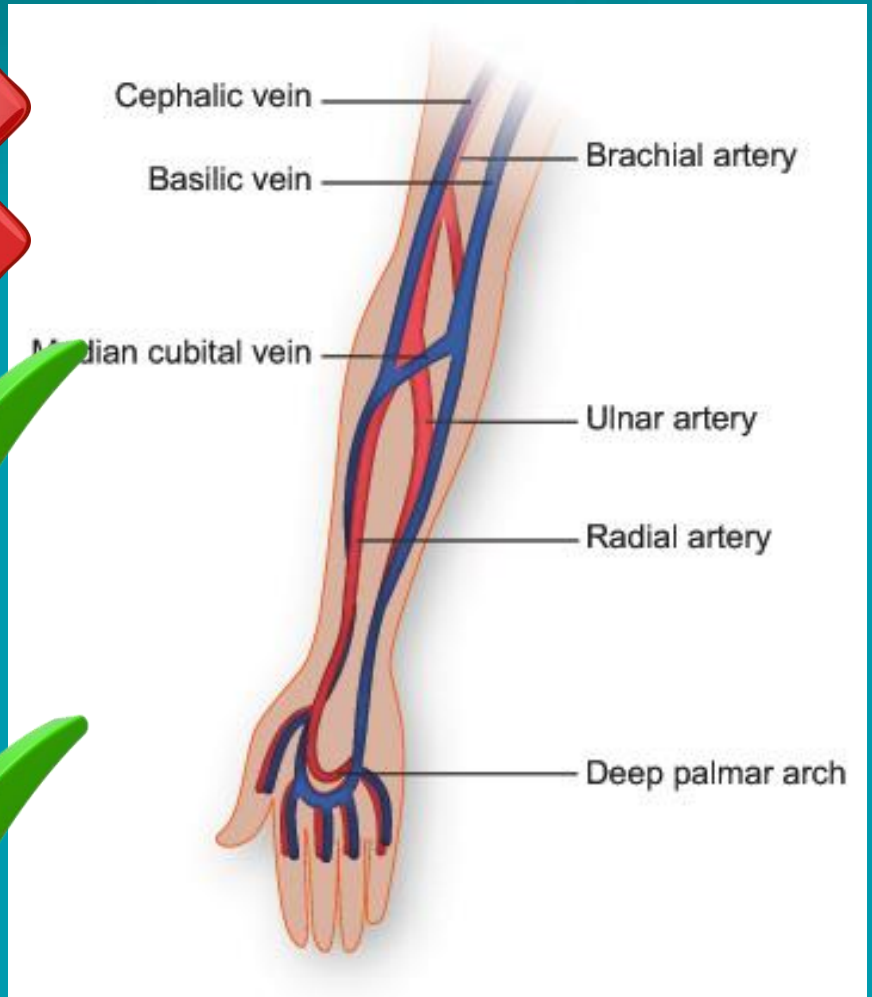
Brachial Artery



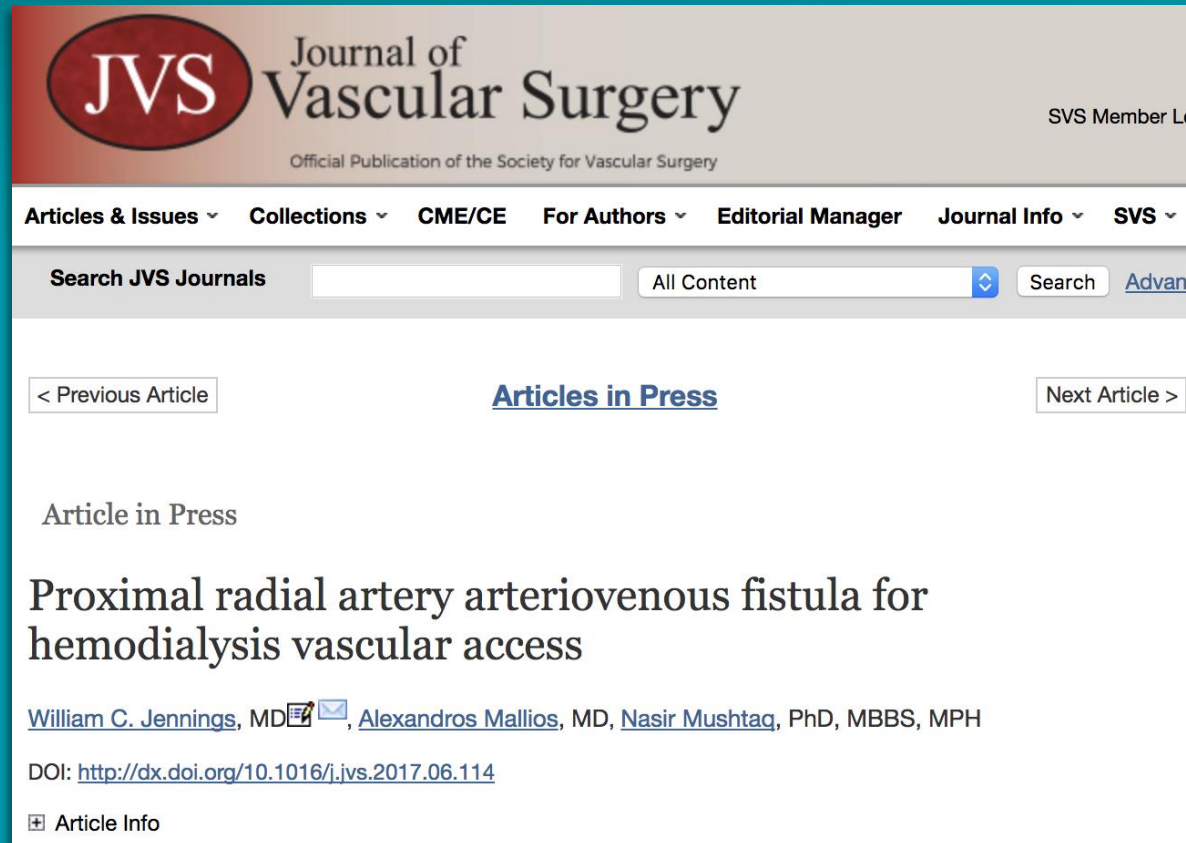
Proximal Radial



Distal Radial (or Ulnar)



