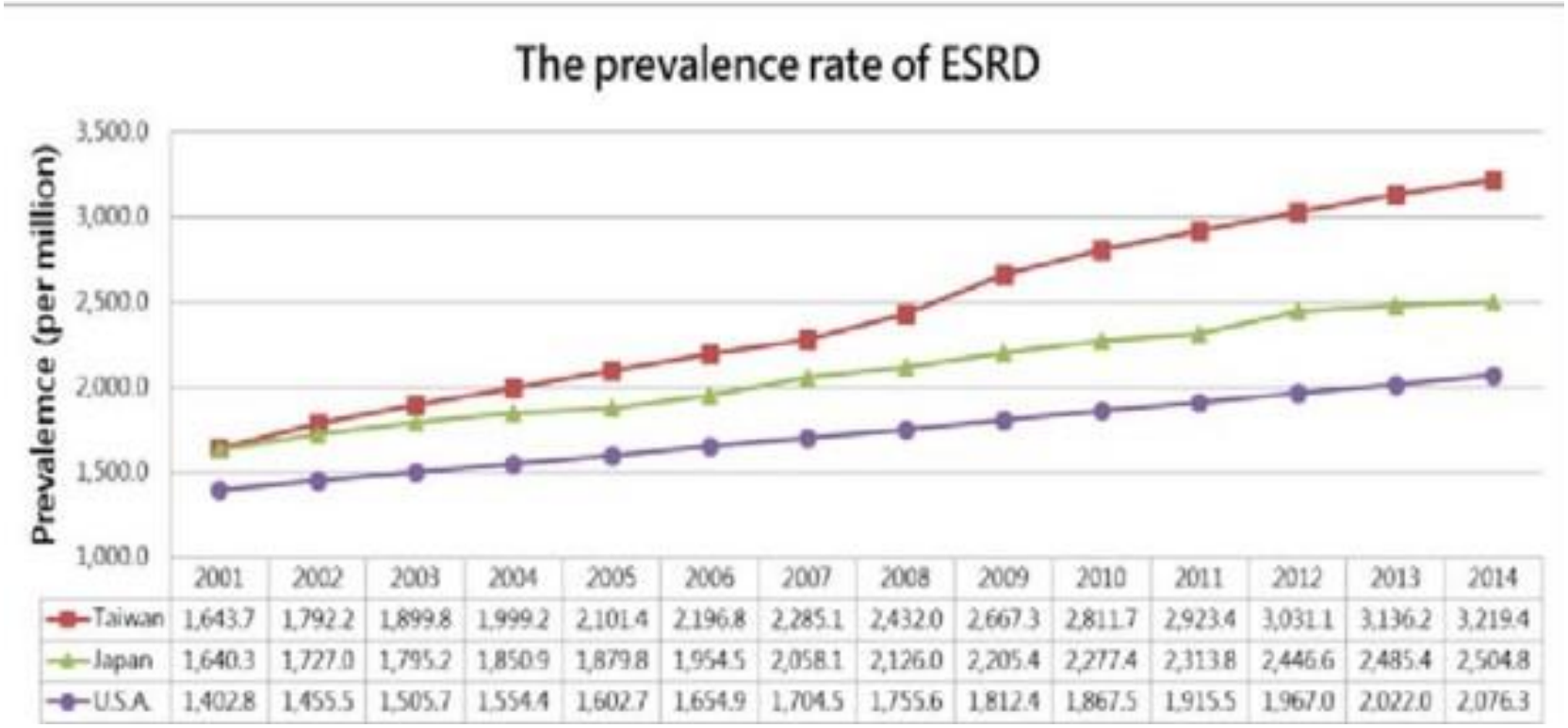
HỘI TIM MẠCH QUẢNG NINH

KẾT QUẢ BƯỚC ĐẦU ĐIỀU TRỊ TẮC HẸP AVF TRONG CHẠY THẬN NHÂN TẠO BẰNG CAN THIỆP NỘI MẠCH

Ths. Bs Ngô Văn Tuấn
Khoa Tim mạch, BVĐK tỉnh Quảng Ninh

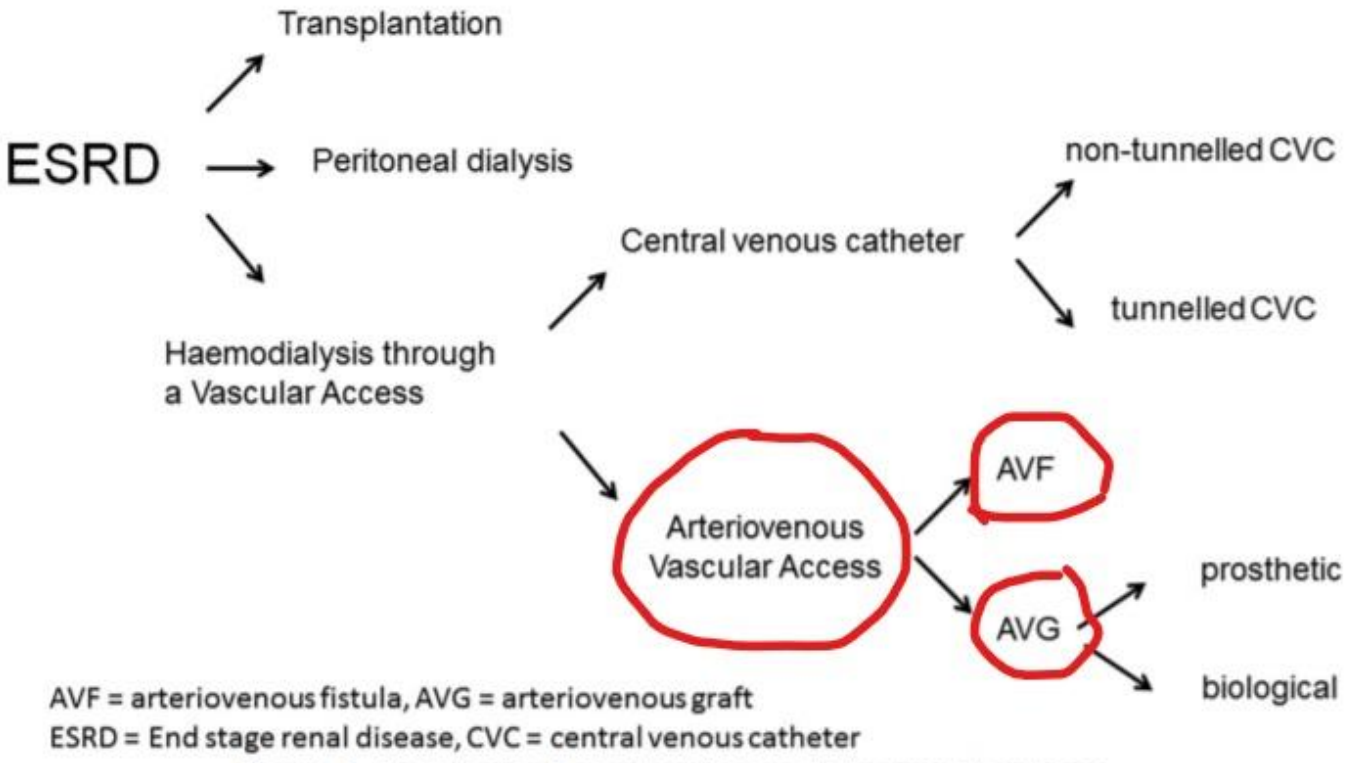
TỶ LỆ BỆNH NHÂN BỆNH THẬN GIAI ĐOẠN CUỐI



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
Taiwan	1,643.7	1,792.2	1,899.8	1,999.2	2,101.4	2,196.8	2,285.1	2,432.0	2,667.3	2,811.7	2,923.4	3,031.1	3,136.2	3,219.4
Japan	1,640.3	1,727.0	1,795.2	1,850.9	1,879.8	1,954.5	2,058.1	2,126.0	2,205.4	2,277.4	2,313.8	2,446.6	2,485.4	2,504.8
U.S.A.	1,402.8	1,455.5	1,505.7	1,554.4	1,602.7	1,654.9	1,704.5	1,755.6	1,812.4	1,867.5	1,915.5	1,967.0	2,022.0	2,076.3

Ying-Ping Chen, Yin-Wen Lu, Article 1007 Outcome of the Five-Year-Plan for Chronic Kidney Disease Prevention in Taiwan, Aug 2018

Treatment options for patients with ESRD



AVF = arteriovenous fistula, AVG = arteriovenous graft
ESRD = End stage renal disease, CVC = central venous catheter

Figure 1. Flowchart of renal replacement treatment options.

