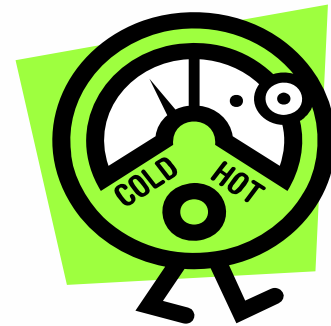


VASCULAR ACCESS: WHAT'S HOT? WHAT'S NOT?

Presentation by BCs VA Nurses

*BC Nephrology Days
October 12, 2007*



Agenda

1. What is PVAAS?
2. Use of fistulas, grafts, and catheters – why are fistulas hot and grafts and catheters not?
3. Incidence and prevalence rates – is BC hot? Or not?
4. Discussion: As nurses, how can we promote successful fistula usage?



WHAT IS PVAST?

Janet Williams, PVAST Coordinator



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What is PVAST?

- Provincial Vascular Access Services Team (PVAST)
- Provincial, inter-HA, multidisciplinary approach to improvements in VA
 - Better data
 - Standardized guidelines
 - Improved delivery of care
- Initiatives provincial but tailored to local needs and implemented locally



PVAST Targets

- 50% fistula/graft incidence rate
 - i.e., fistula/graft used for 1st HD session
- 80% fistula/graft prevalence rate
 - i.e., fistula/graft in use currently for HD



PVAST Phase 1 – 2005/06

- VA infrastructures established
 - PVAST established
 - VA Teams, VA Nurses, VA Clinics, & VA rounds in each HA
- VA provincial guidelines developed for:
 - Patients with HD as Primary Modality
 - Radiology: Indications & Urgency Criteria
 - Surgery: Urgency Criteria



PVAST Phase 2 – 2006 to 2008

- Continuing to develop VA infrastructures
- 4 priority areas:
 - Use of PROMIS/CQI indicators
 - Development of provincial guidelines
 - VA Clinics & best practices
 - Referral processes



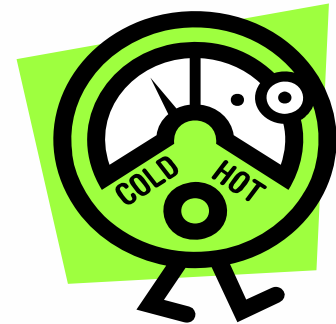
Provincial Guidelines

- Assessment of newly created fistulas & grafts
- Cannulation
- Insertion & removal of tunneled HD catheters
- Selection of permanent HD access & order of placement
- Prevention, treatment, & monitoring of VA related infection



USE OF FISTULAS, GRAFTS, & CATHETERS:

*Why are fistulas
hot and grafts &
catheters not?*



VA Nurses of BC



Objectives

- **Understand the benefits of fistulas (AVFs) vs grafts (AVGs) & catheters**
- **Know how AVF rates in Canada & BC compare to other countries**
- **Identify steps you can take to promote successful AVF usage**



What is the Preferred Type of Access?



What is the Preferred Type of Access?