Journal of Vascular Surgery



The screenshot shows the Journal of Vascular Surgery (JVS) website. At the top is the JVS logo and the text "Journal of Vascular Surgery" and "Official Publication of the Society for Vascular Surgery". A navigation bar includes links for "Articles & Issues", "Collections", "CME/CE", "For Authors", "Editorial Manager", "Journal Info", and "SVS". Below this is a search bar with the text "Search JVS Journals" and a dropdown menu set to "All Content". Navigation links for "< Previous Article" and "Next Article >" are present. The main content area is titled "Articles in Press" and features the article title "Proximal radial artery arteriovenous fistula for hemodialysis vascular access" by William C. Jennings, MD, Alexandros Mallios, MD, and Nasir Mushtaq, PhD, MBBS, MPH. The DOI is provided as <http://dx.doi.org/10.1016/j.jvs.2017.06.114>. An "Article Info" link is at the bottom.

JVS Journal of Vascular Surgery
Official Publication of the Society for Vascular Surgery

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Article in Press

Proximal radial artery arteriovenous fistula for hemodialysis vascular access

[William C. Jennings, MD](#), [Alexandros Mallios, MD](#), [Nasir Mushtaq, PhD, MBBS, MPH](#)

DOI: <http://dx.doi.org/10.1016/j.jvs.2017.06.114>

[Article Info](#)

Journal of Vascular Surgery

- 1400 patients
- Advantages of PRA inflow
- Faster and better maturation for patients not suitable for distal AVFs
- Lower complication rates than brachial based AVFs

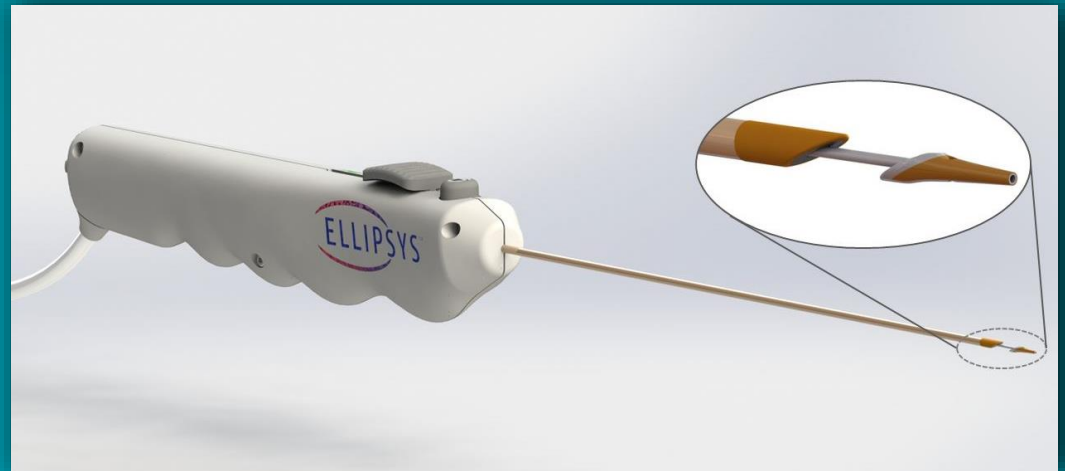
The Best Possible Fistula..