Eur J Vasc Endovasc Surg (2018), Vascular Access: 2018 Clinical Practice Guidelines of the European Society for Vascular Surgery (ESVS) 55, 757e818

Chức năng của AVF = Cuộc sống của bệnh nhân

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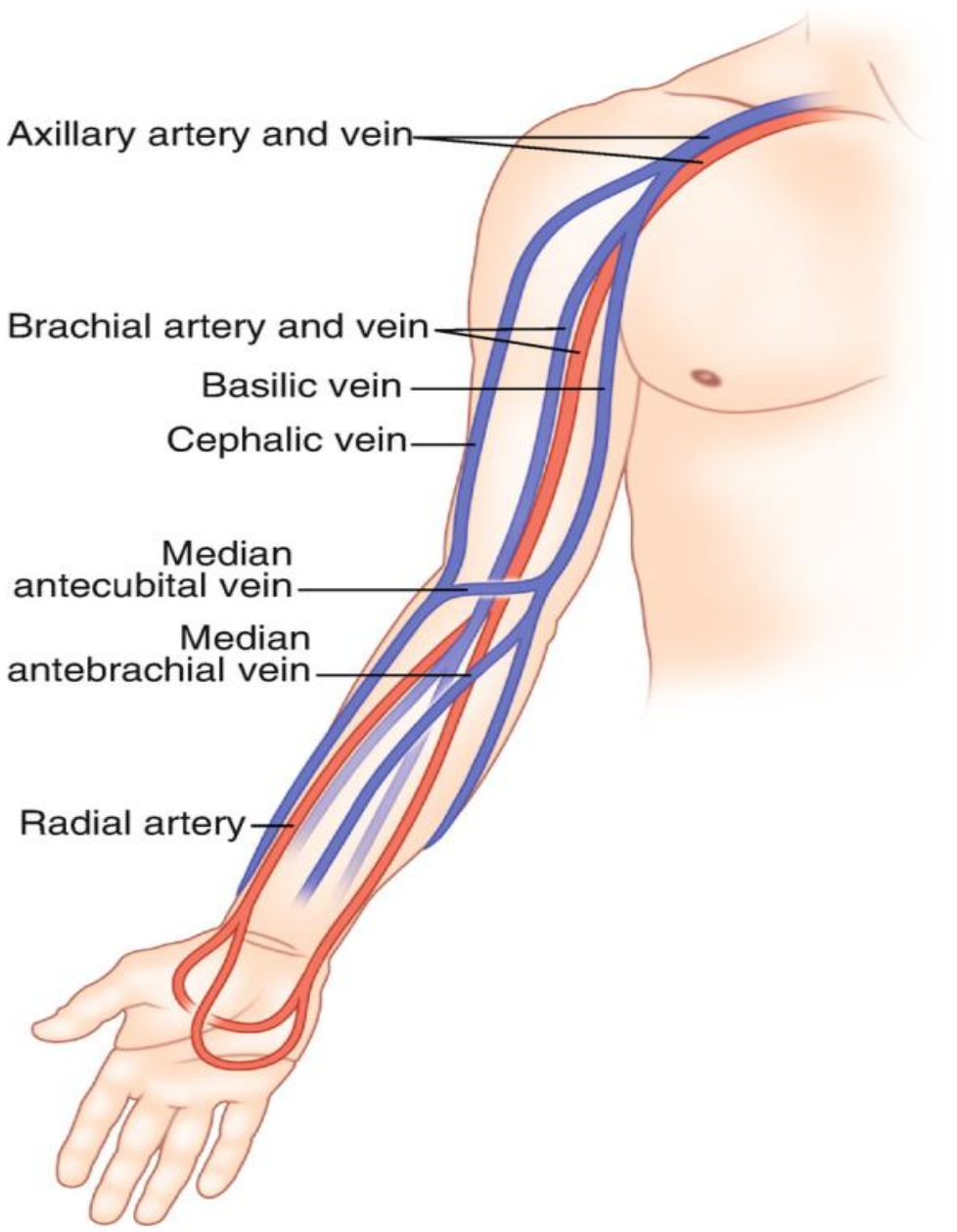
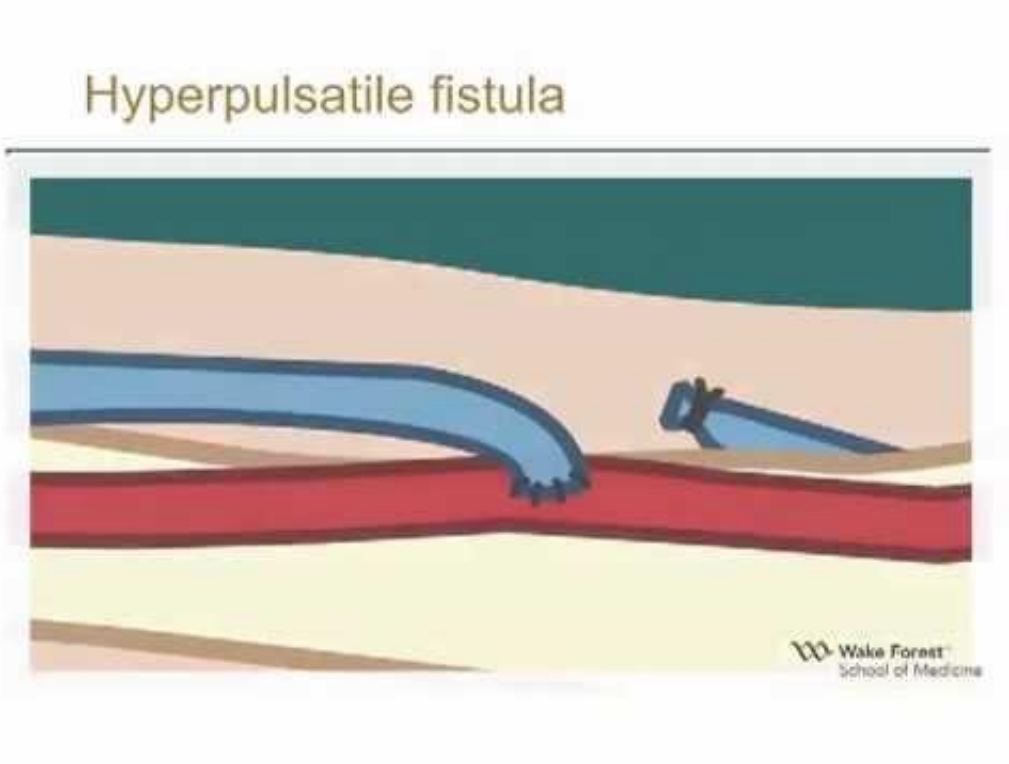
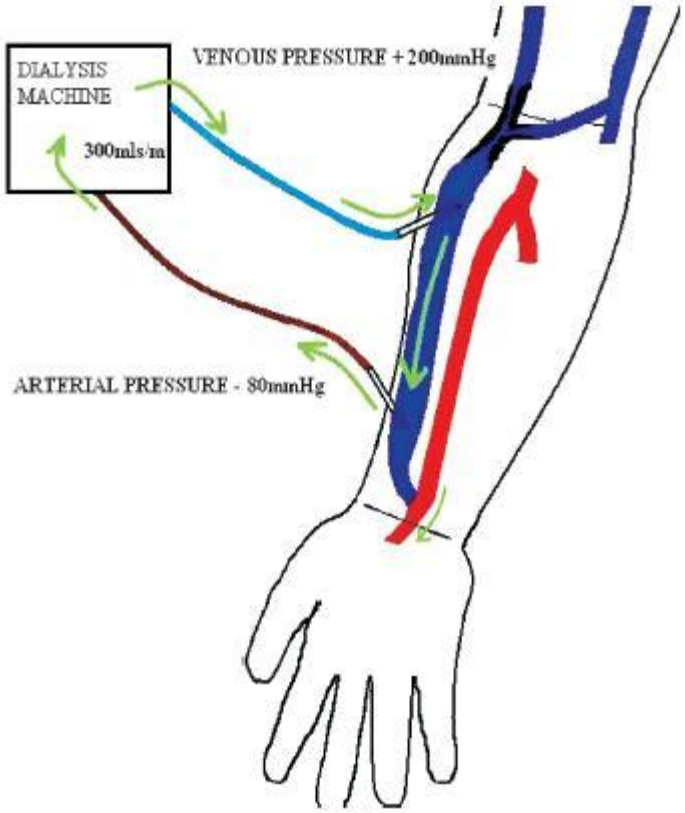
Giải phẫu mạch máu chi trên

