CLINICAL TRAINING MODULE (OR)

PleuraFlow® Active Clearance Technology® (ACT®) System

TN086-B
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PLEURAFLOW PLACEMENT

Anterior Mediastinum is area of maximal bleeding due to:
• Bone/Periostium
• Mediastinal fat
• Cannulation sites
• Bypass grafts

Additional Conventional Chest Tubes can be placed as needed
PLEURAFLOW CLEARANCE APPARATUS

Consists of:

- Guide Tube
- Proximal Connector (blue)
- Distal Connector (white)
- Shuttle Guide with magnets
- Clearance Wire and Loop
PleuraFlow Systems

- Available in various sizes and configurations, such as:
  - Straight: 20, 24, 28, 32 FR
  - Pediatric: 20 FR SEDL (Short Effective Drainage Length)
  - XDL: 20, 24 FR (Extended Drainage Length)
  - RA: 24, 28, 32 FR (Right Angle)
- System consists of PleuraFlow Chest Tube and Clearance Apparatus
- Use only the supplied PleuraFlow Chest Tube (Clearance Wire is calibrated to match the inner diameter and length of the Chest Tube)
KEY INFORMATION ABOUT PLACEMENT

- Insert Chest Tube using standard technique
- Typical placement is in the anterior mediastinum
- When creating the skin incision:
  - Ensure that it accommodates the Chest Tube without any impingement, please allow for some edema; otherwise actuation may be difficult with constant magnetic safety release.
KEY INFORMATION ABOUT PLACEMENT

• When placing PleuraFlow:
  – “Gentle” curves are acceptable
  – **Sharp angles** may prevent or make it difficult to actuate

NEVER bend the Chest Tube when the Clearance Wire and Loop are in the Park position (inside the patient)
KEY INFORMATION ABOUT PLACEMENT

Cut the chest tube precisely where indicated

- This will prevent the Clearance Wire from extending beyond the tip of the chest tube which could potentially damage internal structures

Suture the chest tube in place taking care not to kink or bend the tube

- If the sutures are too tight, it may prevent or make it difficult to actuate
PLEURA FLOW ATTACHMENT

- Attach the Chest Tube to the blue proximal (close to patient) end of Clearance Apparatus
- Remove ~50 cm (20”) of drain tubing to minimize dependent loops
- Attach white distal (away from patient) end to drainage canister tubing
- Confirm that Clearance Wire can be easily advanced in and withdrawn from the Chest Tube
- Park Clearance Wire by clicking the Shuttle Guide into the proximal connector
CONNECTING THE CHEST TUBE TO THE CLEARANCE APPARATUS

- Ensure clearance apparatus matches the chest tube French size and configuration (for e.g. Right Angle “RA” or “XDL”).

- When connecting, check that component labeling (printing) on proximal (chest tube) barb matches.
  
  Note: Right Angle chest tube and clearance apparatus are labeled “RA”.

- The RA clearance apparatus is provided with a tag for identification purposes.
CONNECTING THE CHEST TUBE TO THE CLEARANCE APPARATUS

• Once the appropriate chest tube has been connected to the proximal barb of the clearance apparatus, Do not detach the chest tube until the chest tube has been discontinued.

• The utilization of zip ties as an additional securement method may be considered in accordance with internal practice/facility protocols.
Y-CONNECTING A PLEURAFLOW TO CHEST TUBE

- All Y-connections must be made below the distal end the PleuraFlow Clearance Apparatus
- Connect a 24-inch section of drainage canister tubing to the Chest Tube connector
- Connect a 4-inch section of drainage canister tubing to the Distal Connector of the PleuraFlow Clearance Apparatus
- Connect all three sections of drainage tubing together using a 3/8 inch Y connector
Y-CONNECTING MULTIPLE PLEURAFLLOWS

• All Y-connections must be made below the distal end of the PleuraFlow Clearance Apparatus

• Connect a 4-inch section of drainage canister tubing to the Distal Connectors of each PleuraFlow Clearance Apparatus

• Connect all three sections of drainage tubing together using a 3/8 inch Y connector
The images below represent some common configurations of PleuraFlow and conventional chest tubes with drainage tubing and canister.

- One PleuraFlow and one conventional chest tube draining into one canister.
- Two PleuraFlow chest tubes draining into one canister.
- Two PleuraFlow chest tubes and one conventional chest tube draining into two canisters.
- One PleuraFlow and two conventional chest tubes draining into one canister.
- Two PleuraFlow chest tubes and one conventional chest tube draining into one canister.

To avoid dependent loops, it may be necessary to remove and discard 24-28" of drainage tubing.
HOW TO ACTUATE

1. **Squeeze**
   Initiate shuttle activation by depressing finger pads

2. **Actuate**
   Slowly slide the Shuttle Guide toward the distal connector then advance Clearance Wire back into the Chest Tube

3. **Park**
   Click the Shuttle Guide into the proximal connector during use
SYSTEM COMPATIBILITY

The Clearance Apparatus can only be used with the corresponding PleuraFlow Chest Tubes.

Ensure the clearance apparatus matches the chest tube French size and configuration (for e.g. Right Angle “RA”).

When connecting, check that component labeling (printing) matches. **Note:** Right Angle chest tube and clearance apparatus are labeled “RA”.

The PleuraFlow ACT System can be used with any drainage canister

- Maximum vacuum: -40cmH₂O
ADDITIONAL NOTES

• The PleuraFlow System is **contraindicated** for patients with a history of intolerance to implantable silicone materials.

• The PleuraFlow Clearance Apparatus is **NOT** MRI Compatible.

• Do not place the Shuttle Guide within 15 cm (6 inches) of an implanted pulse generator such as pacemakers or implanted defibrillators.

• The PleuraFlow System is Latex Free.
THANK YOU

Questions & Discussion