

# Vascular Access for CRRT

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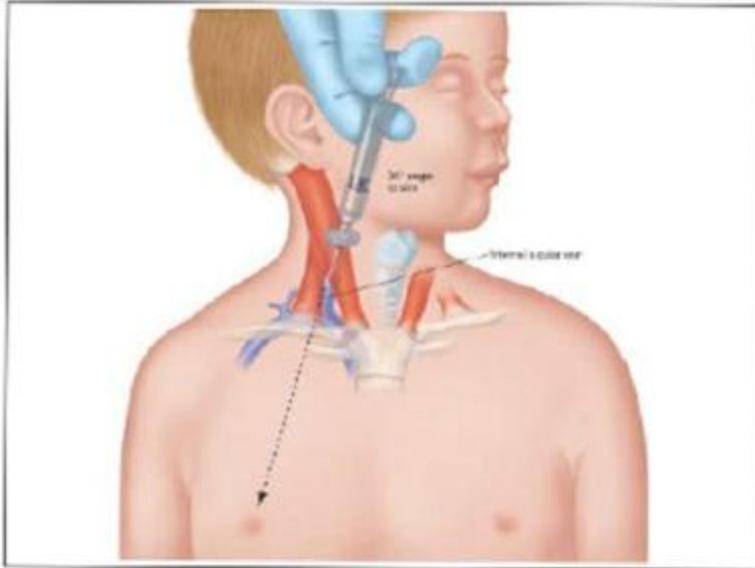
# Requirements

- Multi-lumen catheter
  - 7 Fr Dual Lumen
  - 9 Fr Dual Lumen
  - 12 Fr Dual or Triple Lumen
- Minimal resistance
  - Shortest catheter improves flow rate
  - May worsen recirculation

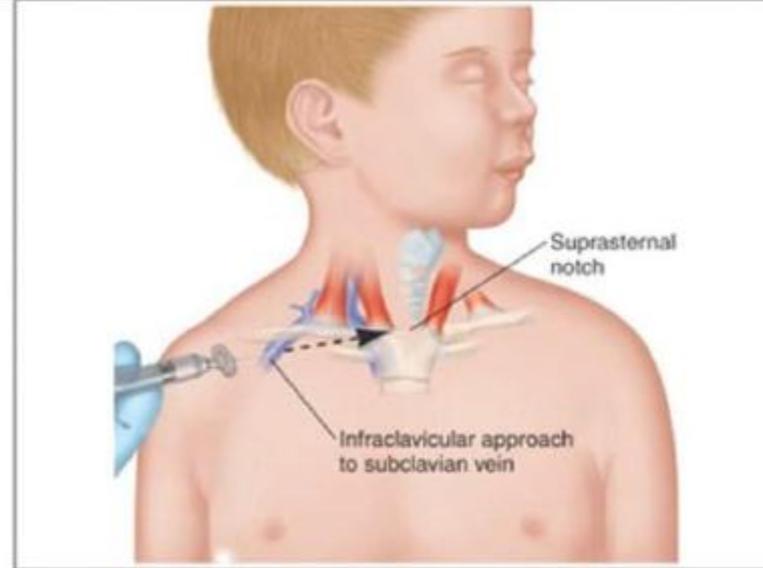
# Site for Vascular Access

- Femoral Vein
  - Least Risk
  - Greatest problem with recirculation
- Internal Jugular Vein
  - Relatively safe with Ultrasound Guidance
  - Optimal Catheter placement
  - Minimizes recirculation
- Subclavian Vein
  - Highest risk
  - Most prone to kinking of catheter