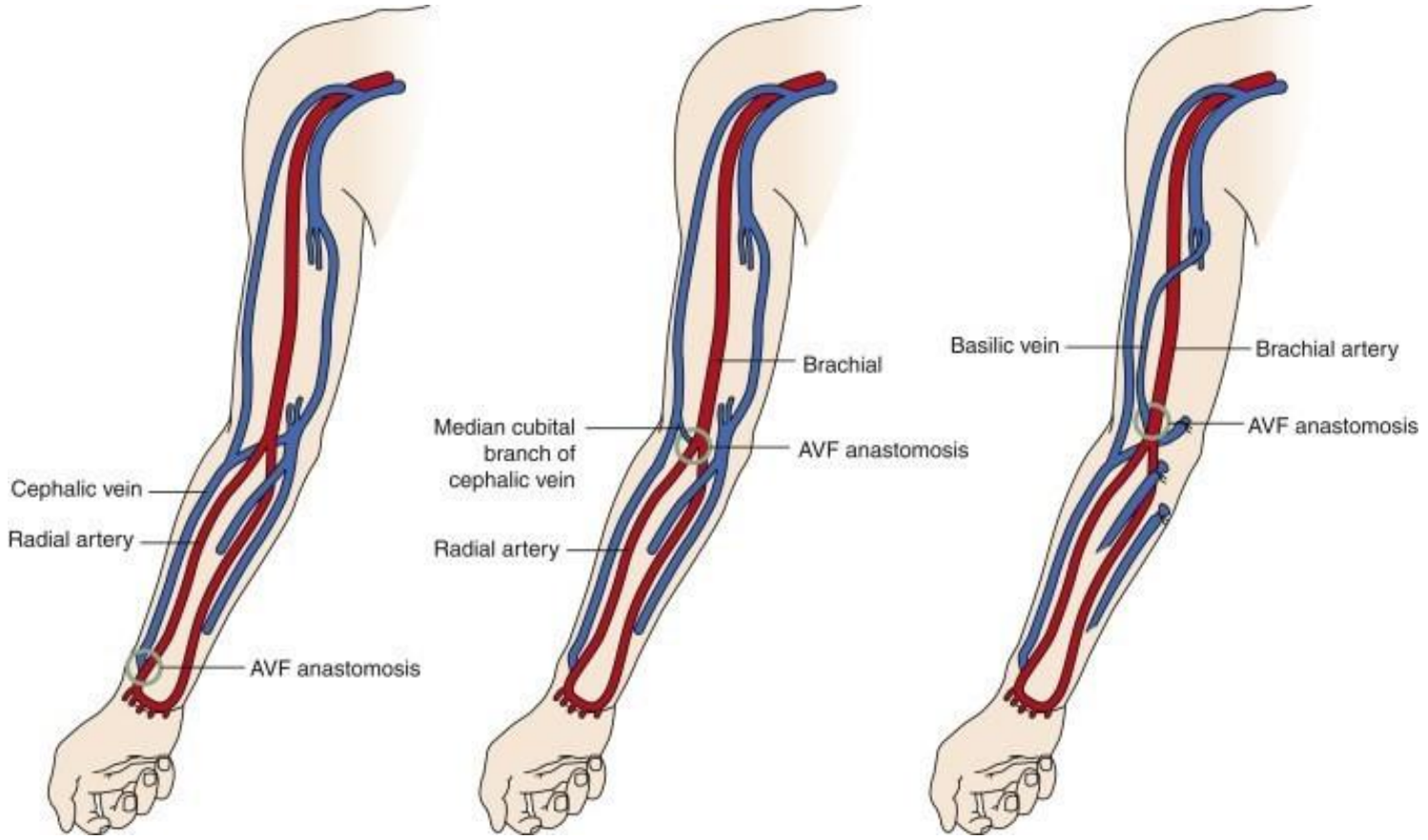


Cầu tay thận nhân tạo





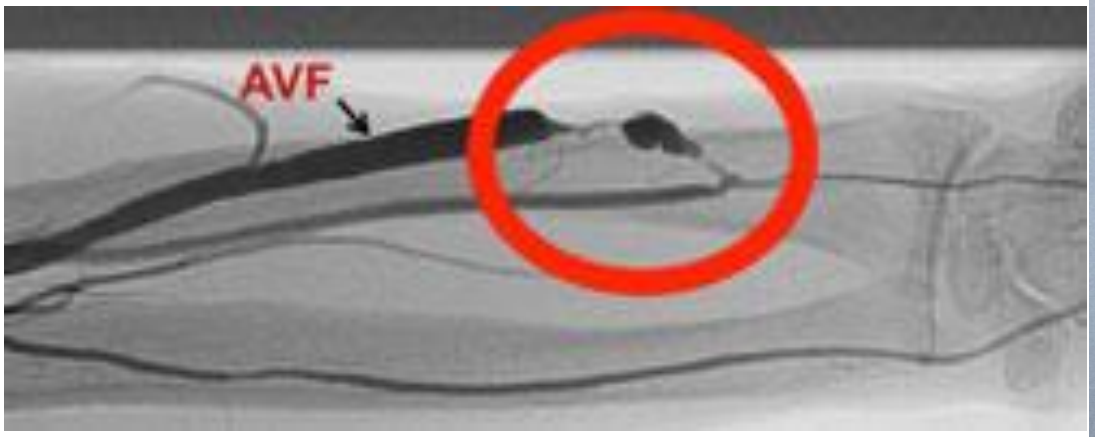
Các vị trí làm AVF



Recommendation 2		
A permanent vascular access should be created 3–6 months before the expected start of haemodialysis treatment.	I	B
Recommendation 3		
An autogenous arteriovenous fistula is recommended as the primary option for vascular access.	I	A
Recommendation 4		
The radiocephalic arteriovenous fistula is recommended as the preferred vascular access.	I	B
Recommendation 5		
When vessel suitability is adequate, the non-dominant extremity should be considered as the preferred location for vascular access.	IIa	C
Recommendation 6		
A lower extremity vascular access should be considered only when upper extremity access is impossible.	IIa	C
Recommendation 7		

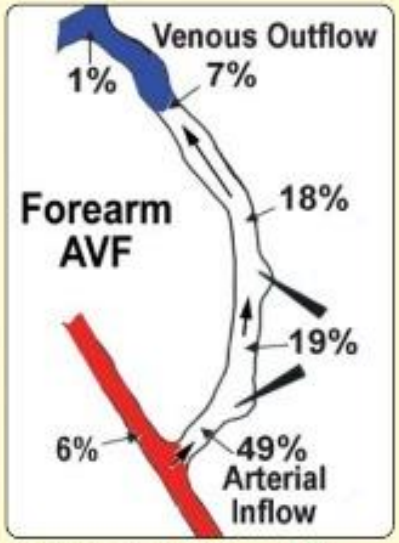
Eur J Vasc Endovasc Surg (2018), Vascular Access: 2018 Clinical Practice Guidelines of the European Society for Vascular Surgery (ESVS) 55, 757e818

