



Procedural Ultrasound  
Chapter 3

# ULTRASOUND GUIDANCE FOR PARACENTESIS

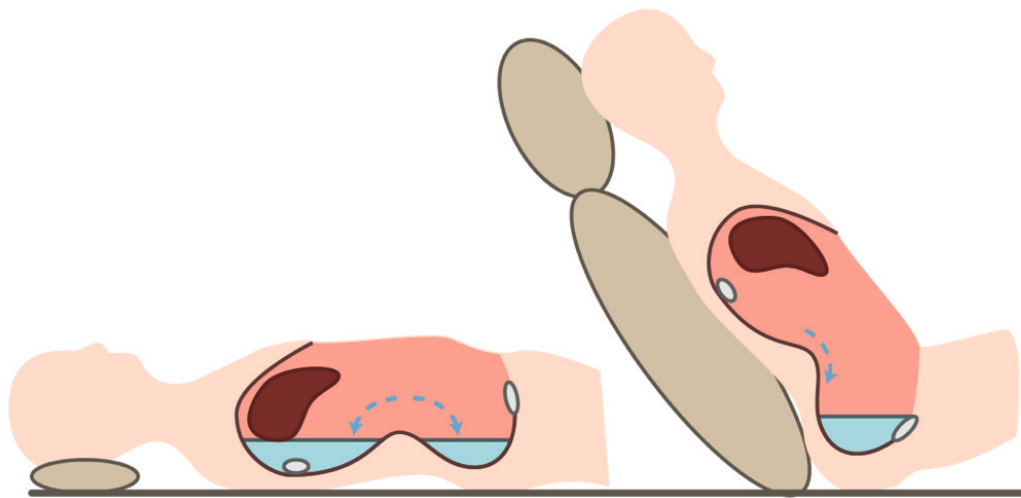


Sara Damewood

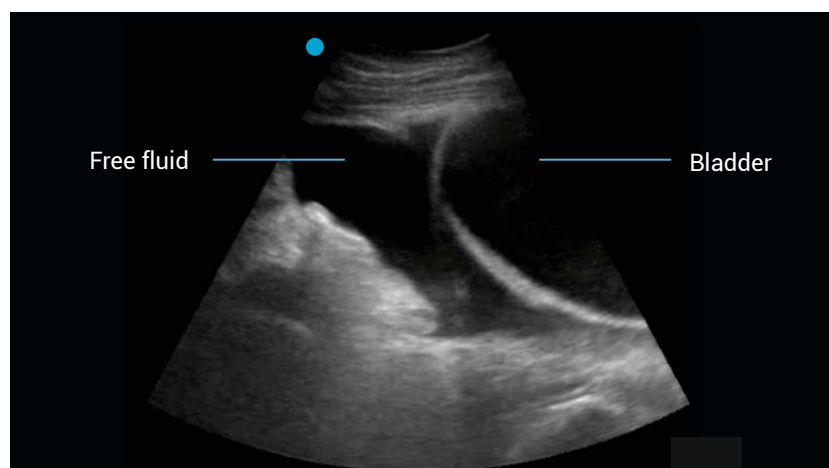
## Ultrasound guidance for paracentesis

# IDENTIFYING ASCITES ON ULTRASOUND

Ascites appear as freely moving fluid without borders. It fills potential spaces, like the right upper quadrant (RUQ) and pelvis.



