Do not do the insertion without the patient present. The patient should be in a sitting or lying position with the arm elevated. The arm should be placed on a table or pillow to ensure proper position.

Insertion sites:
- Internal Jugular
- Subclavian
- External Jugular
- Femoral

DIRECTIONS FOR SELLING INSERTION SITE:
- Make sure the hub is clean and dry before inserting the catheter.
- Insert the catheter hub onto the lock right adapter.
- Apply the Statlock® Adapters, and open clamps.
- Insert the catheter hub into the needle hub. Advance guidewire with forward motion into and past needle hub into the target vein.
- Place the catheter hub into the target vein. 
- Use standard hospital protocols when removing catheter.
- Note: Do not soak catheter end or any adapter in any antiseptic (i.e. alcohol, PVP, etc.) before or during insertion.
- Place catheter in a sterile field in a manner that prevents breakage or unravel. If guidewire is damaged, the catheter and guidewire must be removed together.
- If using StatLock® Adapters, and open clamps.
REMOVAL/DISINFECTION

- The heparin solution should be removed from each lumen prior to treatment to prevent systemic heparinization of the patient.
- The catheter should be flushed with saline to remove any type of mechanical or chemical intervention in response to catheter performance problems.
- Heparin solutions should be prepared or stored right.
- Necessity released material must be taken prior to the continuation of the dialysis treatment.
- Excessive blood loss may lead to patient shock.
- Hemodialysis should be performed under physician’s instructions.

HEPATIC REMOVAL

- If the catheter is not used immediately for treatment, follow the suggested catheter removal guidelines.
- To maintain patency between treatments, a heparin lock must be created in each lumen of the catheter.
- Each lumen should be completely filled with heparin to maintain effectiveness.

SITE CARE

- Clean skin around catheter. Cover the exit site with occlusive dressing and leave extensions, clamps, Lock Right® Adapters, and caps exposed for access by staff.
- Wound dressing must be kept clean and dry.
- Patients must not swim, shower, or soak dressing while bathing.
- If a leak is found, the catheter should be clamped immediately.
- Only a physician familiar with the appropriate techniques should attempt the following procedures.

INSUFFICIENT FLOWS

- The following may cause insufficient flows:
  - Occluded arterial holes due to clotting or fibrin sheath.
  - Occlusion of the arterial side holes due to contact with vein wall.
- Solutions include:
  - Chemical intervention utilizing a thrombolytic agent.
- One of the following adjustments may resolve the obstruction:
  - Reposition catheter.
  - Reposition patient.
  - Have patient cough.
  - Provided there is no resistance, flush the catheter vigorously with sterile normal saline to move the tip away from the vessel wall.

INFECCTION

- Due to the risk of exposure to HIV (Human Immunodeficiency Virus) or other blood borne pathogens, health care professionals should always use Universal Blood and Body Fluid Precautions in the care of all patients.
- Sterile technique should always be strictly adhered to.
- Clinically recognized infection at a catheter exit site should be treated promptly with the appropriate antibiotic therapy.
- If a fever occurs in a patient with a catheter in place, take a minimum of two blood cultures from a site distal from catheter exit site. If blood culture is positive, the catheter should be removed immediately and the appropriate antibiotic therapy initiated. Wait 68 hours before catheter replacement. Insertion should be made on opposite side of original catheter exit site, if possible.

- Insert a second .035” guidewire into and through the 6F sheath until it is properly positioned in the target vein.
- Once the second guidewire is in place, remove the 6F sheath and continue following directions starting at #8.

MR LABELING BASED ON THE TEST RESULTS

MR Safety Information

MR Information. The Tesio Catheter (polyurethane with embedded stainless steel connector) was determined to be MR-conditioned according to the terminology specified in the American Society for Testing and Materials (ASTM) International Designation: F2503-03. Standard Practice for Marking Medical Devices and Other Items for Safety in the Magnetic Resonance Environment. ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, Pennsylvania, 2003.

- Non-Clinical testing demonstrated that the Tesio Catheter (polyurethane with embedded stainless steel connector) is MR Conditional. A patient with this device can be scanned safely immediately after placement under the following conditions:
  - Static magnetic field of 3-Tesla or less.
  - Maximum spatial gradient magnetic field of 720-Gauss/cm or less.

MR-Related Heating

- In non-clinical testing, the Tesio Catheter (polyurethane with embedded stainless steel connector) produced the following temperature rise during MR performed for 15-min in the 3-Tesla (7.5-Tesla 1.28 MI, Excite, HDx, Software 1.4X,M5, General Electric Healthcare, Milwaukee, WI). MR System:
  - Highest temperature change: +1.6°C.

Therefore, the MR-related heating experiments for the Tesio Catheter (polyurethane with embedded stainless steel connector) at 3-Tesla using a 15-mm receiver RF body coil at an MR system reported whole body averaged SAR of 2.9-W/kg (i.e., associated with a calorimeter measured whole body averaged value of 2.7-W/kg) indicated that the greatest amount of heating that occurred in association with these specific conditions was equal to or less than +1.6°C.

Artifactual Image

MR image quality may be compromised if the area of interest is in the exact same area or relatively close to the position of the Tesio Catheter (polyurethane with embedded stainless steel connector). Therefore, optimization of MR imaging parameters to compensate for the presence of this device may be necessary.