Biến chứng hẹp AVF

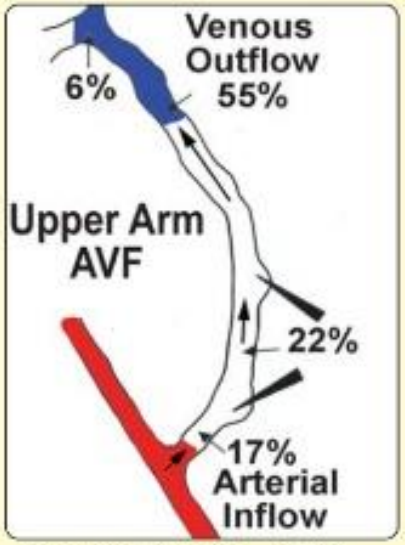


Tỷ lệ hẹp cầu tay theo vị trí

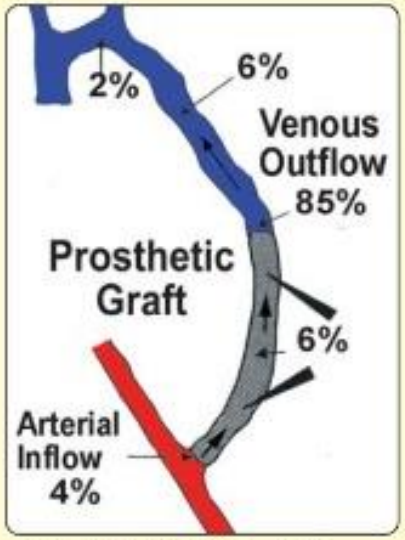
Common site of stenosis



Arterial inflow	49%
Between Needles	19%
Venous Outflow	18%



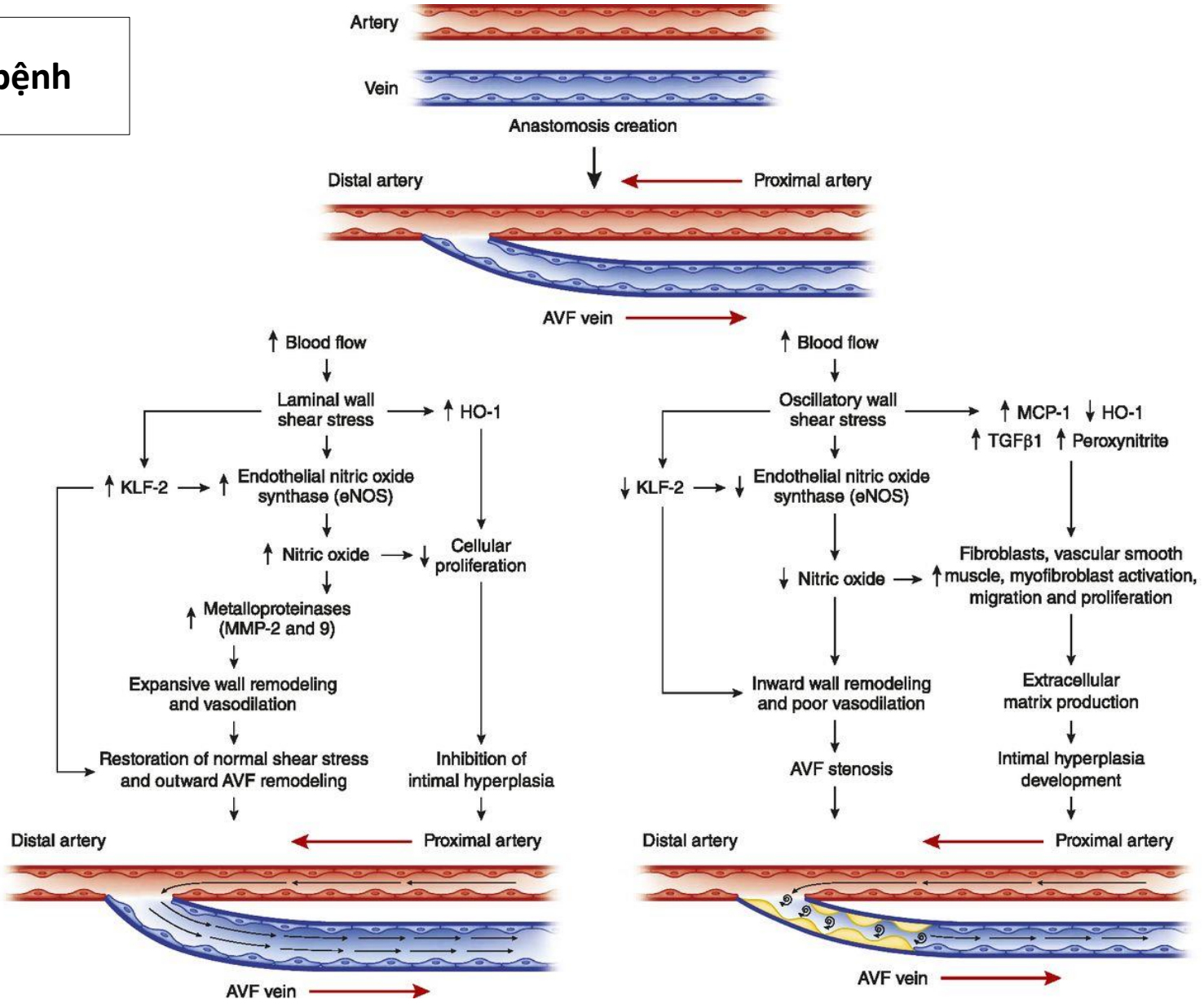
Arterial inflow	17%
Between Needles	22%
Venous Outflow	55%



Arterial inflow	4%
Between Needles	6%
Venous Outflow	85%

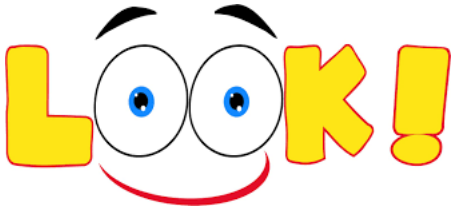
Nephrol Dial Transplant (2000) 15: 2029–2036

Sinh lý bệnh


Artery
Vein
Anastomosis creation
Distal artery
Proximal artery
AVF vein
↑ Blood flow
Laminal wall shear stress
↑ HO-1
↑ KLF-2
↑ Endothelial nitric oxide synthase (eNOS)
↑ Nitric oxide
↓ Cellular proliferation
↑ Metalloproteinases (MMP-2 and 9)
Expansive wall remodeling and vasodilation
Restoration of normal shear stress and outward AVF remodeling
Inhibition of intimal hyperplasia
Distal artery
Proximal artery
AVF vein
↑ Blood flow
Oscillatory wall shear stress
↑ MCP-1 ↓ HO-1
↑ TGFβ1 ↑ Peroxynitrite
↓ KLF-2
↓ Endothelial nitric oxide synthase (eNOS)
↓ Nitric oxide
↑ Fibroblasts, vascular smooth muscle, myofibroblast activation, migration and proliferation
Inward wall remodeling and poor vasodilation
Extracellular matrix production
AVF stenosis
Intimal hyperplasia development
Distal artery
Proximal artery
AVF vein

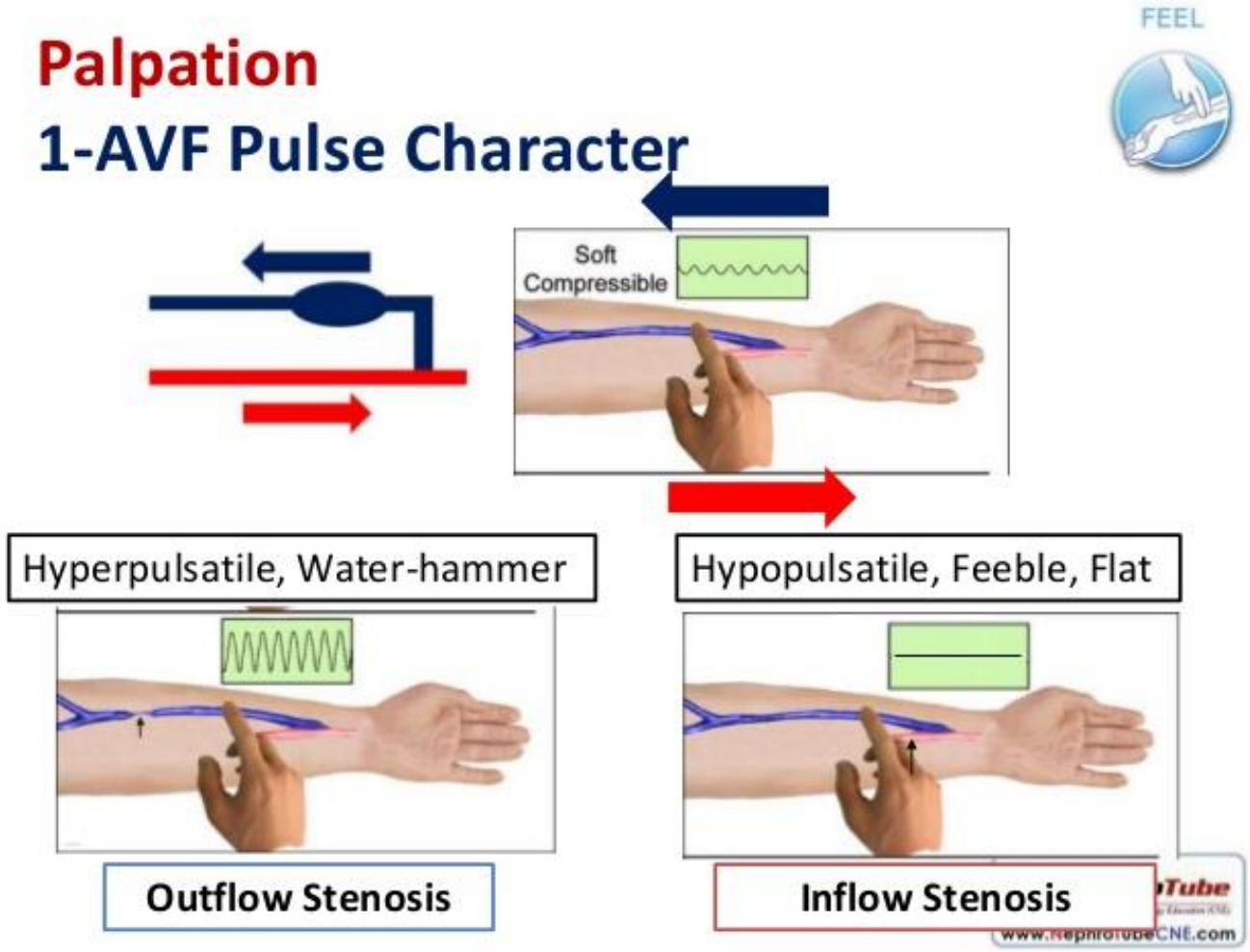
Good AVF Examination
= Early detection of complications
= Saving AVF
= Saving patient's life

Khám AVF ?



Nhìn toàn diện !

Khám lâm sàng

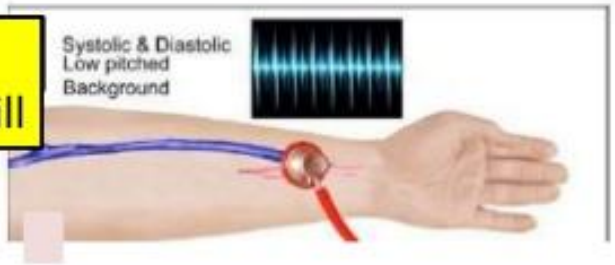


Auscultation

1-Bruit

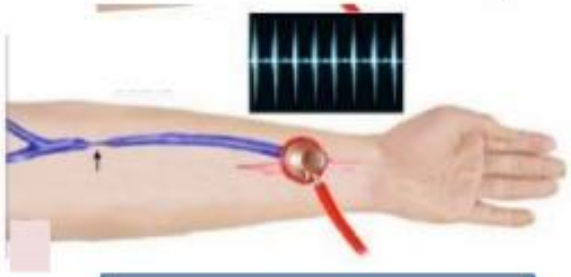
LISTEN

Normally:
Continues Thrill



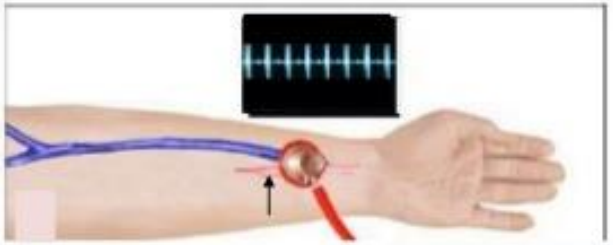
Abnormally: Discontinues Thrill (Systolic only)

