



## 2° Convegno Regionale Calabria Infermieri di Area Nefrologica

30 Giugno 2024 Hotel San Francesco Rende (Cs)

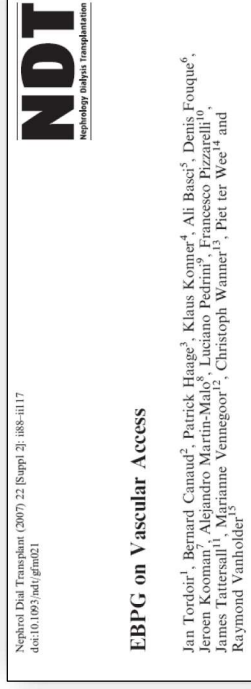
**Le Competenze Infermieristiche in Nefrologia:  
La nuova sfida per il riconoscimento professionale.**

**U.O.C RADIOLOGIA INTERVENTISTICA**  
Ospedale Annunziata  
**Dir. G. Guido**  
Dr. T. De Bartolo - Dr. F. A. Iannace

## Treatment of stenosis and thrombosis in AV Fistulae & AV grafts

### Guideline 7

- 7.1. For venous outflow stenosis percutaneous transluminal angioplasty (PTA) is the first treatment option. *(Evidence level III)*
- 7.2. Thrombosed autogenous and graft fistulae should be treated either **interventionally or surgically**. Individual centers should review their results and **select** the modality that produces the best results for that center. In some centers this will be interventional radiology and in others surgery. *(Evidence level III)*



Materiale formativo SIAN, la riproduzione integrale rappresenta una violazione della legge sul diritto d'autore