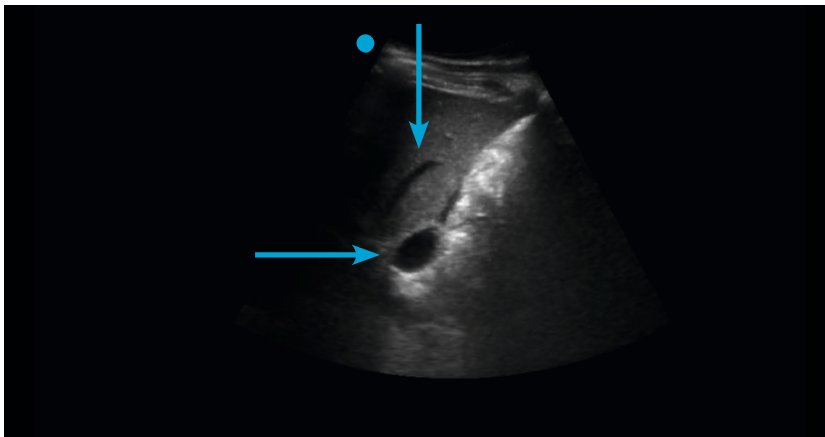
You can look in the RUQ, left upper quadrant (LUQ), and pelvis for fluid, but you will most likely find free fluid in the pelvis, especially when the patient is supine or semi-recumbent. It is easiest to find fluid in the sagittal plane compared to the transverse.



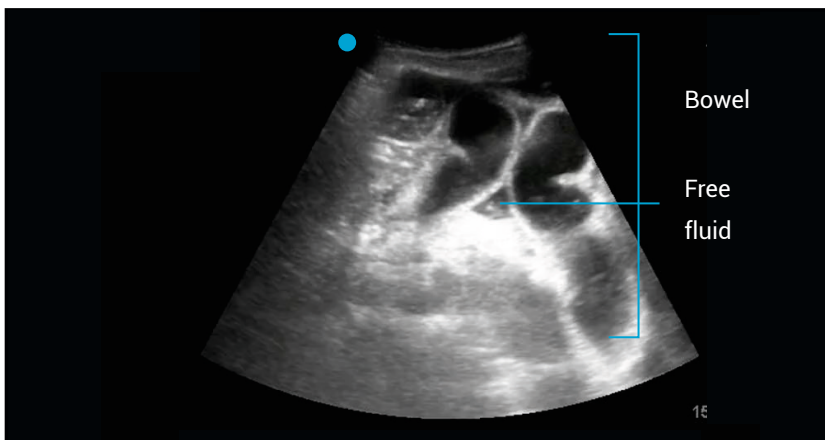
## Ultrasound guidance for paracentesis

# CONSIDER THIS FIRST

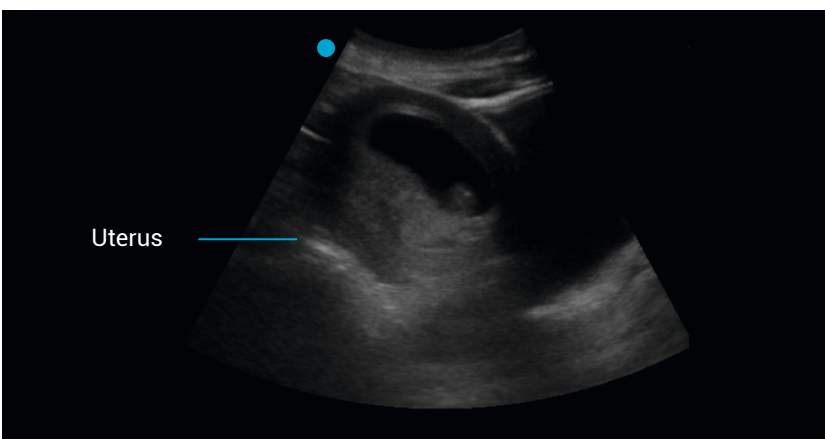
There are some things that can look like free fluid on ultrasound, but shouldn't get a needle put in them!  
The gallbladder, dilated loops of bowel, and a pregnancy are commonly confused with free fluid.