High Pitched, Loud

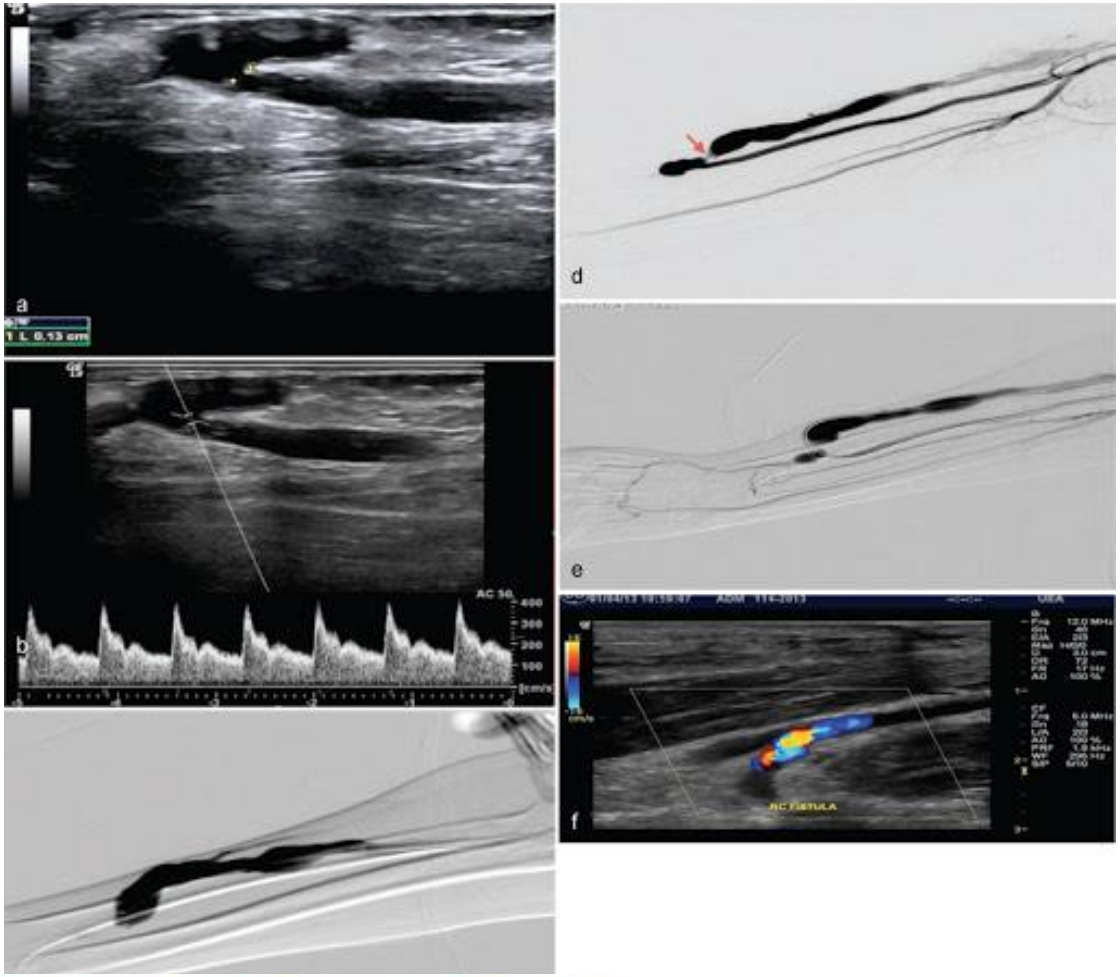


Outflow Stenosis

Low Pitched, Quiet



Inflow Stenosis



Recommendation 9	Class	Level
Duplex ultrasound is recommended as the first line imaging modality in suspected vascular access dysfunction.	I	B

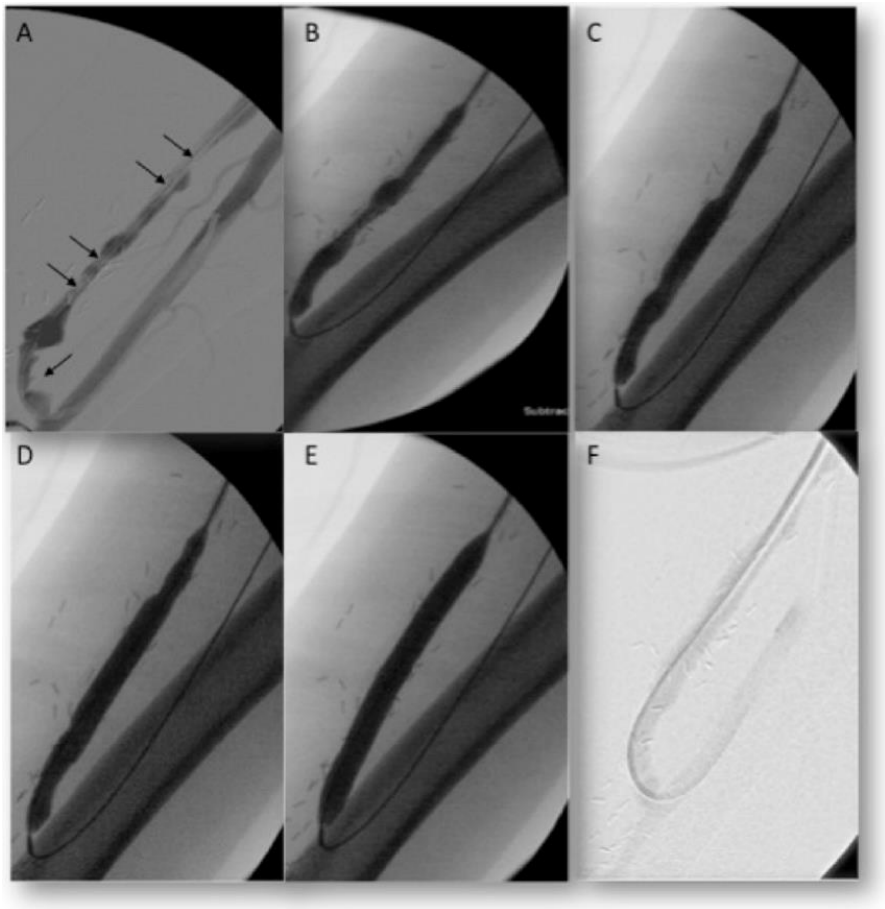
Recommendation 10	Class	Level
Computed tomographic angiography may be considered in patients with inconclusive ultrasonographic or angiographic results concerning the degree of central venous stenosis.	IIb	C

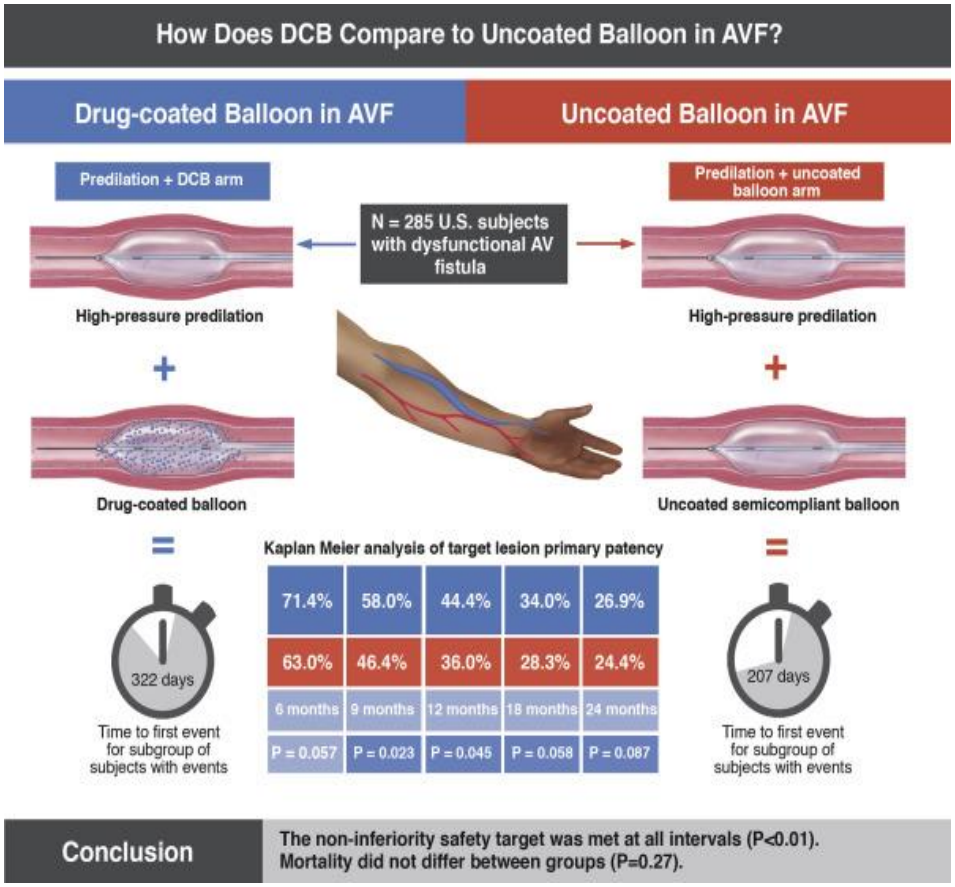
TREATMENTS

Recommendation 60	Class	Level
Balloon angioplasty is recommended as primary treatment for inflow arterial stenosis of any type of vascular access.	I	C
Recommendation 61		
Surgical proximal relocation of the vascular access anastomosis should be considered in juxta-anastomotic stenosis in the forearm.	IIa	C
Recommendation 62		
Balloon angioplasty is recommended for the treatment of venous outflow stenosis.	I	C
Recommendation 63		
Endovascular treatment with stent grafts should be considered for the treatment of cephalic arch stenosis.	IIa	B

