VA CANNULATION CHECKLIST – PHYSICIAN

PRE-CANNULATION

- ❑ Consent obtained and witnessed
- ❑ BLE vascular exam performed and documented
- ❑ *RIGHT* radial a-line in place
- ❑ Check for cannulation targets (Operator discretion)
    - Left femoral vein for drainage
    - Right femoral artery for return
    - Distal perfusion catheter options - pre-cannulation doppler for arterial leg
- ❑ Remove hair from access sites
- ❑ Nursing/perfusionists ready to proceed
- ❑ Bed & Patient position (see diagram)

SUGGESTED* CANNULA SITES & SIZES

*Operator Discretion

Patient > 60 kg	Patient < 60Kg
Venous/drainage; RFV; 25 - 29 Fr	Venous/drainage; RFV; 21 - 25 Fr
Arterial/return; RIJ; 17-19 Fr	Arterial/return; RIJ; 15-17 Fr

EQUIPMENT

- ❑ US monitor and probes
- ❑ Wires – super stiff?
- ❑ Sutures
- ❑ Sterile cannulation drape set
- ❑ Biopatch
- ❑ Sorbiview dressing
- ❑ Micropuncture set prn
- ❑ Distal perfusion catheter

CANNULATION STEPS OVERVIEW

1. Prep & drape
2. TIME OUT
3. Estimate wire/cannula lengths
4. Access – ALWAYS US GUIDED; FRESH STICK PREFERRED
5. Wires placed on ALL sites, confirmed with US
6. If using a SFA distal perfusion catheter place it first, no heparin needed but it'll be logistically easier to do this one before the arterial cannula.
7. Heparin 3,000 units (or other anticoagulant) when BOTH wires in place
8. Dilation – groin begins first
9. Cannulation
10. Confirmation of position
11. Wet connection to first barb of connector, look for air, only then push to second barb
12. Note cannula positions
13. Securement
14. Confirm appropriate ECMO flows
15. Post-cannulation order set

VA CANNULATION CHECKLIST – PHYSICIAN

16. REPEAT BLE VASCULAR EXAM
17. Notes/documentation/time card

DETAILED MD CANNULATION STEPS – RIGHT FEMORAL ARTERY (RETURN)

- ❑ Estimate *in situ* wire length
- ❑ Estimate *in situ* cannula position
- ❑ Flush cannula
- ❑ (RE) Tighten all caps/stopcocks
- ❑ Obtain introducer needle access ALWAYS under US guidance
    - Access point in *COMMON* femoral artery
    - Fresh stick strongly preferred
    - consider micropuncture for difficult access
- ❑ Place 75cm 0.035 wire into right IJ and visualize with US
    - Consider stiff wires in obese patients, etc
    - Administer 5000U heparin (or other anticoagulant) when BOTH wires placed
- ❑ Sequentially dilate over wire – groin operator starts first
    - Only ~ 1/3 of dilator needs to go in
    - Continuously ensure wire moves easily back and forth
    - Dilate to one size smaller than planned cannula size
- ❑ Advance cannula with introducer until last hole intraarterial
    - remove introducer
- ❑ Clamp cannula
- ❑ Connect to arterial (return) circuit with appropriate air-free technique
    - Ensure no air entrainment
    - Check access port on cannula is secured
- ❑ Secure cannula and cover with sterile dressing
    - Note position

VA CANNULATION CHECKLIST – PHYSICIAN

DETAILED CANNULATION STEPS – RIGHT or LEFT FEMORAL VEIN (DRAINAGE)

- ❑ Estimate *in situ* wire length
- ❑ Estimate *in situ* cannula position
- ❑ Flush cannula
- ❑ (RE) Tighten all caps/stopcocks
- ❑ Obtain introducer needle access ALWAYS under US guidance
    - Fresh stick strongly preferred
    - consider micropuncture for difficult access
- ❑ Place 160cm 0.035 wire under direct US guidance
- ❑ Confirm placement of wire within IVC using US guidance
    - Consider stiff wires in obese patients, etc
    - Administer 5000U (or other anticoagulant) heparin when BOTH wires placed
- ❑ Sequentially dilate over wire – groin operator starts first
    - Only ~ 1/3 of dilator needs to go in (unless obese)
    - Continuously ensure wire moves easily back and forth
    - Dilate to one size smaller than planned cannula size
- ❑ Advance cannula with introducer until last hole intravenous
    - Use US to determine placement at intrahepatic IVC
- ❑ Remove wire and introducer
- ❑ Clamp cannula
- ❑ Connect to venous (drain) line with appropriate air-free technique
    - Ensure no air entrainment
- ❑ Secure cannula and cover with sterile dressing
    - Note position