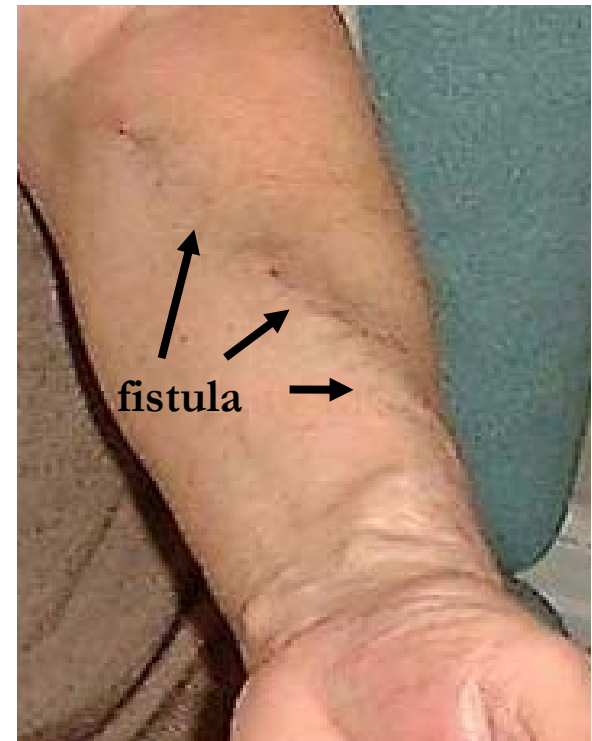
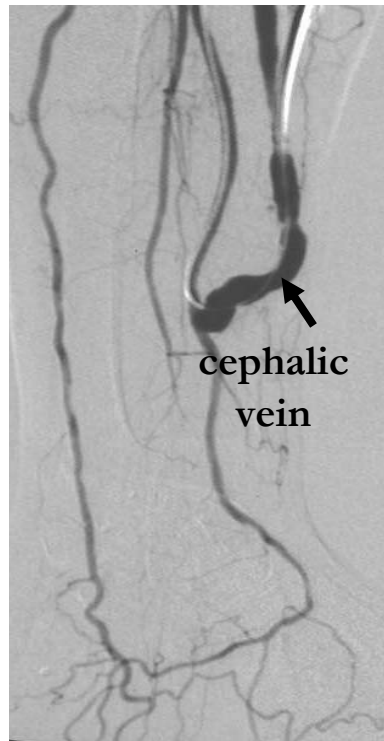
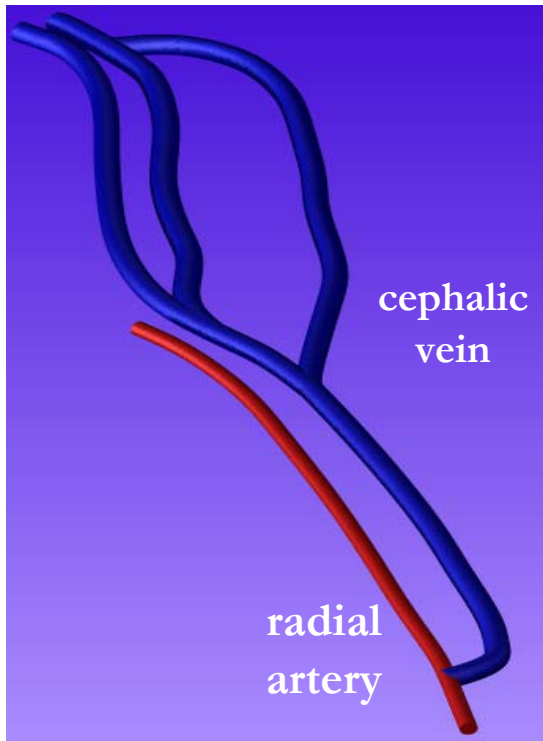
- **Fistula (AVF), followed by graft (AVG), and then catheter (CVC)**
 - **BC PVAAS VA Standards**
 - **Canadian Society of Nephrologists**
 - **National Kidney Foundation (K/DOQI)**



What is a Fistula (AVF)?



What is a Fistula (AVF)?



Radiocephalic Fistula

What are the Benefits of AVFs?