Eur J Vasc Endovasc Surg (2018), Vascular Access: 2018 Clinical Practice Guidelines of the European Society for Vascular Surgery (ESVS) 55, 757e818

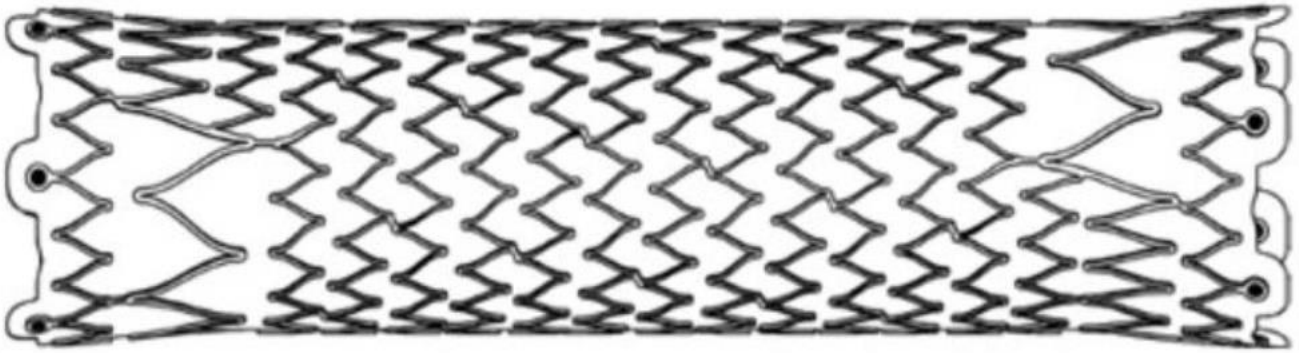
Phương pháp nong bóng





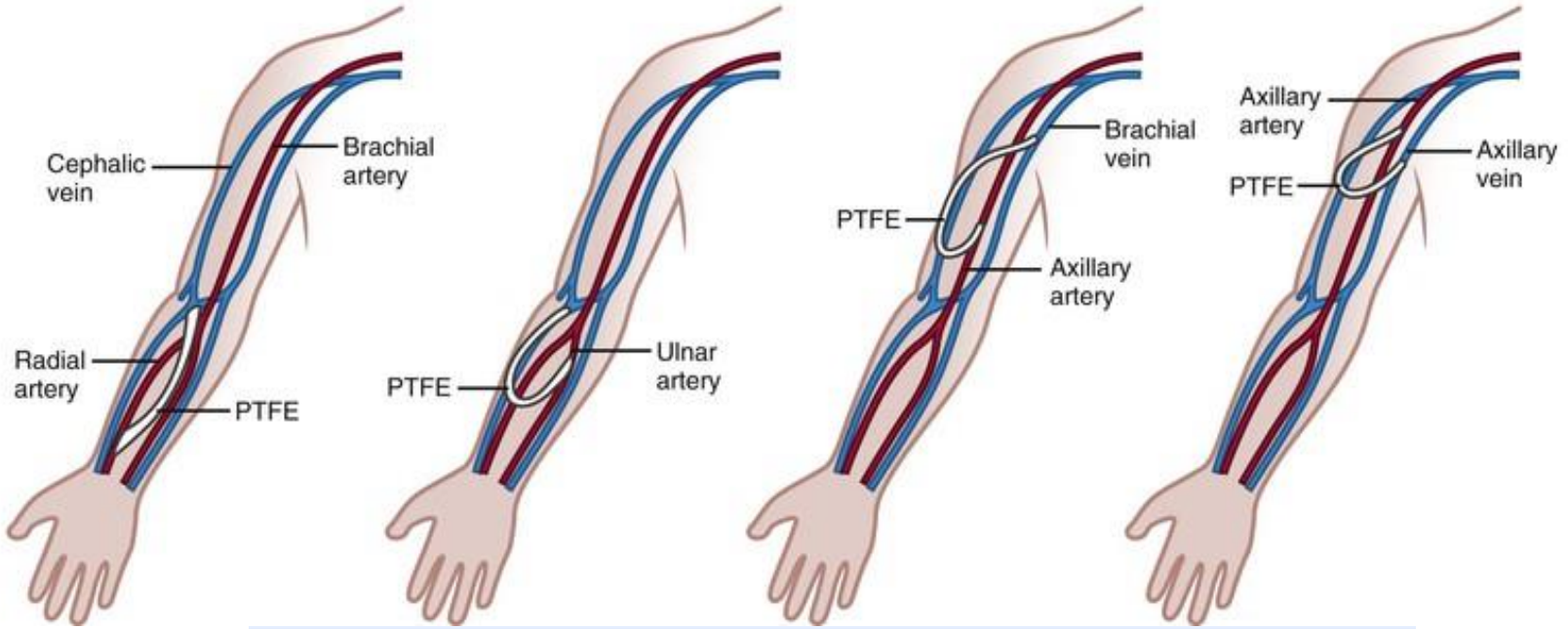
Phương pháp đặt stent

New Indication Added for Covered Stent to Treat Hemodialysis AV Fistula



April 3, 2019 — The U.S. Food and Drug Administration (FDA) recently granted an additional indication to Bard Peripheral Vascular's Covera Vascular Covered Stent for the treatment of a stenosis or blockage which has developed anywhere in the access circuit of patients on hemodialysis using an arteriovenous (AV) fistula.

Nonautogenous Prosthetic Graft (PTFE) Vascular Access



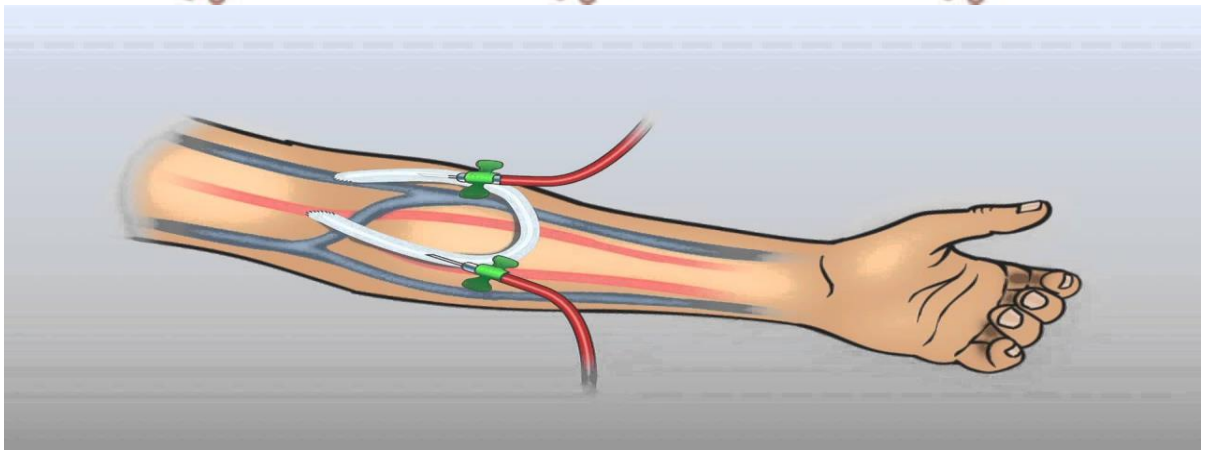
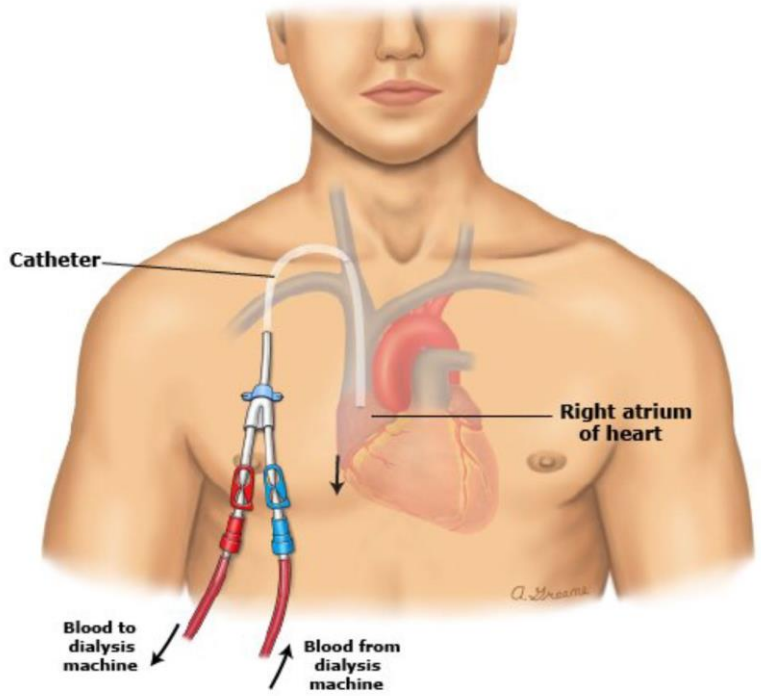


Diagram showing central venous catheter for hemodialysis



This drawing shows a central venous catheter, which is a thin, flexible tube. One end is put into a large vein, usually in the neck. The other end stays outside the body. During hemodialysis, the end outside of the body is connected to tubes from the dialysis machine.