HOME MADE CASES



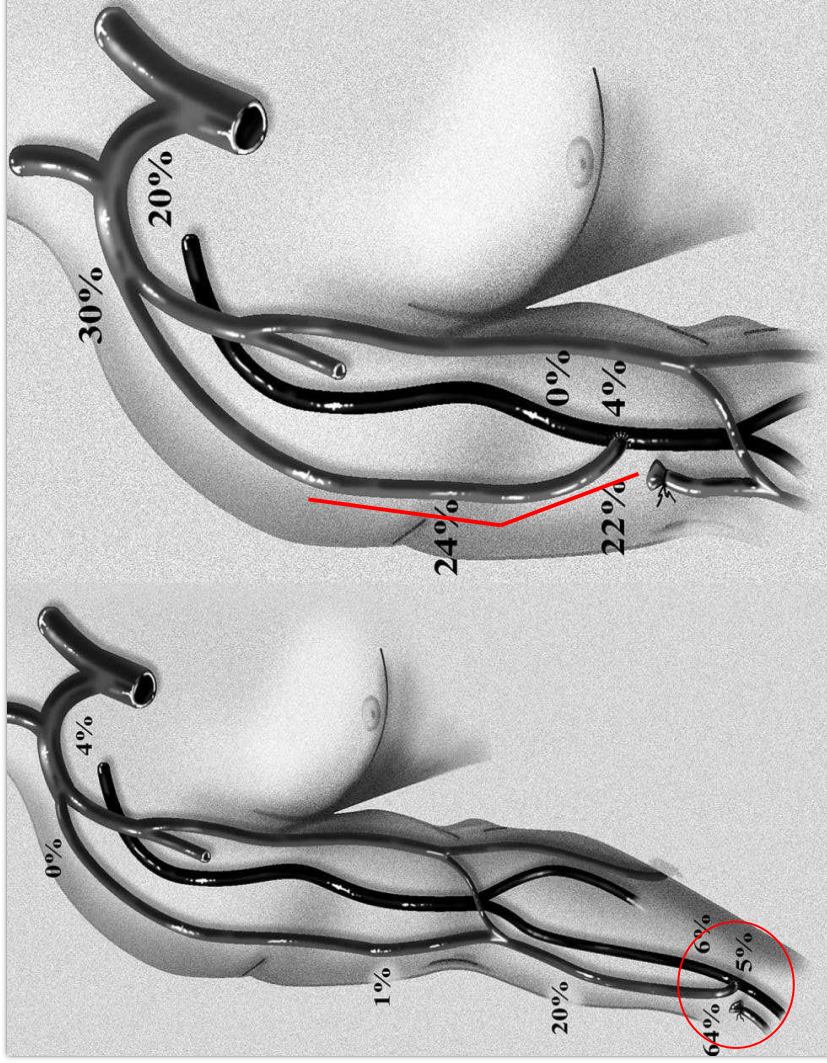
PTA



OPENING

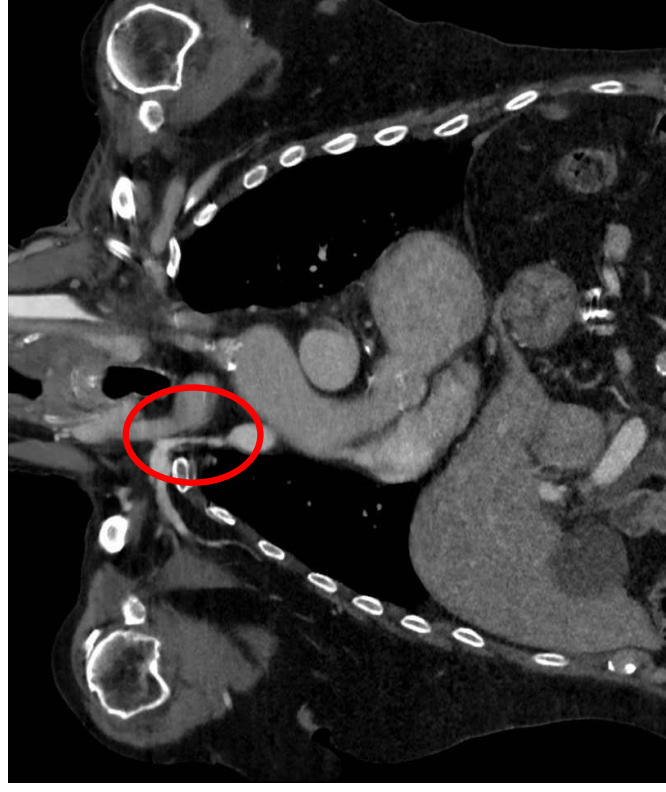


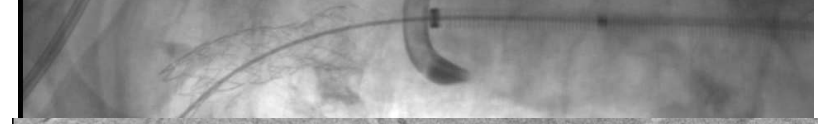
THROMBOLISIS/THROMBECTOMY

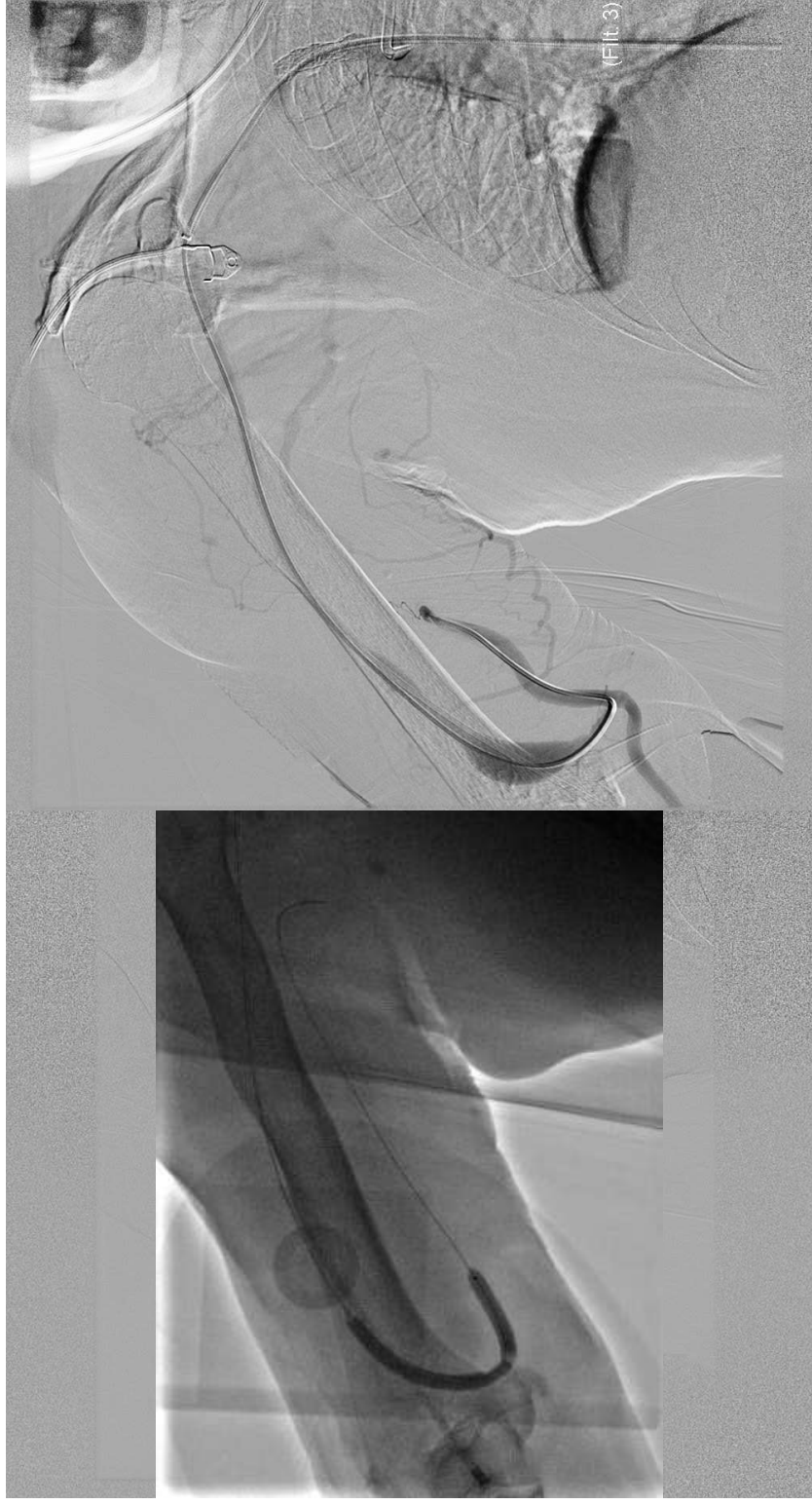




**Agosto 2023**







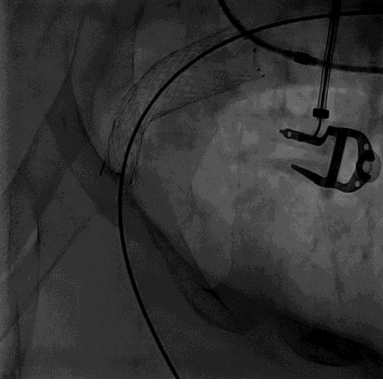
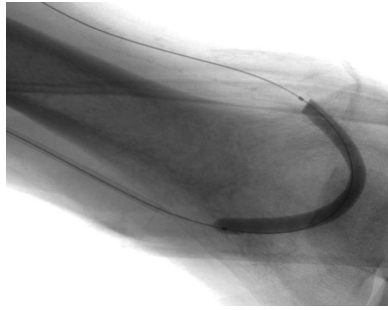
**NEW TECHNOLOGIES PUT THE THRILL BACK IN DIALYSIS ACCESS**

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## Endovascular Treatment of Dysfunctional Vascular Access: From Fundamentals to an Algorithmic Approach

Choosing the ideal device for the right location in dialysis access management.