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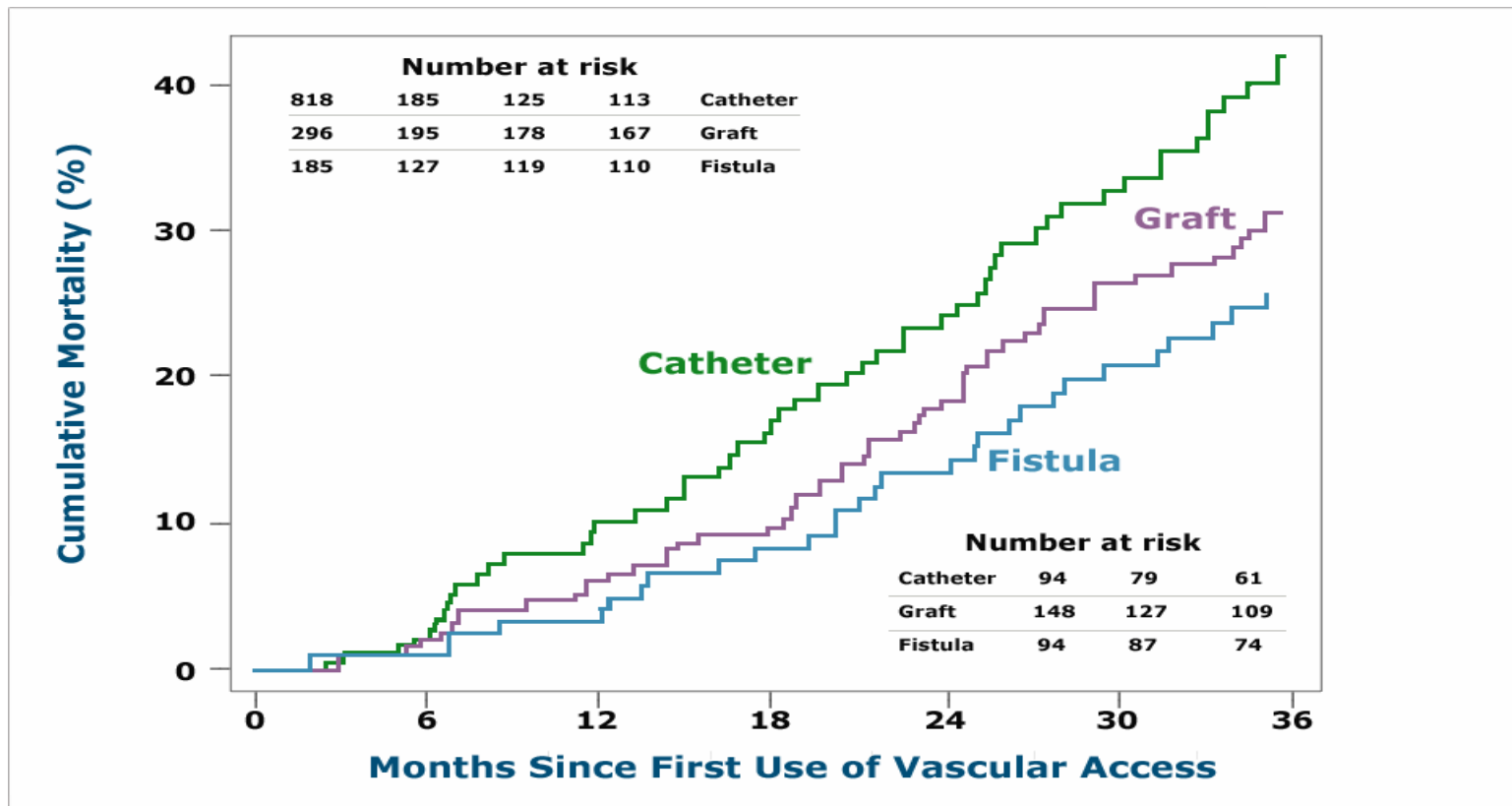
What are the Benefits of AVFs?