The gallbladder

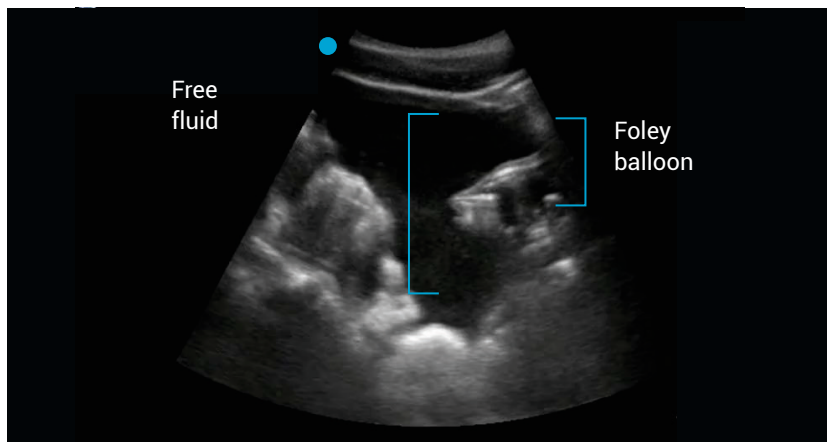


Loops of bowel



A pregnancy

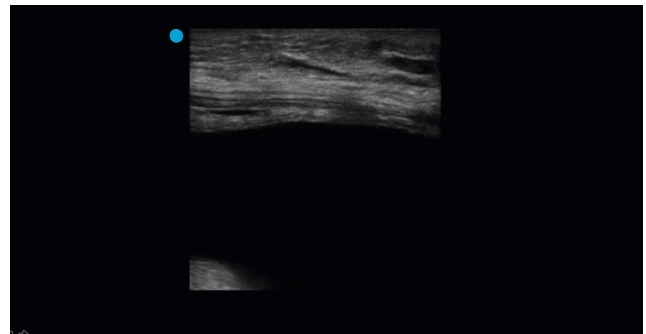
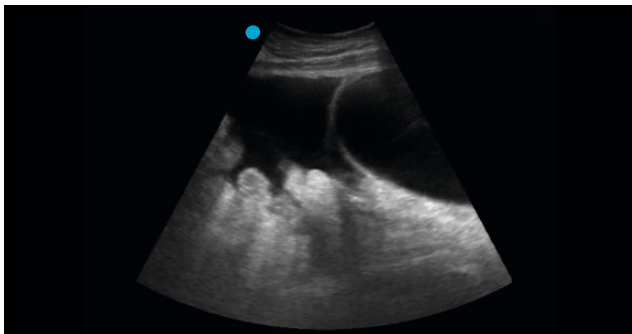
Sometimes it is tough to tell free fluid from the bladder. Put a foley catheter in the patient to decompress the bladder for you to see more clearly.



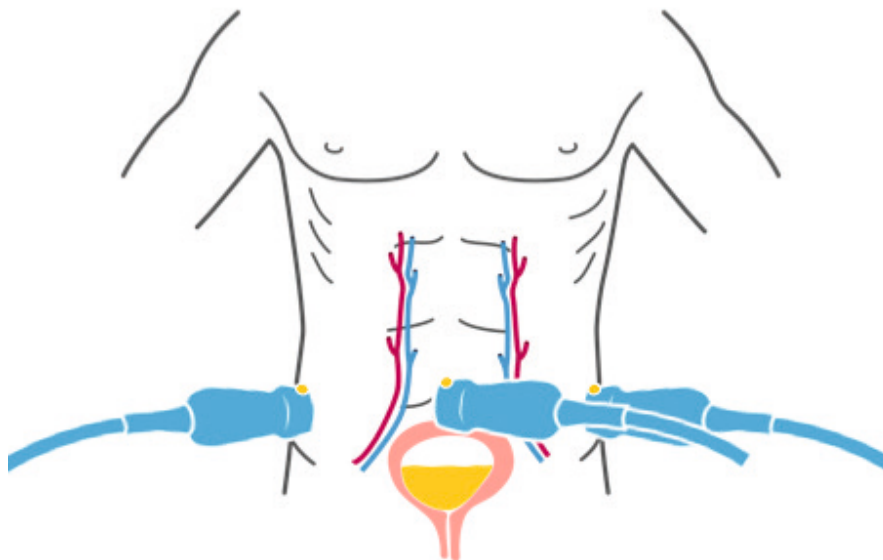
## Ultrasound guidance for paracentesis

# MASTERING ULTRASOUND GUIDANCE FOR PARACENTESIS

There are a few tips to using ultrasound to guide your paracentesis. It is useful to find the largest pocket with the curvilinear probe, then switch to the linear probe to look more carefully at the tissue, thickness, and depth being penetrated, to safely get to the ascites.