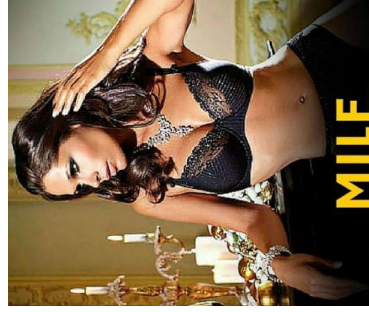
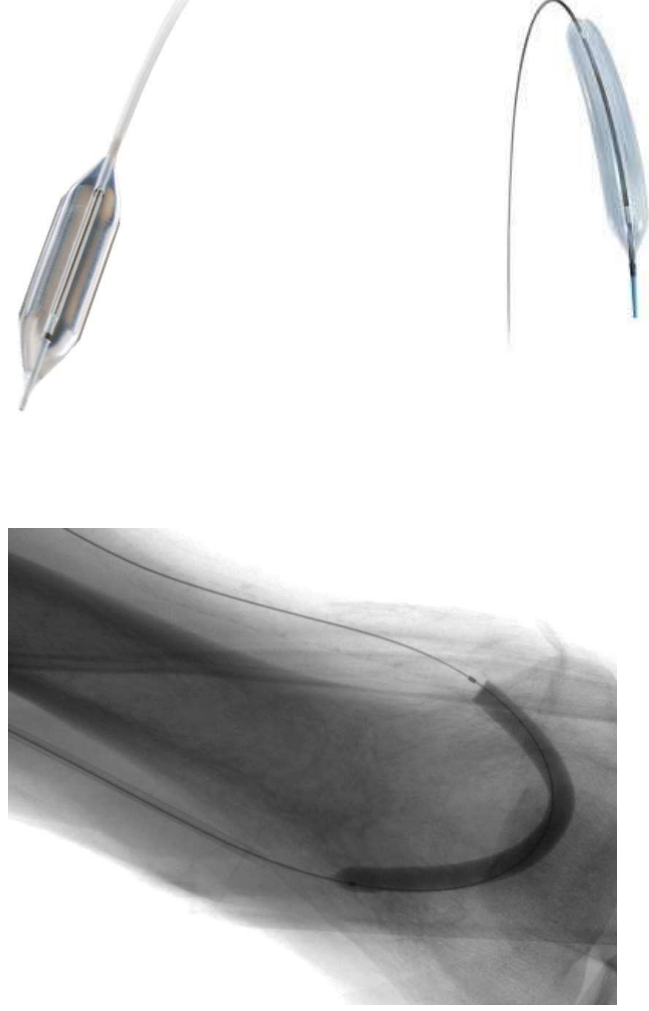
BY PANAGIOTIS M. KITROU, MD, MSc, PhD, EBIR, AND DIMITRIOS KARNABATIDIS, MD, PHD, FCIIRSE



### Stent Grafts Provided Superior Primary Patency for Central Venous Stenosis Treatment in Comparison with Angioplasty and Bare Metal Stent: A Retrospective Single Center Study on 70 Hemodialysis Patients

Piero Quartetti, MD<sup>1</sup>, Franco Galli, MD<sup>2</sup>, Lorenzo Paolo Moramarco, MD<sup>3</sup>, Riccardo Corti, MD<sup>4</sup>, Giovanni Leati, MD<sup>5</sup>, Ilaria Florini, MD<sup>6</sup>, Riccardo Cusi, MD<sup>7</sup>, Giovanni Fornagari, MD<sup>8</sup>, and Marcello Materzi, MD<sup>9</sup>

**Abstract**  
The aim of this study is to compare the efficacy of stent grafts, bare metal stents, and angioplasty in the treatment of symptomatic central venous stenosis. **Materials and Methods:** A 10-year retrospective evaluation in 70 patients (32 men) undergoing vascular access (BA, 47%) and tunneled catheters (27, 33%) was made. Three cohorts were compared: angioplasty alone (21), bare metal stent (18), and stent graft (31). The primary endpoint was primary patency at 1 year. Secondary endpoints were secondary patency, mortality, and clinical outcome. **Results:** All patients had a favorable anatomical and clinical outcome. Restenosis occurred in 22 (31%) of 70 patients requiring 41 interventions (59%). At 1 year, primary patency was 84% (95% CI 71-94%), secondary patency was 86% (95% CI 76-93%), and mortality was 4% (95% CI 1-10%). Primary patency was significantly higher for stent grafts compared with angioplasty (P = .014) versus bare metal stent (P = .002). The overall comparison was more favorable for stent grafts (P = .002). At 1 year, mortality was 4% (95% CI 1-10%), secondary patency was 86% (95% CI 76-93%), and clinical outcome was 96% (95% CI 91-99%). **Conclusion:** Stent grafts provided superior primary patency for central venous stenosis and requires fewer reinterventions in a dialysis population with a high prevalence of long-term catheters.



