

I. Equipment

- a. Paracentesis/Thoracentesis kit
- b. Sterile cap for syringe if labs ordered
- c. Sterile ultrasound probe cover
- d. Two 1,000 mL vacuum bottles
- e. Mask

II. Preparation

- a. The Radiologist/RA is responsible for verifying medications and exam appropriateness
 - i. Follow RIA medication guidelines for medical imaging procedures

III. Personnel

- a. Radiologist/RA
 - i. Responsible for reviewing and obtaining consent
 - ii. Verifies pleural fluid and performs exam
- b. Ultrasound Technologist
 - i. Prints order for radiologist/RA review
 - ii. Documents patient history
 - iii. Obtains scout images
 - iv. Documents size and characterizes effusion
 - v. Assists the radiologist/RA with the procedure
 - vi. Obtains post drainage images

IV. Procedure

- a. Scout images with doppler color to locate ideal effusion access (free of lung tissue and blood vessels)
- b. Mark patient's skin at the appropriate site for thoracentesis (**Mask**)
- c. Prep and drape using maximum barrier sterile technique
- d. Anesthetize the skin and subcutaneous tissue
- e. Advance Yueh catheter into pleural space with ultrasound guidance
- f. Remove pleural fluid (max amount - 1,500mL)
- g. Obtain AP chest x-ray post procedure to check for complications

V. Required Images

- a. SCOUT ultrasound images of pleural effusion
- b. POST DRAIN ultrasound images
- c. Post procedure AP chest x-ray

VI. Special Considerations

- a. INR is above 1.7 – Supervising radiologist approval required

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Role	Interventional Radiologist