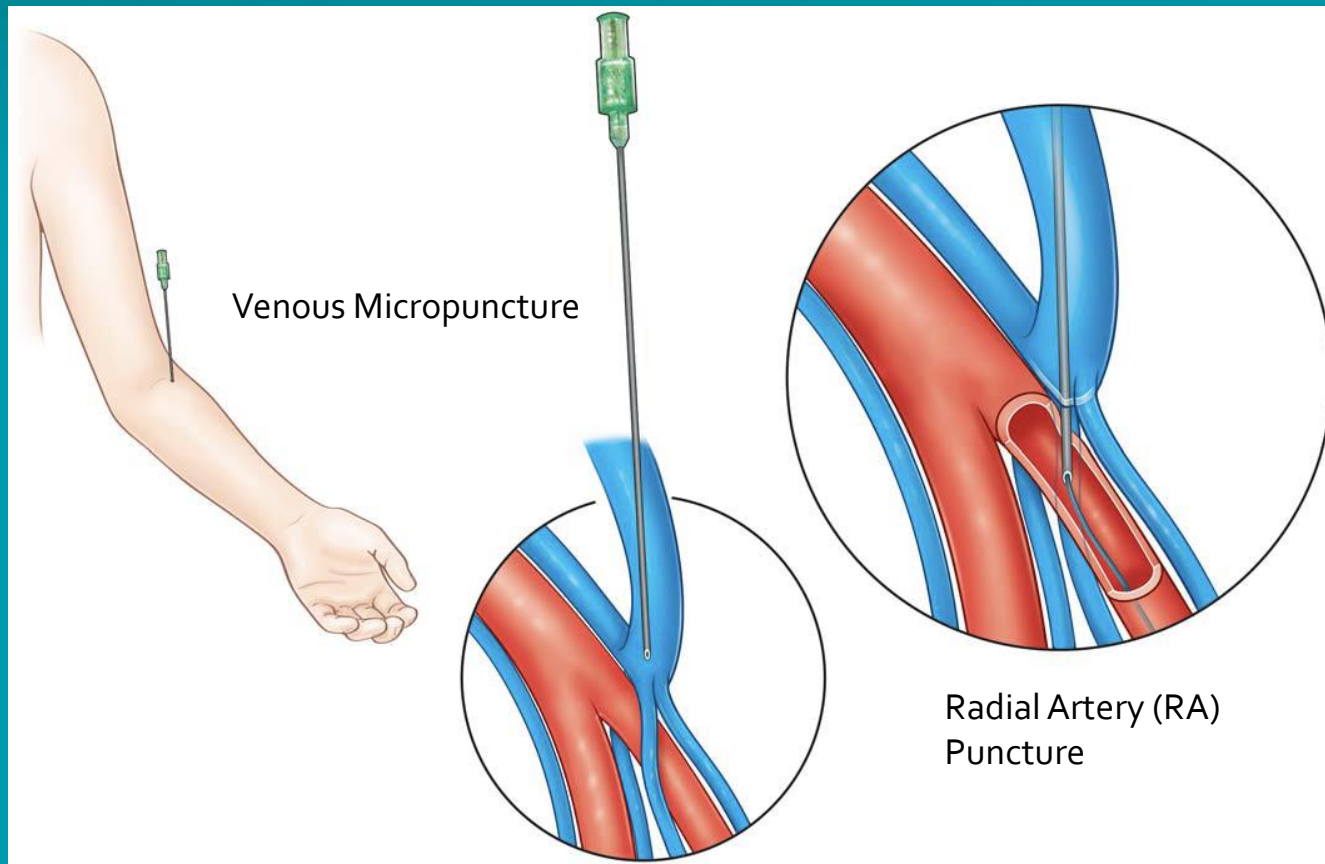
The Least Possible Interventions

Ellipsys® Vascular Access System

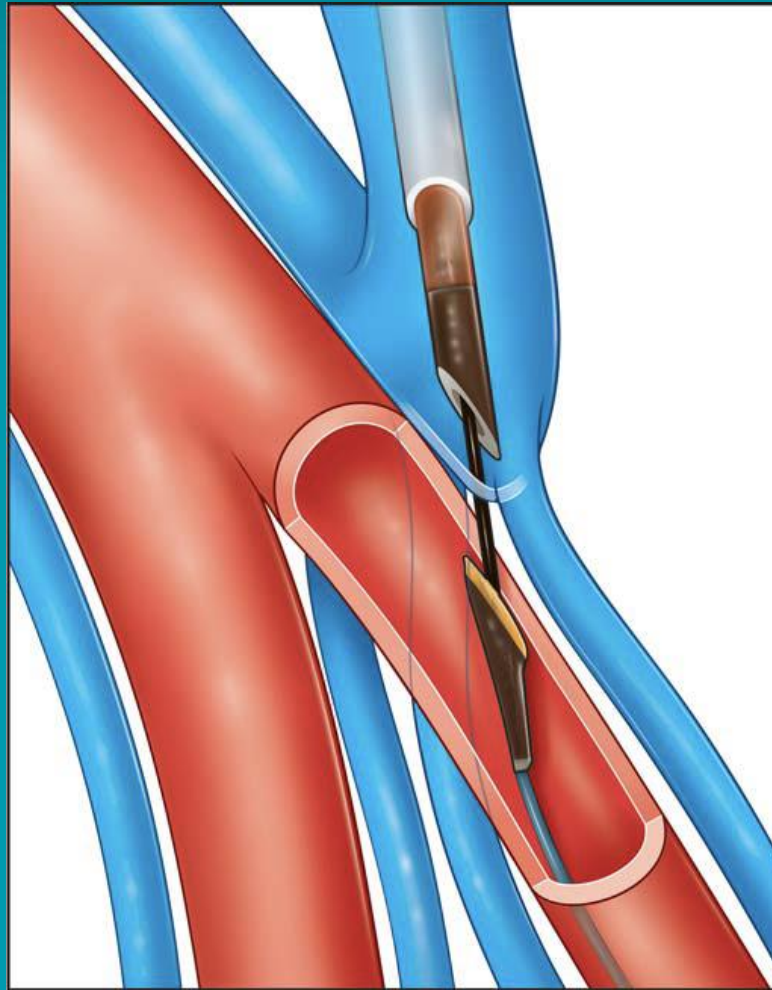
- PRA – Inflow
- Superficial venous outflow
- Ultrasound guided
- *One-stage procedure**