### Endovascular management in arteriovenous fistula for hemodialysis

Shin Jae Lee, MD<sup>a</sup>, Gyeong Sik Jeon, MD<sup>b,\*</sup>, Byungmo Lee, MD

Vascular and Interventional Radiology • Research



Arteriovenous Fistulas and Their Characteristic Sites of Stenosis

Yu et al. BMC Nephrology (2023) 24:304  
<https://doi.org/10.1186/s12882-023-03361-5>

BMC Nephrology

#### RESEARCH

#### Open Access



## The efficacy of percutaneous transluminal angioplasty in arteriovenous fistula



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A STEP AHEAD IN SFA TREATMENT

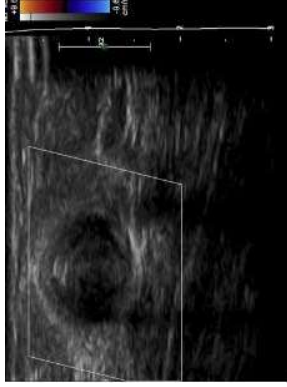
<http://www.kidney-international.org>  
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ure fistula

chool of Medicine, Miami Florida, USA

g Native  
oplasty<sup>1</sup>

Radiology



### Management of autogenous AV fistula thrombosis

**Fistula thrombosis should be treated as soon as possible or within 48 h. The duration and site of AV**

to dopo tanto dice all'altro: "a storta?" o risponde: mica quella

ii104

post-anastomotic vein segment as result of anastomotic stenosis or may begin at the needle site. When the clot is localized at the anastomosis in radial-cephalic and brachial-cephalic fistulae, the outflow vein may remain patent due to the natural side branches that continue to carry venous blood flow. In these accesses, it is possible to create a new proximal anastomosis [7,13]. Thrombosis in transposed basilic vein fistulae usually leads to clot propagation to the entire vein. Although comparative studies are missing, the available literature [4,5,14-22] suggests that thrombosed autogenous AV fistulae should, preferably, be treated by interventional radiology. The single exception may be forearm AV fistulae, thrombosed due to anastomotic stenosis. It is likely that in such cases, proximal re-anastomosis will provide good results.

J. Tondair et al.  
**Management of AV graft stenosis**

A diameter reduction of >50% of the lumen together with a significant flow decline is considered as an indication for treatment [26].

#### Stenosis at the arterial anastomosis

As in autogenous fistulae, most arterial inflow stenoses in grafts can successfully be treated by PTA [27]. Stenosis of the arterial anastomosis itself can be dilated, if only the afferent artery and the graft at the anastomosis are affected and there is no stenosis in the efferent artery. If there is an additional stenosis of the efferent artery, angioplasty of the anastomosis alone will enhance graft flow with the risk of peripheral ischaemia due to reduced peripheral arterial perfusion. In these patients, either dilatation of the efferent artery by interventional radiology or through surgical revision of the anastomosis may resolve the dilemma.