- **AVFs are effective 75% of the time**
 - No access is problem-free but AVFs have significantly less problems than AVGs or CVCs
- **AVFs have few complications (infections & clotting) ⇒ fewer procedures & hospitalizations ⇒ saves lives**
- **Successful cannulation ⇒ better blood flow ⇒ better HD results & less time in HD for patients**
- **No artificial or synthetic material in body for patients**
- **Other benefits?**

In-Service Training Module #4: Fistula First. Developed by Mid-Atlantic Renal Coalition, Sept 2004

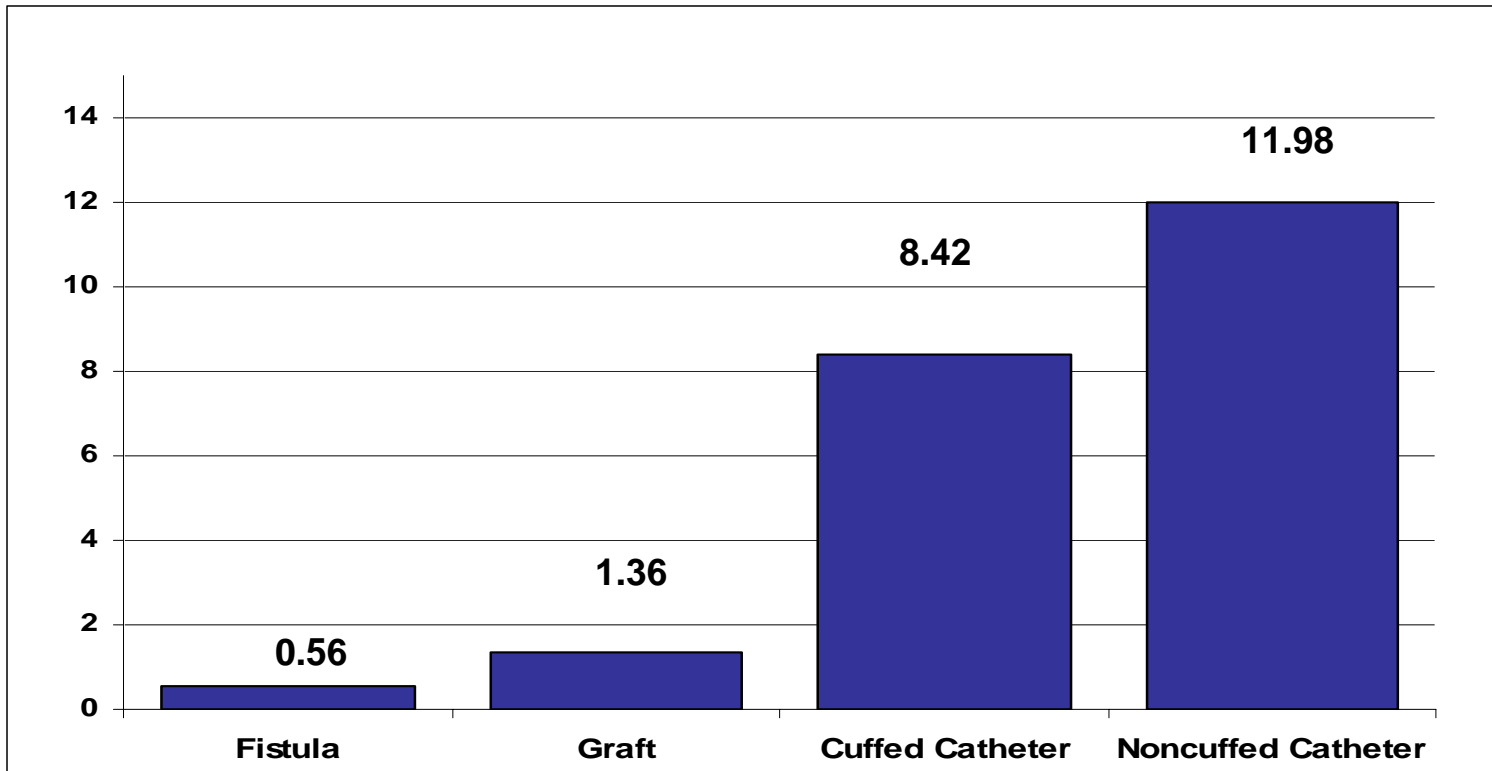


Benefits of AVFs: Type of Access & Mortality Rates (Choice Study)