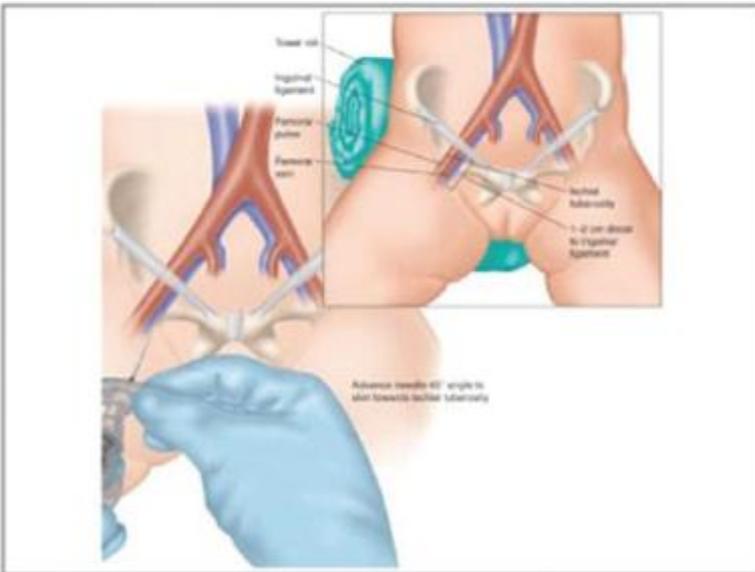
Internal Jugular Vein



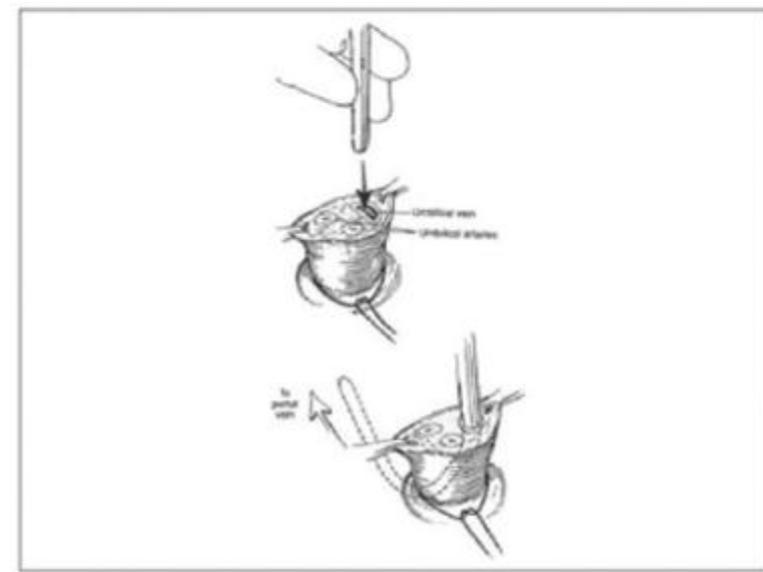
Subclavian Vein



Femoral Vein



Umbilical Vein



# Internal Jugular



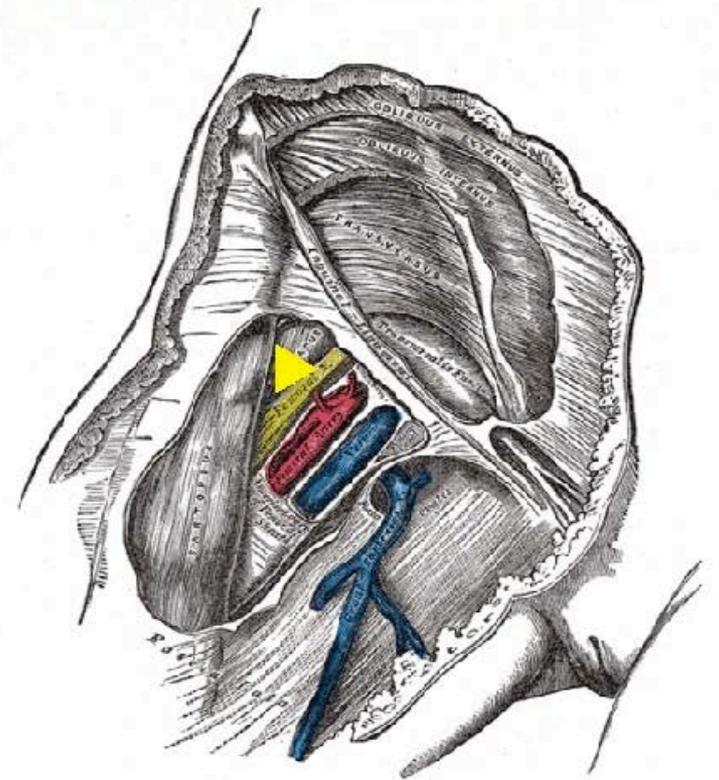
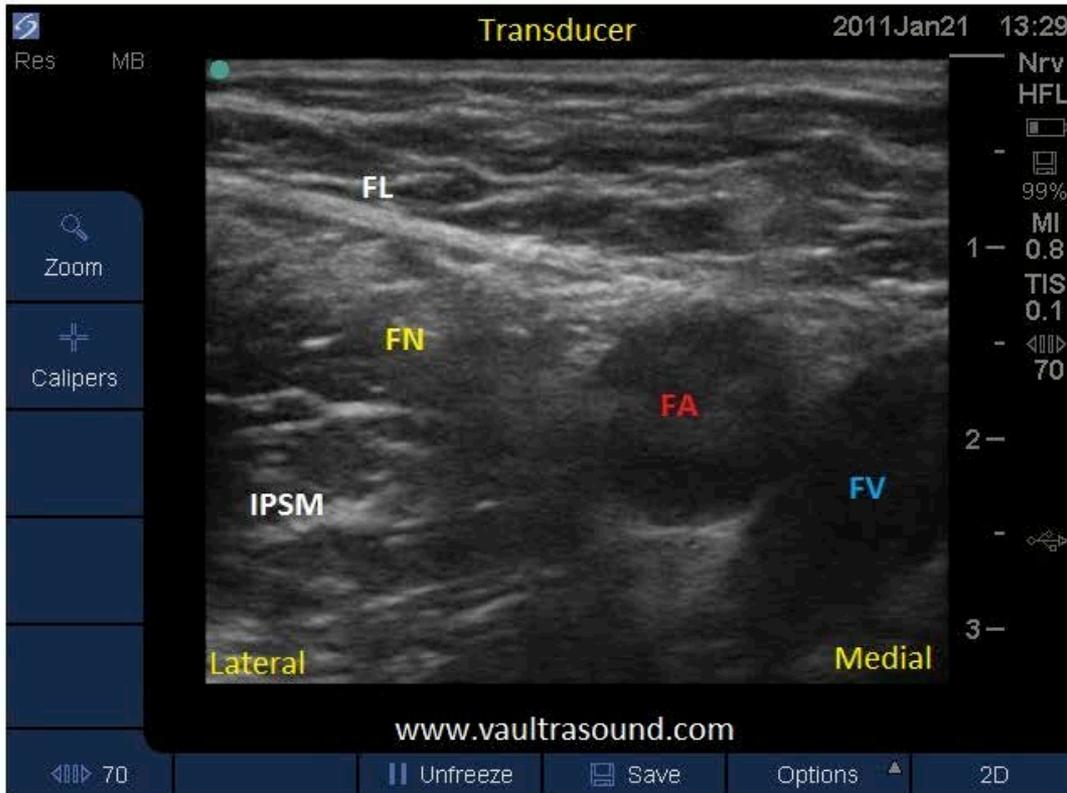
2) The probe marker should point to the patient's left shoulder corresponding to the marker on the left side of the ultrasound screen.

← Right IJ View

Left IJ View →



# Femoral View



## 60 Hour Circuit Survival Rates by Catheter Size & Insertion Site

	Number of patients	% Survival at 60 hours***
<b>Catheter Size*</b>		
5	6	0 (P<0.0000)
7	57	43 (P<0.002)
8	65	55 (NS)
9	35	51 (P<0.002)
10	46	53 (NS)
11.5	71	57 (NS)
12.5	64	60 (NS)
<b>Insertion Site**</b>		
Internal Jugular	58	60 (P<0.05)
Subclavian	31	51 (NS)
Femoral	260	52 (NS)

\*32 patients with unspecified catheter size; \*\*27 patients with unspecified insertion site; \*\*\*P-values for log rank test in parentheses.

A report from the PPCRRT registry

# The effect of vascular access location and size on circuit survival in pediatric CRRT. Hackbarth IJAO 30. 1116-21. 2007

- The larger the catheter the better the circuit survival. No 5 FR catheters survived 60 hours.
- Greater circuit survival with the Internal Jugular approach.
- No difference in circuit survival between the femoral and subclavian approach.
- Greater circuit survival with CVVHD when compared to either CVVH or CVVHDF

## MedComp

7 Fr	7 cm
7 Fr	10 cm
9 Fr	12 cm
9 Fr	15 cm
9 Fr	20 cm
11 Fr	12 cm
11 Fr	15 cm
11 Fr	20 cm