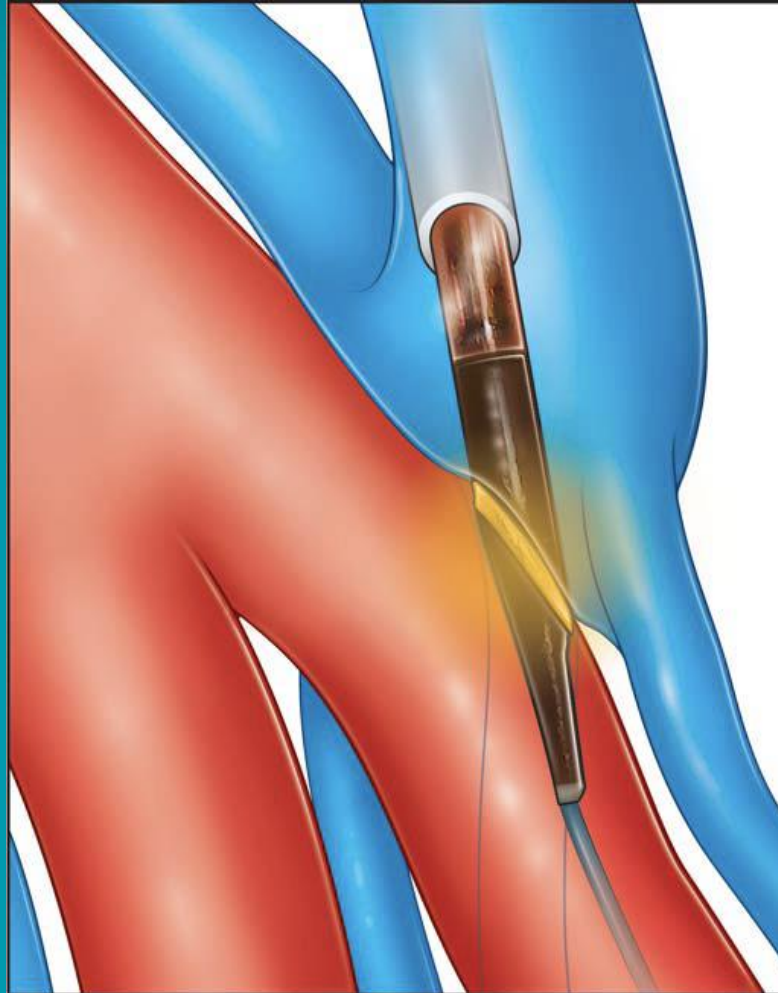
Ellipsys® Vascular Access System



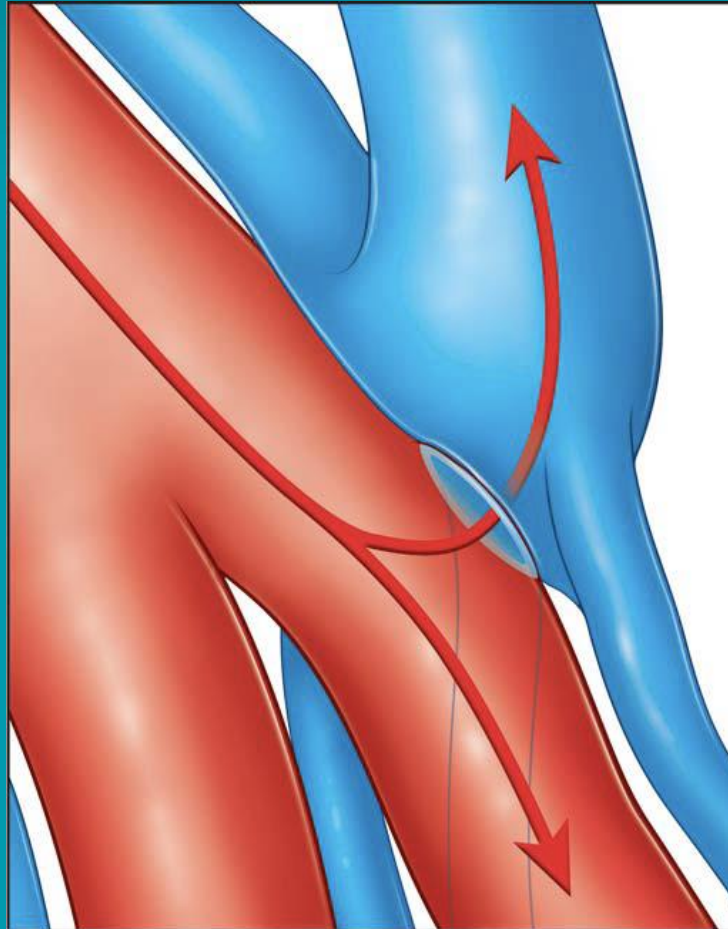
Positioning of Ellipsys® Catheter

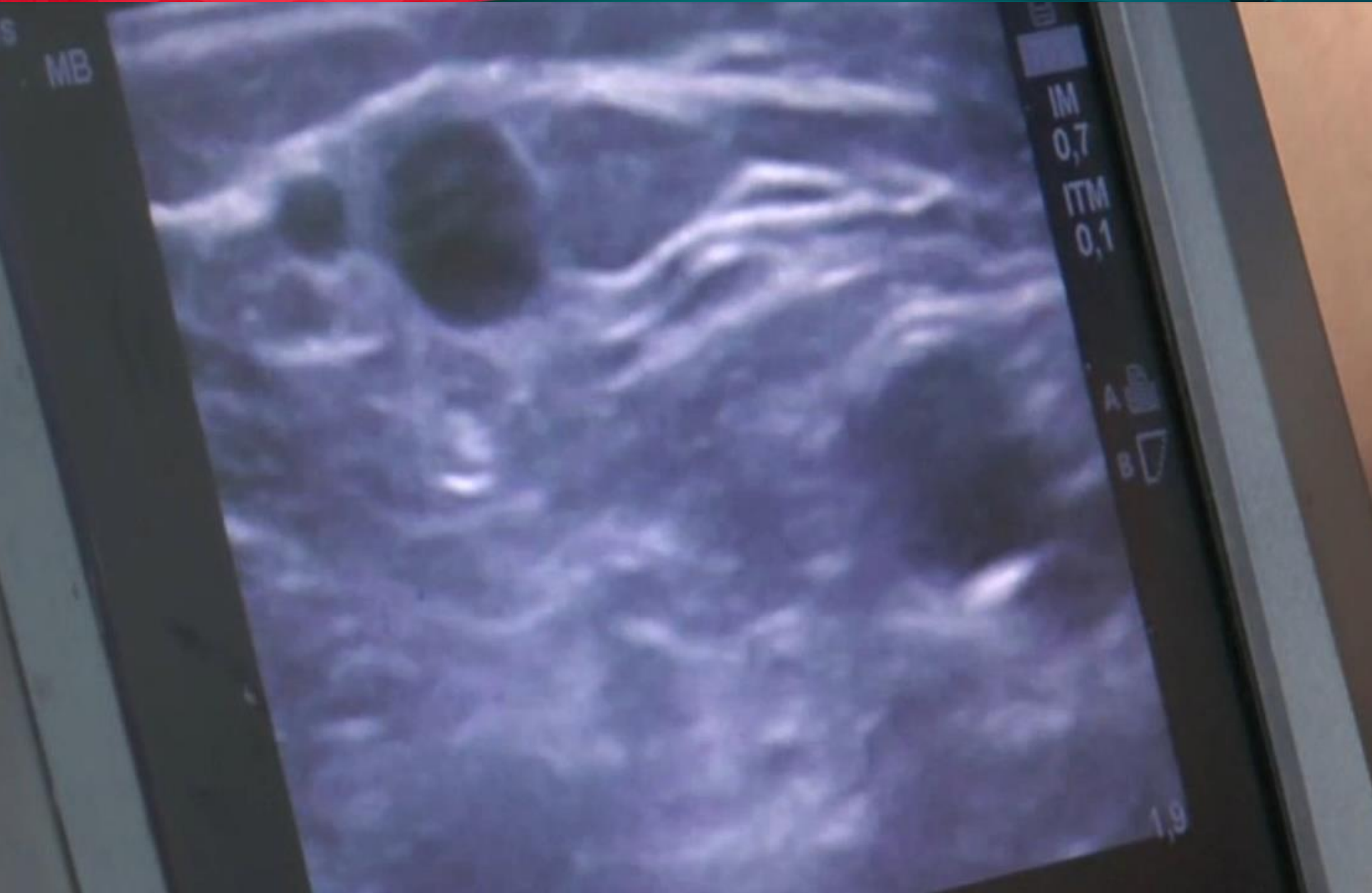


Pressure, Activation and Fusion

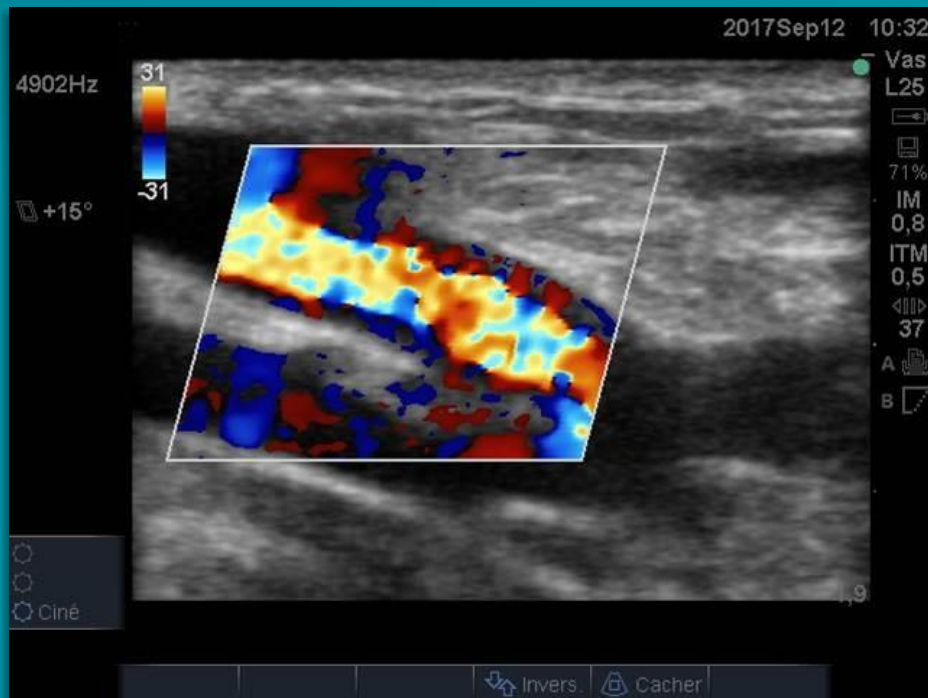


Creation of AVF





Four Days Post Ellipsys® Procedure



One Week Post Ellipsys® Procedure



Experience

- May 2017 – January 2018
- 59 patients
- 98% technical success
- 96% cumulative patency
- Mean access flow: 1025ml/min (brachial artery)
- Follow-up 128 days (12-258)

Experience

- No Serious Adverse Events
- One superficialization
- All AVFs used or usable at 4-6 weeks
- *Immediate 5x20mm PTA of the anastomosis and DCV**
- 18% patients required additional procedures

*No Side Branch
Ligation or
Coiling*



No Side Branch Ligation or Coiling

- Low pressure AVF
- Less risk for aneurysms / bleeding
- Less risk for thrombosis
- Less shear stress and risk for long-term stenosis
- Cannulation of both cephalic and basilic vein
- Avoidance of basilic vein superficialization (24% cannulation in "Y")