#### Intra-graft stenosis

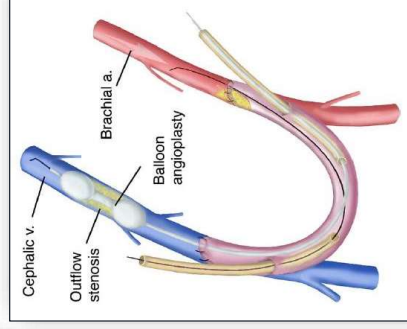
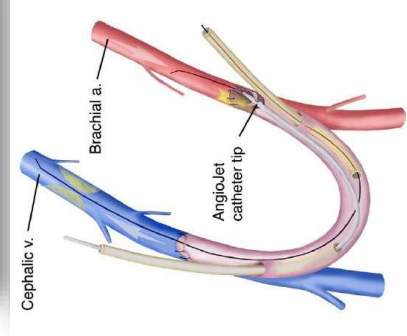
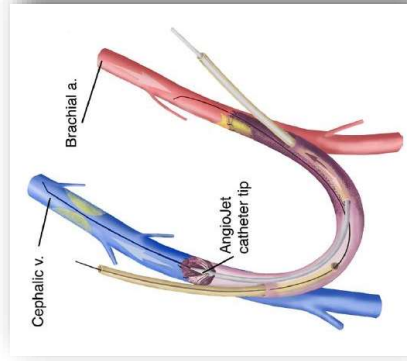
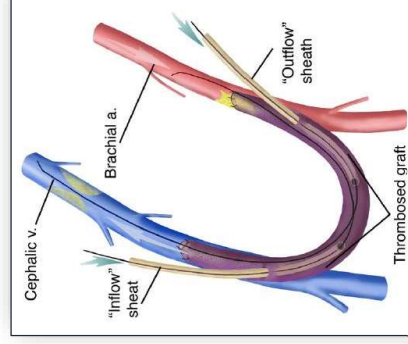
Intra-graft (or mid-graft) stenoses are found in the cannulation segment of grafts. They result from excessive ingrowth of fibrous tissue through puncture holes. These stenoses can be treated by PTA [28], graft curettage [29], or segmental graft replacement. When only a part of the cannulation segment is involved, the stenosis can be treated for hemodialysis.

#### Interventional thrombolysis

Thrombolysis can be performed mechanically or pharmacomechanically [23-25]. While the immediate success rate is higher in grafts than in autogenous AV fistulae (99 vs 93% in forearm fistulae), the primary patency rate of the forearm AV fistula at 1 year is much higher (49 vs 14%). One year secondary patency rates are 80% in forearm and 50% in upper arm AV fistulae, respectively [14]. In AV fistulae, the combination of a thrombolytic agent (urokinase or tissue plasminogen activator =tPA) with balloon angioplasty resulted in an immediate success rate of



### Tecnica del doppio approccio



STATE-OF-THE-ART PAPER  
**Catheter Interventions for Hemodialysis Fistulas and Grafts**  
Joh A. Hult, MD

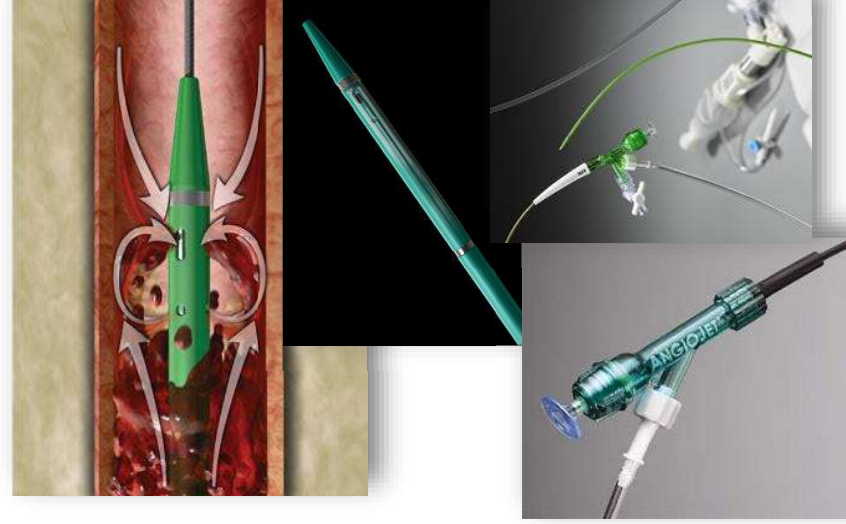
## FAV native e GRAFT- Risultati

- Tasso di successo tecnico per trombosi migliore graft versus vs fistole native \*, al contrario della pervietà primaria ad 1aa (FAV=49% versus graft=26%->da recidiva stenosi)

Turmel Rodriguez, CVIR 2004

- Successo clinico fistole native 84%
- Successo clinico graft 71%

Tromb Garcia Medina, Nefrologia 2009 (6)



ARROW.

