

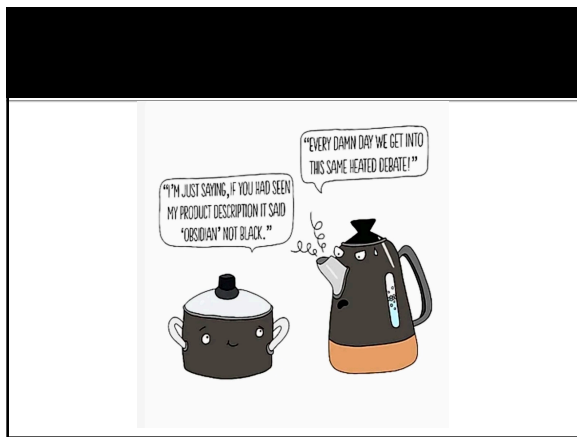
Dear Surgeons, Design Me a Better Access

Ramblings of an Interventional Nephrologist

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Disclosures

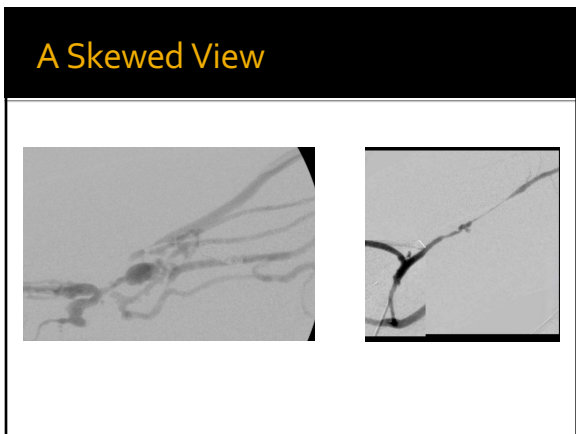
None



Here's the thing....

**Sometime I get really good AVF....
From really bad surgeons**

**Sometimes I get really bad AVF....
From really good surgeons**



EndoAVF: Pros or Cons?

- Controlled size and repeatable anastomosis
- Low-Moderate flow
- Multi-outflow
- Reliant on native anatomy and vessel path

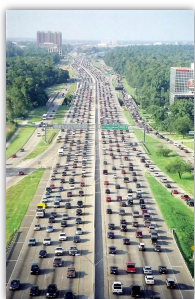
Here's the Question

Can we use the pros and lessons from the endoAVF experience to design a better sAVF?

Maturation is Flow Modulation

How much flow

Where is the flow

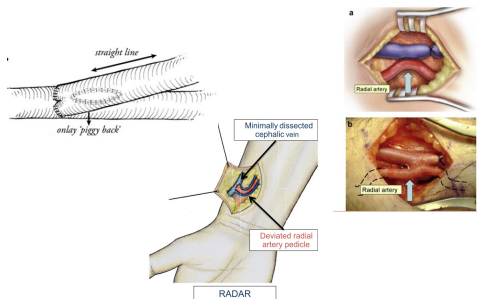


How much flow?

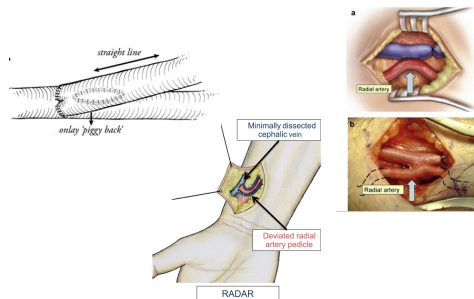
What's the ideal flow volume?
<1000? <1500?

What factors dictate flow volume?
Vessel size?
Anastomosis type/size?

Is it the anastomosis?



Is there a common factor here?



But is it the anastomosis?

Technical Success

Ellipsys	95%	WavelinQ	98%
*Mallos, JVS 2018	97%	*Zemela, AVS 2021 (6F)	100%
Hebbi 2019	97%	*Boston, JVA 2020 (4F)	97%
*Mallos, JVS 2020	99%	*Berland, AVS 2019 (4F)	100%
*Harka, JVS 2021	-	*Berland, JVS 2021 (4F)	97%
Sultan, JVA 2021	94.4%	*Morchoni, JVS 2021 (6F 4F)	-
Chavez, AVS 2021	96%	*Kitou, JVR 2021 (4F)	100%
*Shahverdyan, SIR 2020	100%	Shahverdyan, SIR 2020	97%
Yao, SVS 2023		98%	

But is it the anastomosis?

2 Needle Cannulation

Ellipsys	88% @114d	WavelinQ	64% @111d
*Mallos, JVS 2018	100%	*Zemela, AVS 2021 (6F)	48% of 23 ESRD
Hebbi 2019	82% (6w)	*Boston, JVA 2020 (4F)	13d
*Mallos, JVS 2020	100% of 137 ESRD	*Berland, AVS 2019 (4F)	78% (90d), 43d mean
*Harka, JVS 2021	-	*Berland, JVS 2021 (4F)	78% (0m), 66d mean
Sultan, JVA 2021	20% (2 of 10 ESRD) (0m)	*Morchoni, JVS 2021 (6F 4F)	-
		*Kitou, JVR 2021 (4F)	86%, 61d mean
*Shahverdyan, SIR 2020	79.5% @1y, 60d mean	Shahverdyan, SIR 2020	60% @1y, 90d mean
Yao, SVS 2023		62%	

Where is the flow?

John Ross says a polyfistula is bad

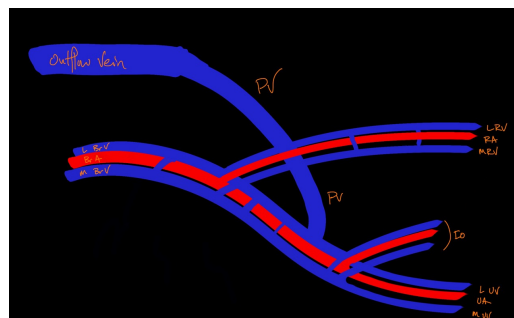
But is a mono fistula really that good?

Is there a middle ground that is better?

2 or 3 outflow vessels?

Can we modulate that?

What if you could control a multi outflow?



While I have your attention