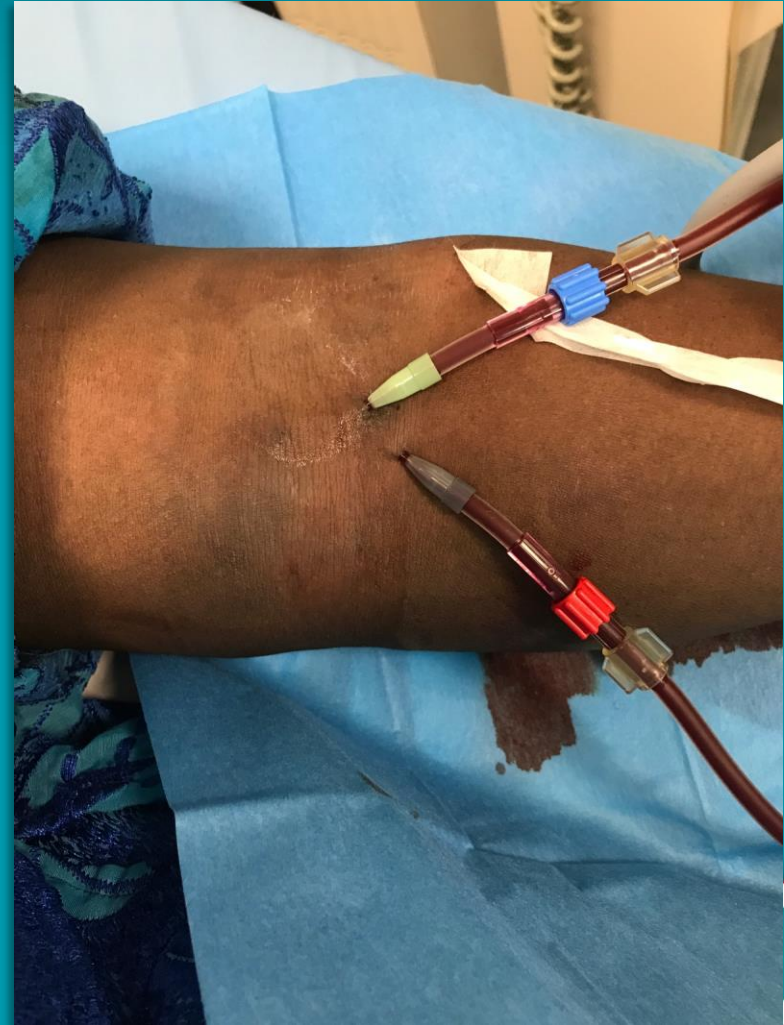
Cephalic Vein Cannulation in the Arm



Cannulation in "Y" (possible in 36%)



Avoidance of Basilic Superficialization (24%)



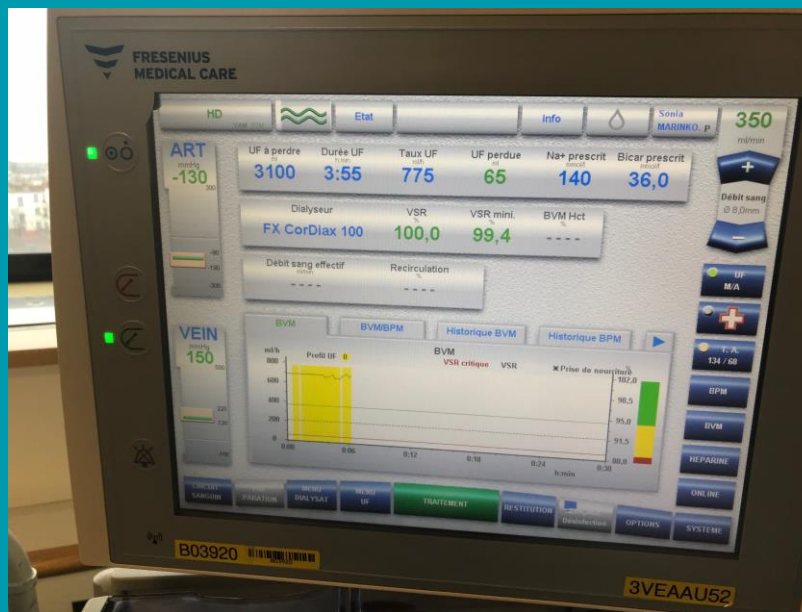
Avoidance of Basilic Superficialization (24%)



Early Cannulation – Day 4



Early Cannulation – Day 1



Minimally Invasive...



Patient Perspective...



7 months post Creation...



