



## Pre-procedure

1. Check bilateral radial pulse and bilateral BP. Notify physician if weak radial pulse or BP difference >10 mmHg.
2. In patients who have had prior radial artery access, and the same side will be accessed again, perform reverse Allen's test. Ask patient to clench and unclench hand several times, while holding pressure over both radial and ulnar arteries, till palm blanches. Then release pressure over the radial artery while still holding pressure over the ulnar artery. Assess for return of blush in the palm within 10 seconds. If blush returns (positive test), patency of the radial artery is implied and the artery may be re-accessed.
3. Document history or presence of pain, deformity, numbness or weakness affecting wrists and hands.
4. Reposition IV if it will contaminate access site or if it is located in the ipsilateral hand (will become non-functional after placement of radial band).
5. If patient has had prior CABG with a left internal mammary graft, confirm site of access with physician.
6. Ask about and check cath reports for documentation of difficulty with prior trans-radial access due to spasm (patient may recollect severe pain) and/or radial/ subclavian anomaly which required cross over to femoral access or contralateral radial access.
7. Obtain history of recent use of PDE5 inhibitors for erectile dysfunction (if used within past 24 hours, no NTG to be used during case).
8. If patient takes warfarin, ensure INR has been drawn on same day and is lower than institutional or physician threshold for performing cardiac catheterization/PCI. If patient is taking a "novel" oral anticoagulant (NOAC) such as dabigatran (Pradaxa), apixaban (Eliquis) or rivaroxaban (Xarelto), determine time of last dose. Refer to SCAI [Tip of the month](#) on novel anticoagulants.
9. Ensure availability of adequate sized hemostasis band.

## Intra-procedure

1. Heparin 50 U/kg IV (up to 5000 U) after sheath insertion or when catheter successfully enters ascending aorta (based on institutional/physician policy/preference). In patients with history of heparin induced thrombocytopenia (HIT), administer bivalirudin 0.75 mg/kg bolus instead of heparin.
2. Vasodilator "cocktail" after sheath insertion, based on institutional policy/physician preference. Caution with NTG if h/o recent PDE5 inhibitor use or SBP <100 mmHg.
3. Position patient's hand by his/her side after access has been obtained to reduce radiation exposure to operator. Ensure adequate shielding and consider use of a dedicated radial radiation protection shield drape.



4. Use an extension tubing to increase distance of manifold from sheath and lower radiation exposure to operator and scrub.
5. Vasodilator “cocktail” prior to sheath removal, per institutional policy/physician preference.
6. Document amount of air in band, if radial band with inflatable cuff is used.

## Post-procedure

1. Use “patent hemostasis” method for radial artery hemostasis. This can be done in the holding room, after initial hemostasis has been achieved. This technique is performed by placing a pulse oximetry probe on the index finger and observing the waveform while applying pressure on the ulnar artery. If the waveform is flat, then pressure/air should be released from the band till a waveform is noted, such that the radial artery remains patent and also does not bleed. If bleeding is noted when band is loosened/air removed, re try in 10 minutes. Refer to [SCAI transradial best practices document](#) for more details.
2. Check for unusual color change/pain/numbness/loss of motor strength in fingers when band is on. If noted, notify physician.
3. Observe for any signs of forearm hematoma. If swelling occurs proximal to the TR-band, notify physician immediately. Do not apply more pressure to the radial artery. The forearm should be wrapped to reduce the swelling and prevent compartment syndrome.
4. Check for and document radial artery patency if patient is discharged from holding area after removal of hemostasis band.