Astor BC, et al, J Am Soc Nephrol, 2005; 16: 1,449 – 55

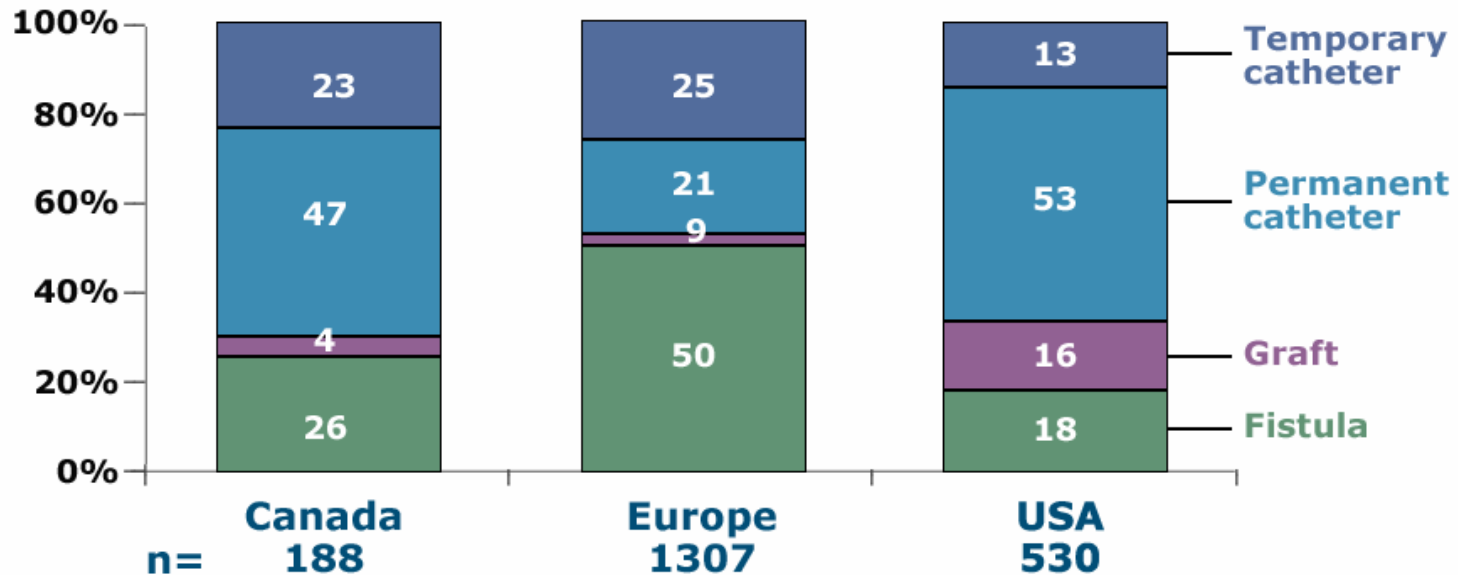
Benefits of AVFs: Lower Infection Rates



In-Service Training Module #4: Fistula First. Developed by Mid-Atlantic Renal Coalition, Sept 2004