Conclusion

pAVF Creation with Ellipsys®

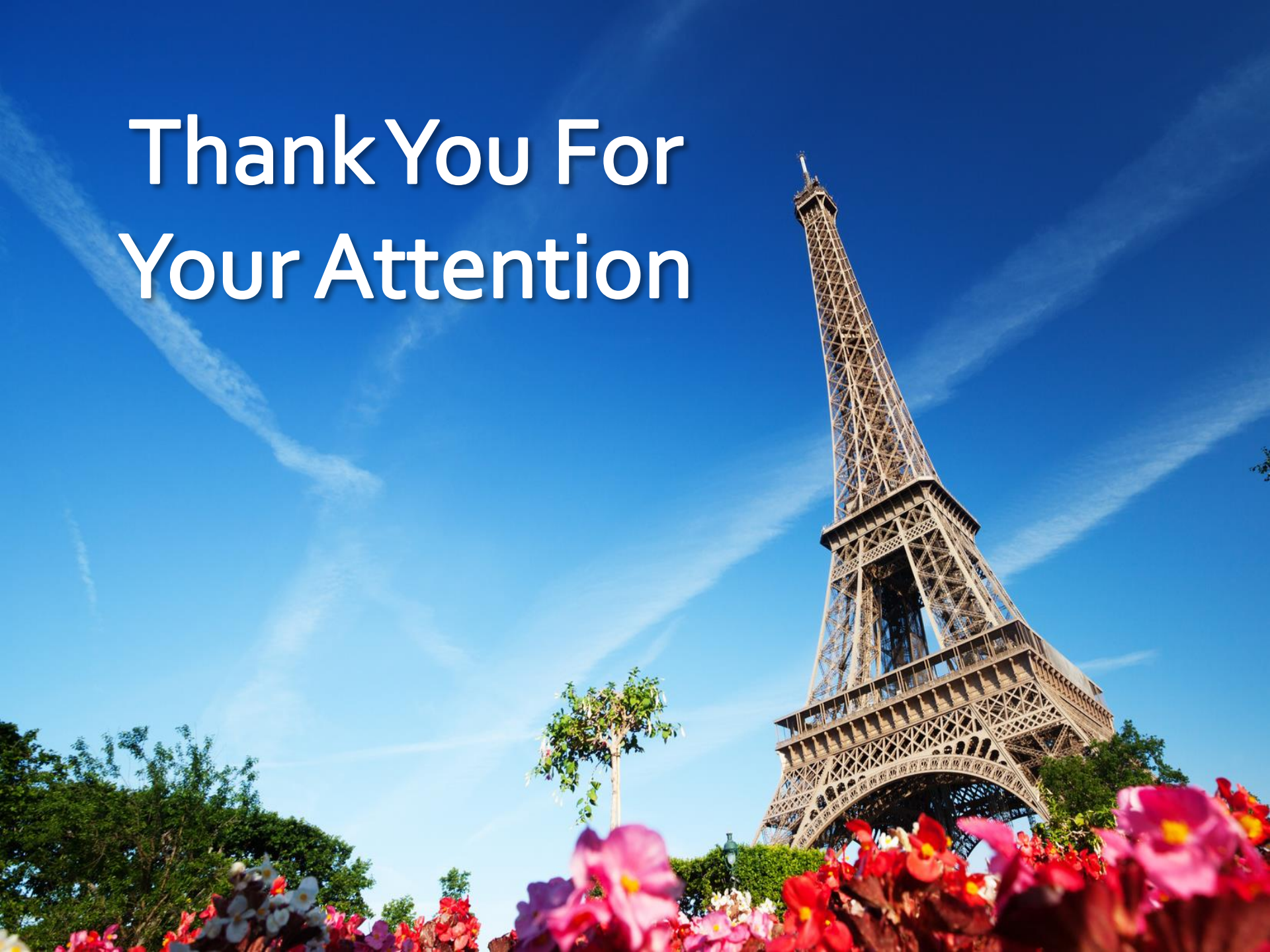
- Minimally invasive one-stage AVF creation
- High safety profile
- Time efficient procedure (10-15 min)
- High patient satisfaction

Conclusion

pAVF Creation with Ellipsys®

- Excellent technical success and patency rates
- Less long-term complications and need for re-interventions
- New possibilities in terms of vessel cannulation and avoidance of superficialization
- Early Cannulation – avoidance of catheter for certain patients

Thank You For
Your Attention



Save the
Date!!!

i-AS 2018

International
Vascular Access
Symposium

PARIS - Friday 14th September 2018

Institut Mutualiste Montsouris



Institut Mutualiste Montsouris

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Patient No 31 Mapping of DCV