You can use ultrasound to guide either the lateral or the linea alba approach.

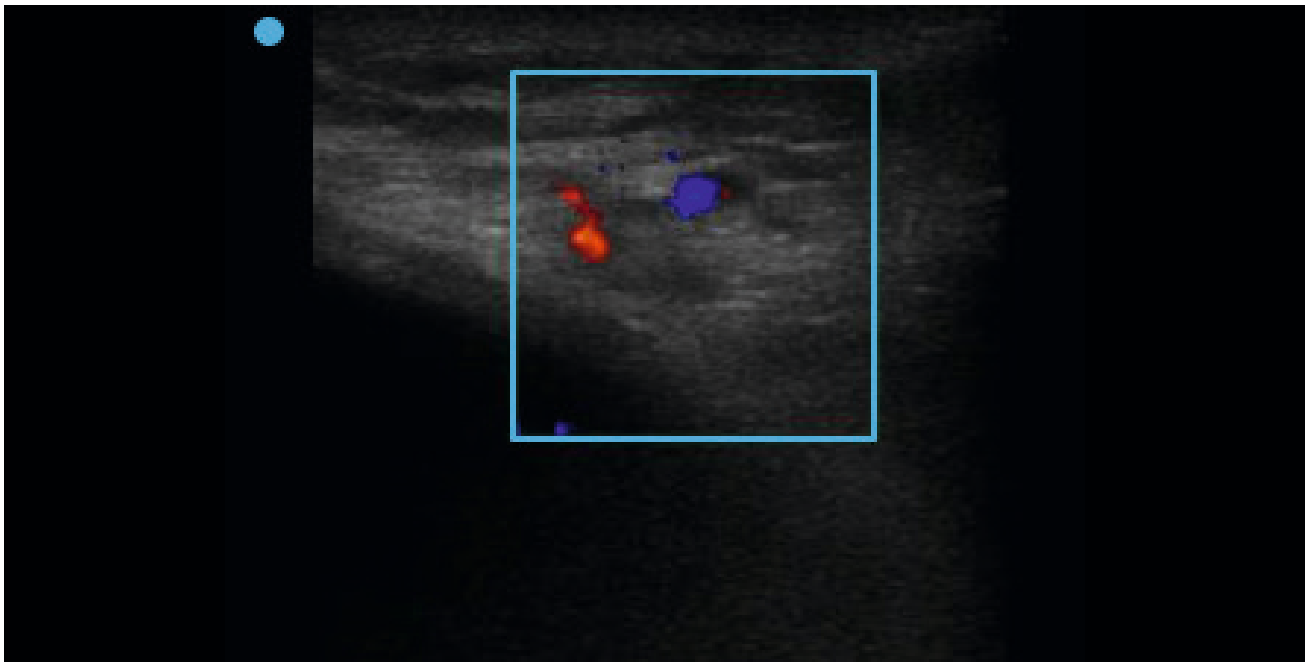


## Ultrasound guidance for paracentesis

# TROUBLESHOOTING AND AVOIDING COMMON PITFALLS

Here are some pointers to avoid pitfalls in ultrasound-guided paracentesis:

You can visualize and avoid vessels in your path. Since these patients tend to have coagulopathy, it is especially important to avoid bleeding.



Avoid areas with surgical scars. This can suggest that there are adhesions present underneath. Ultrasound doesn't always show adhesions well, but keep your eye out for bowel loops.

Ultrasound can help you troubleshoot in real-time during paracentesis to relocate fluid if the patient moves, or to flush the catheter if a loop of bowel is against a fenestration.



## FURTHER READING

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