VA Type Among New (Incident) Patients: Canada vs Europe vs US

Patients

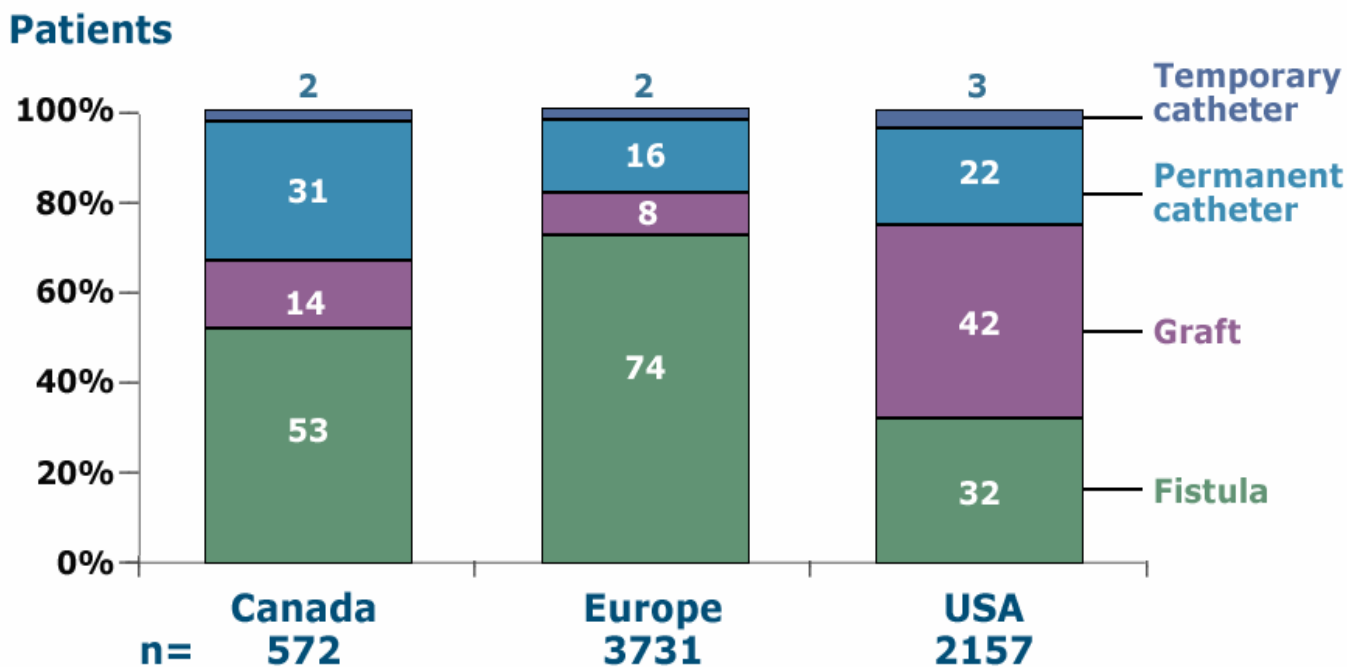


Incident patients entering DOPPS within 5 days of first-ever chronic dialysis; n = # of patients

DOPPS Data: Mendelssohn DC, et al. *Nephrol Dial Transplant* 2006;21:721-8.



VA Type Among Existing (Prevalent) Patients: Canada vs Europe vs US



Per response from medical questionnaire cross section, 2002-2003;
n=# of patients; weighted to account for facility sampling fraction

VA Type Among Existing (Prevalent) Patients: How Hot is BC?

Type of Access	#	%	Invalid Combos/ No Access Specified Removed
Fistula	866	49%	52%
Fistula + Catheter	127	7%	7.5%
Graft	152	8.5%	9%
Graft + Catheter	29	2%	1.5%
Catheter	502	28.5%	30%
Invalid Combos/ No Access Specified	83	5%	
Total	1,759	100%	100%



VA Type Among New (Incident) Patients: How Hot is BC?

Type of Access	#	%	Invalid Combos/ No Access Specified Removed
Fistula	56	18%	25%
Graft	2	1%	1%
Catheter	169	54%	74%
No Access Specified	85	27%	
Total	312	100%	100%



What Can We Do to Promote Successful AVF Usage?



Oh yes, I remember when
Mr. Norris's fistula blew.

Suggestions to avoid this situation?