Venous Micropuncture

Pt 31
↓



Needle Positioning



Radial Artery (RA) Puncture

Pt 31



Confirming RA Access

Pt 31
↓



Sheath Placement



Closure of the Device

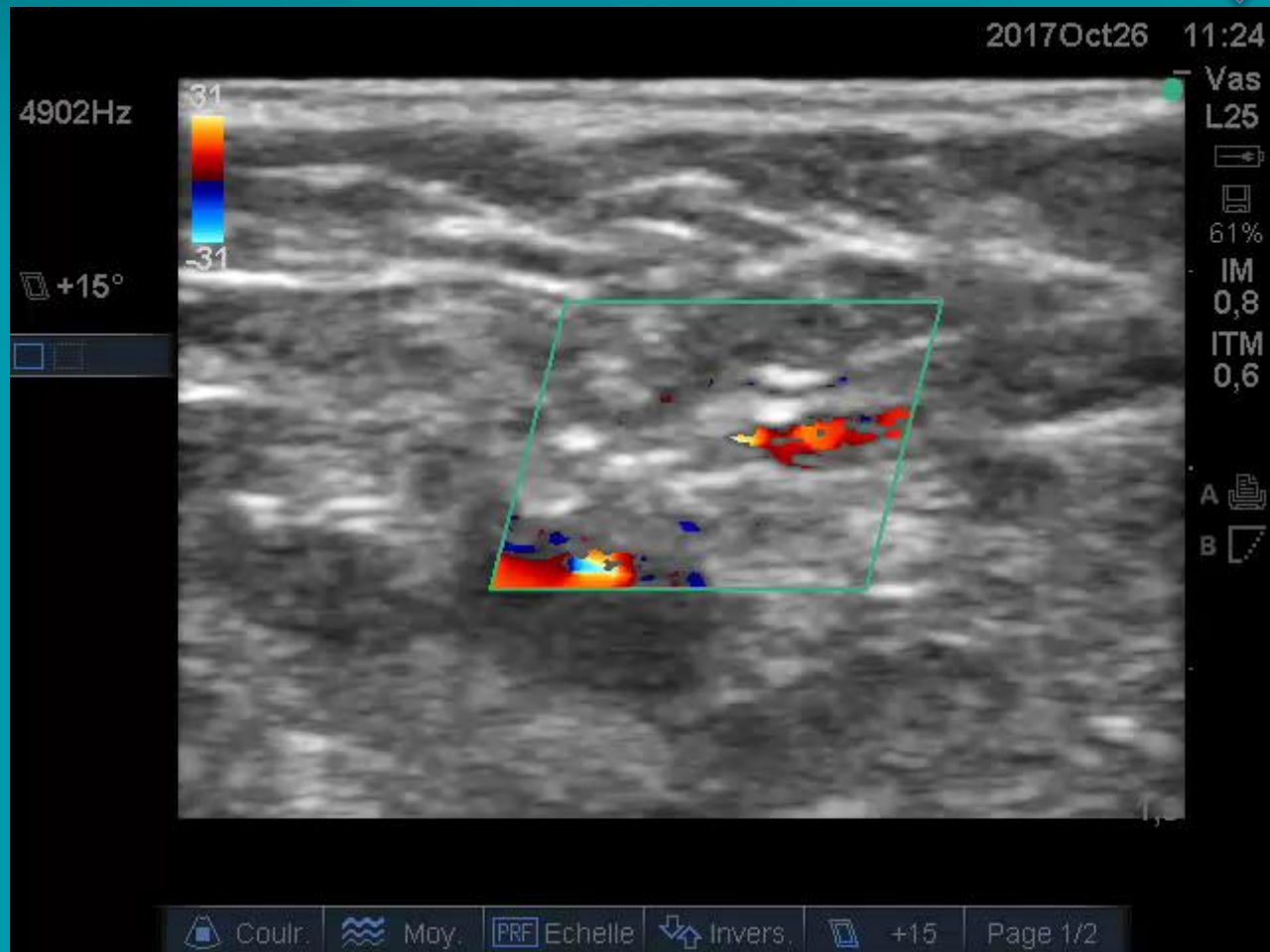


Activation and Fusion

Pt 31
↓



AVF flow in DCV



*Anastomosis
Completed **17 minutes**
after scanning the
patient!!!*

*Patient No **31***

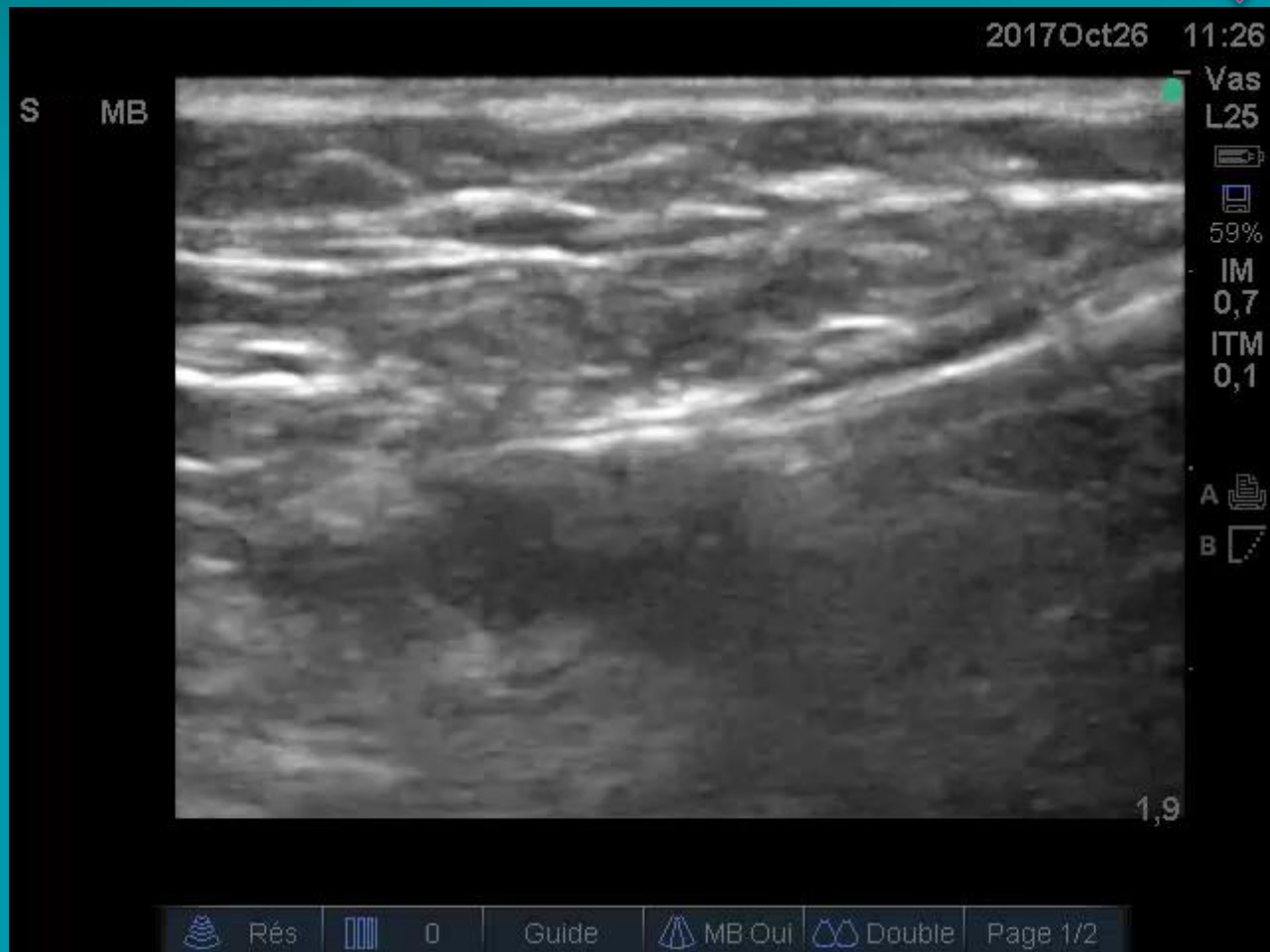
Demo Case

5x20 Balloon Positioned

Pt 31



Balloon Inflated



Improved AVF flow