Ca lâm sàng

- Bệnh nhân nam 68 tuổi
- Tiền sử THA 14 năm, ĐTĐ 11 năm, suy thận mạn đã chạy thận chu kỳ 12 năm (T2 – T4 – T6).
- Ban đầu BN chạy qua cầu: quay – đầu trái, được 2 năm => quay đầu phải 3 năm => cánh tay đầu trái => AVG cánh tay – cánh tay T => cánh tay đầu phải => AVG cánh tay – cánh tay phải

(∑ phẫu thuật: 11 lần)

- Nhập viện do không chạy thận nhân tạo được qua AVG tay phải => Chạy qua Catheter tĩnh mạch cảnh trong phải
- Khám lâm sàng: Sờ không thấy dấu hiệu mạch đập ở AVG tay phải.

Cận lâm sàng

- **Xét nghiệm máu:**

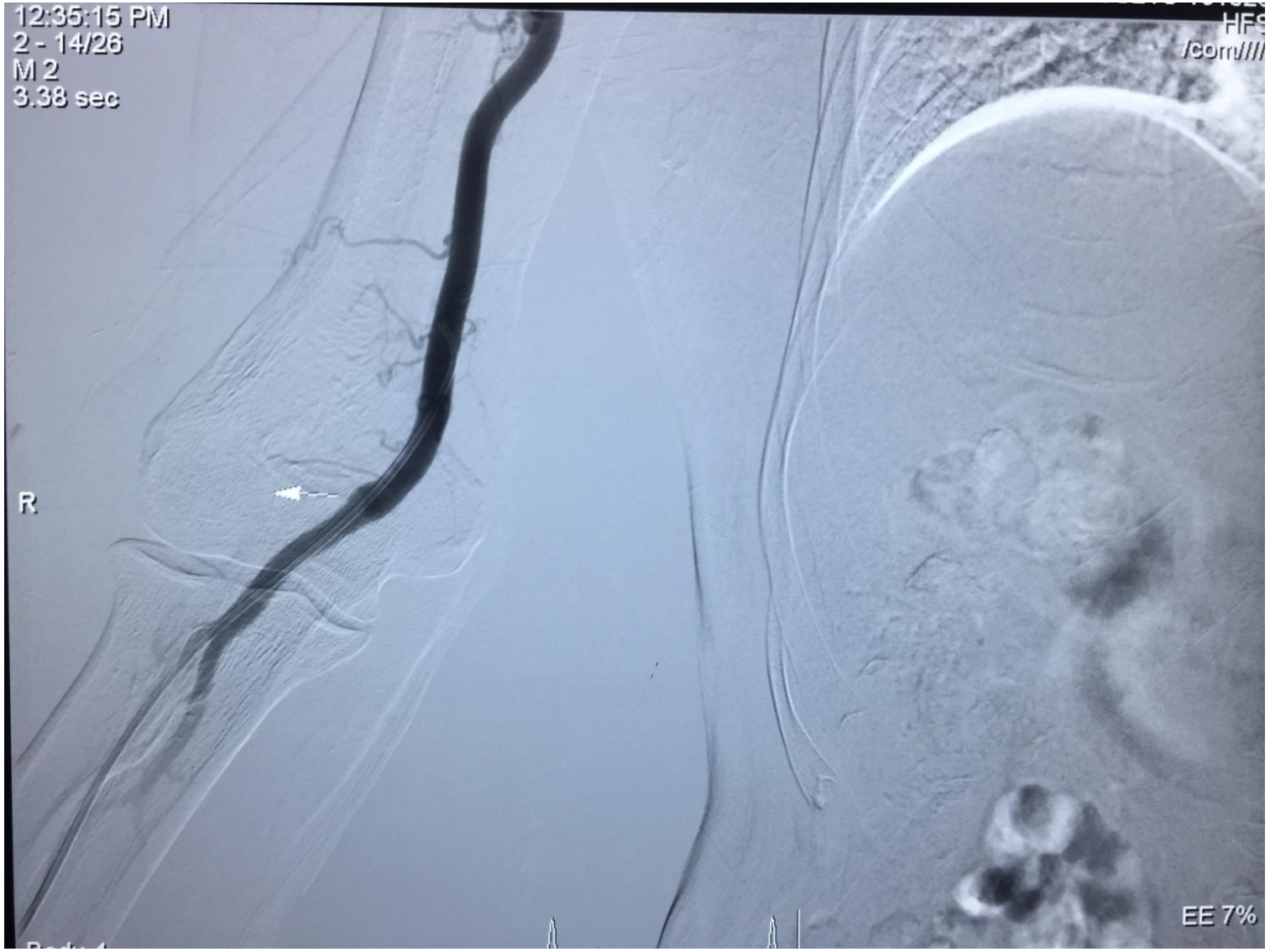
✓ HC: 3.2 T/L Hb 8,2 g/dl, HCT 36 %

✓ Ure: 16,2 mmol/l, Cre: 602 µmol/l, Kali: 4.7 mmol/l

- **Siêu âm mạch máu chi trên:**