PRODUCT CATALOG

Percutaneous Thrombolytic Devices (PTD)<sup>®</sup>

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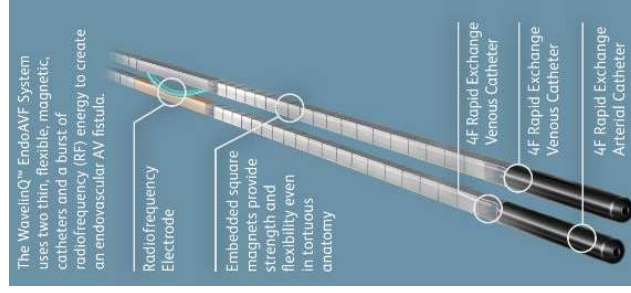


# When Not to Perform Percutaneous Thrombectomy of a Clotted Native Fistula

Ten scenarios in which this therapy may not be the best option for hemodialysis fistula treatment.

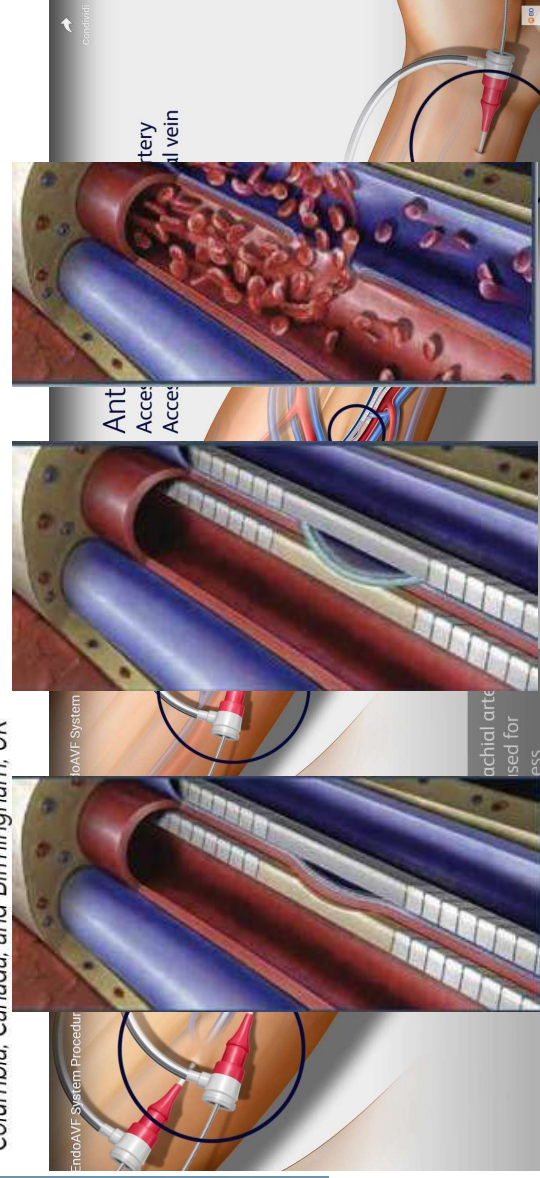
JUNE 2014 ENDOVASCULAR TODAY  
BY JONAS W. REDMOND, MD, AND TIMOTHY W.I. CLARK, MD, FSIR

- **Fistola infetta** (eritema e flogosi cutanea per la flebite da trombosi)
- **In presenza di ischemia distale da ipoperfusione**
- **Fistola aneurismatica (<5cm) con ampia deposizione trombotica** (embolismo polmonare 59%)
- **Ulcerazione sito di puntura o aree di necrosi cutanea**
- **Trombosi ripetuta (caso per caso) <1 m**
- **Stenting esteso**
- **Pz.emodinamicamente instabili, con limitata riserva cardio-polmonare, shunt destro-sinistro**



## Percutaneous arteriovenous fistula creation with the 4F WavelinQ EndoAVF System

Todd Berland, MD,<sup>a</sup> Jason Clement, MD,<sup>b</sup> Nicholas Inston, MD,<sup>c</sup> Paul Kreienberg, MD,<sup>d</sup> and Kenneth Ouriel, MD,<sup>e</sup> on Behalf of the WavelinQ 4 French Investigators, New York and Albany, NY; British Columbia, Canada; and Birmingham, UK





## CONCLUSIONI

### INSTAGRAM VERSUS REALITY



# GRAZIE PER L'ATTENZIONE...E ATTENZIONE A NON SBAGLIARE IDRAULICO