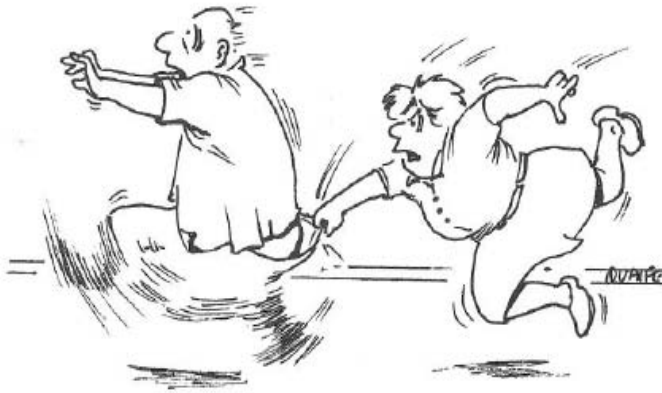
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Suggestions to Improve Successful AVF Usage

- **Keep site clean during treatment**
- **Monitor site for infection**
- **Rotate needle sites, unless using buttonhole technique**
- **Use advanced cannulators for new and complicated AVFs**
- **Educate patients to:**
 - **Check blood flow daily**
 - **Monitor site for infection, stenosis, and other complications**
 - **Keep site clean and dry between treatments**
 - **Clean access site with antibacterial soap before dialysis**
 - **Apply gentle pressure to site after needle is removed**
 - **Not wear tight clothes or jewelry on access arm**
 - **Not carry anything that would put pressure on the access**
 - **Not let anyone use a BP cuff or draw blood from access arm**



What Can We Do to Promote Successful AVF Usage?



Come back here, Arnold!
Stacey isn't needling today...

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Case Studies

- What may have caused this situation or made it worse?
- What nursing actions might have prevented this situation?
- Now that the situation has occurred, what nursing actions might be used to minimize the damage?



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Case Example #1: Aneurysmal Fistula



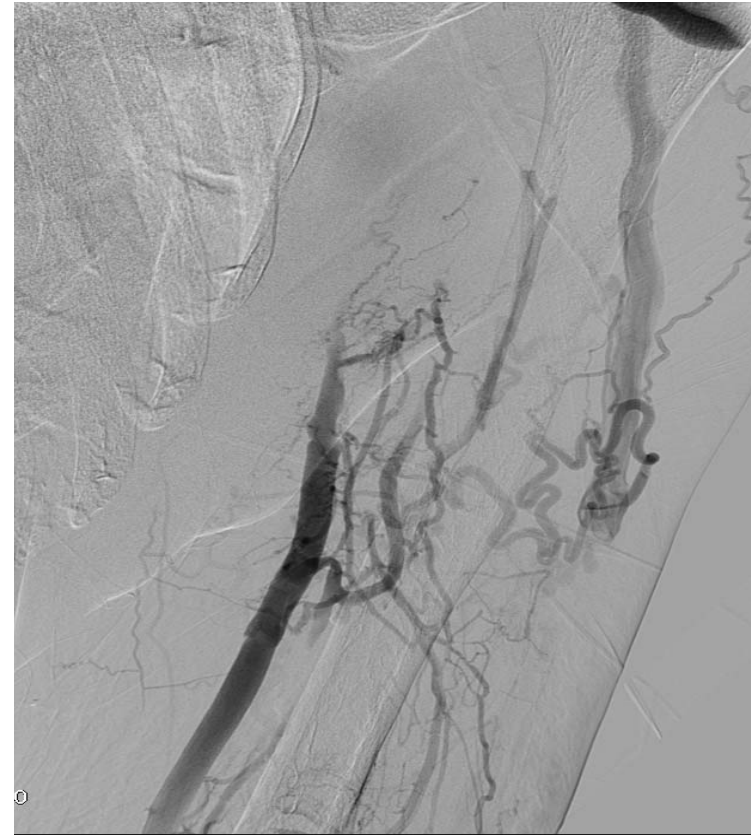
Case Example #2: Steal Syndrome



Case Example #3: Hematoma



Case Example #4: Central Venous Stenosis



Questions? Interested in participating in PVAAS? If so, we are interested in you!

<http://www.bcrenalagency.ca/default.htm>



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