✓ Động mạch cánh tay, động mạch quay, động mạch trụ có xơ vữa rải rác

✓ Tắc hoàn toàn AVG, trong lòng có nhiều huyết khối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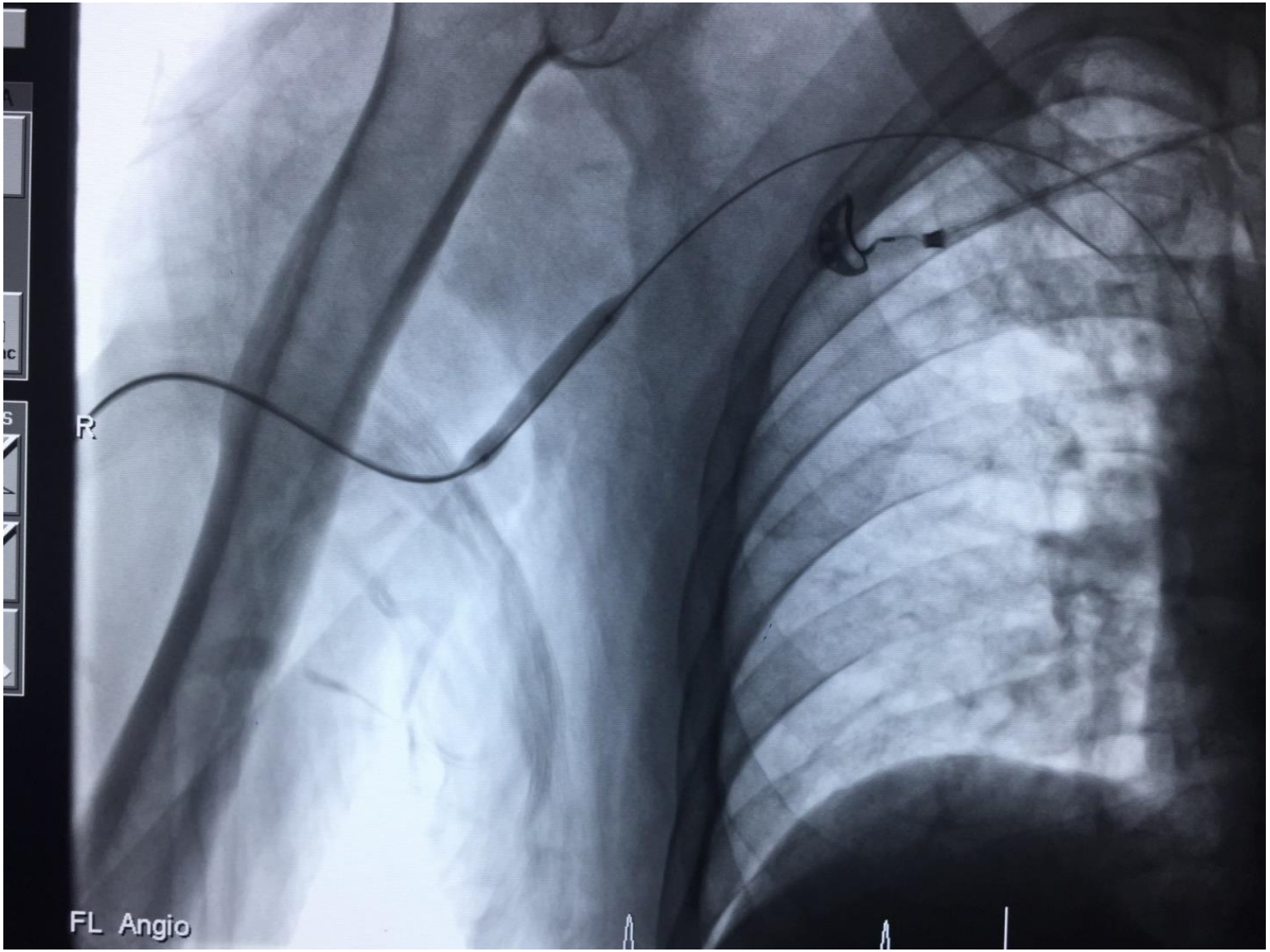
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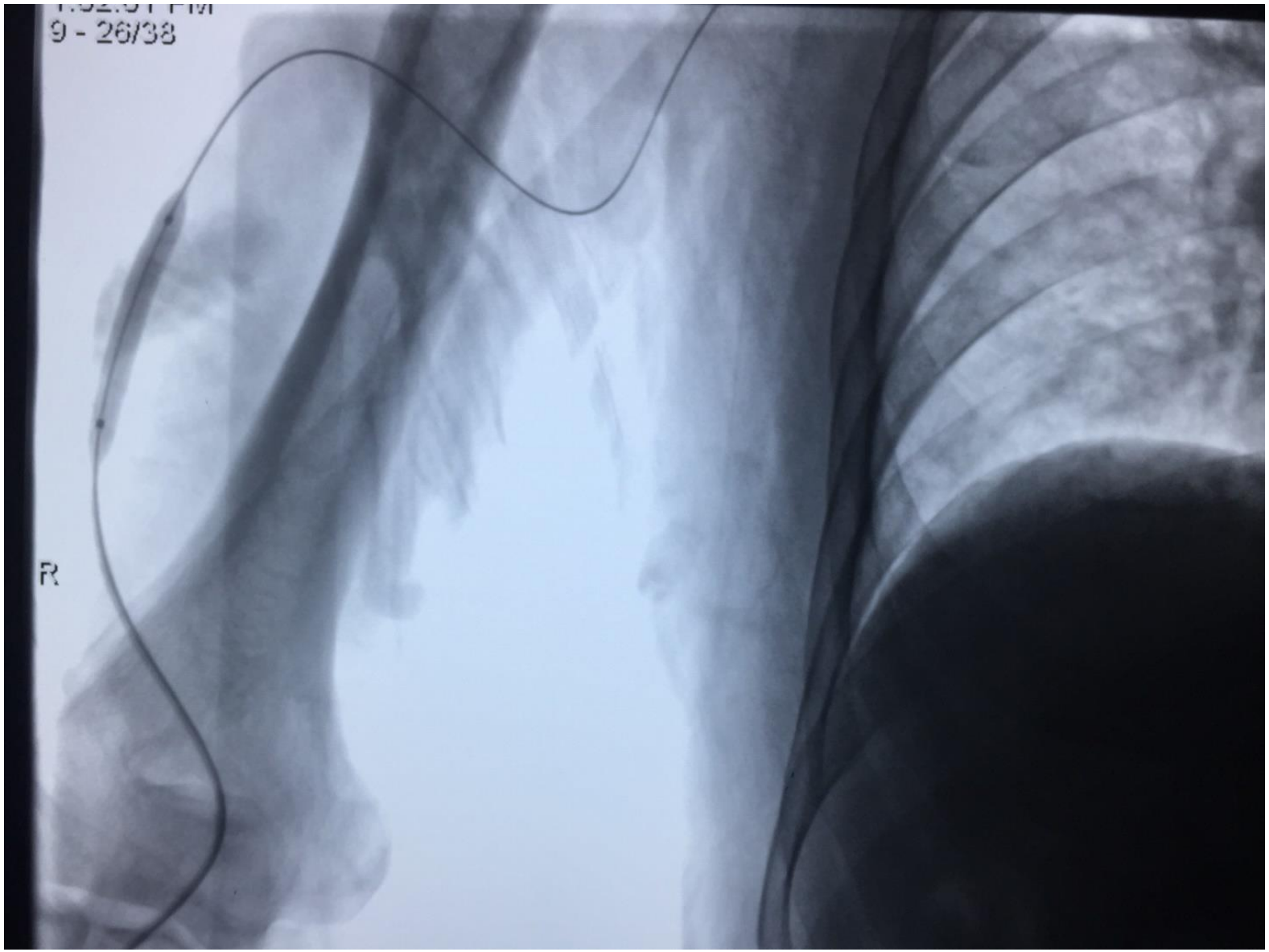
FL Angio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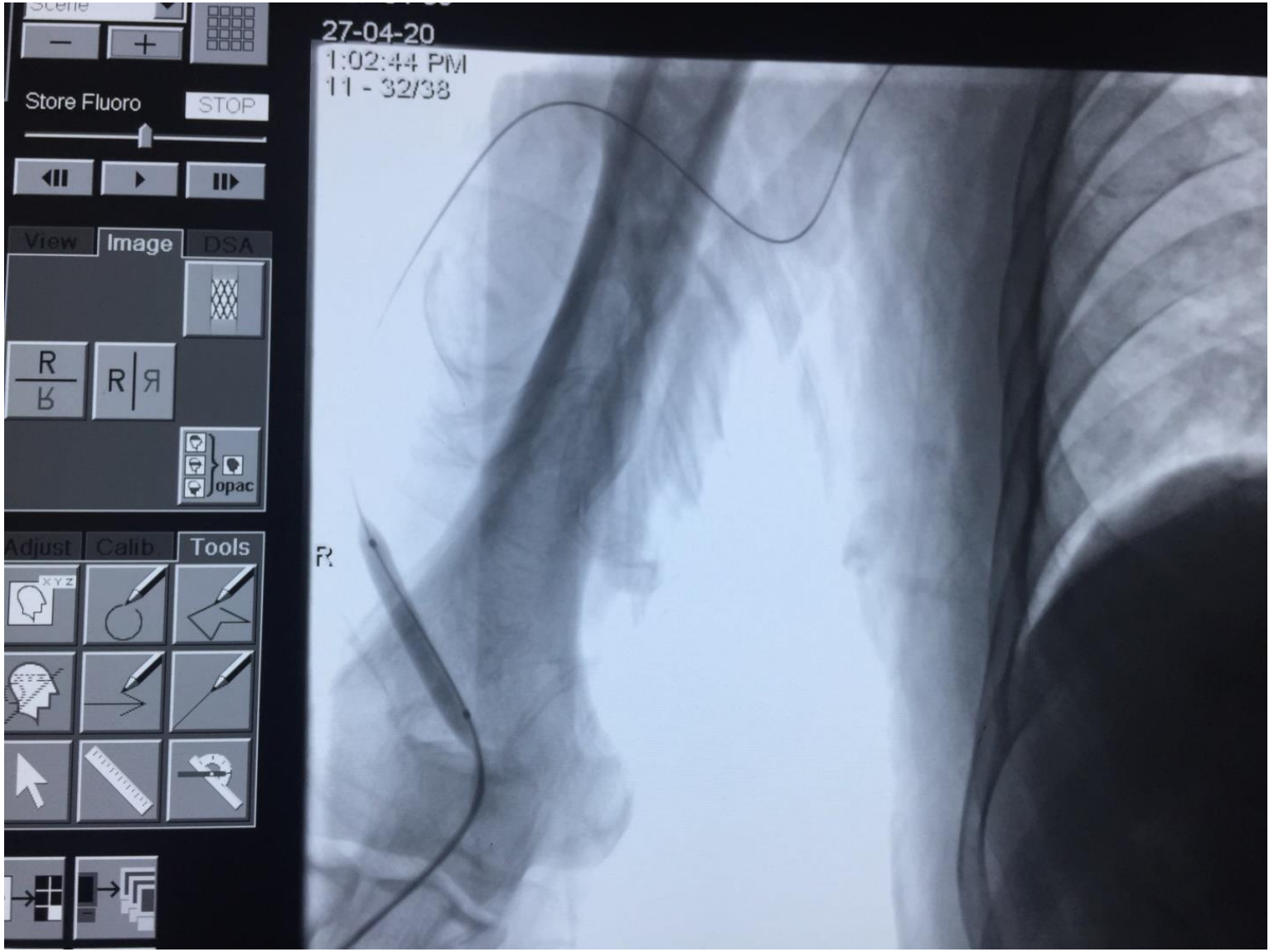
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Artis Workplace A

Kết luận

- Hẹp cầu tay là biến chứng thường gặp ở bệnh nhân thận nhân tạo
- Chăm sóc cầu tay tốt sẽ giúp kéo dài cuộc sống cho bệnh nhân
- Nong bóng điều trị hẹp, tắc cầu tay là một phương pháp hiệu quả, an toàn, có thể áp dụng nhiều lần

Xin cảm ơn sự lắng nghe !