APPENDIX

Patient Prep

1. None.

Survey:

Perform a real-time survey of the right lower quadrant (RLQ) of the abdomen with attention to the appendix.

Use Doppler or color flow to distinguish vessels and on any abnormality.

Image Documentation:

Each image must be labeled with the patient's full name, medical record number, accession number, initials of the imaging technologist, organ/area identification, scanning plane and patient orientation if different from supine.

General Procedure description:

1. Have the patient place a finger where it hurts and pay special attention to this area (even if the location is not in the right lower quadrant (RLQ) as the appendix may not be located in this location in some patients) during imaging and record at least 6 images in longitudinal and transverse plans.
    a. Using the graded compression technique evaluate the RLQ and site of pain if different then RLQ
    b. Using this graded compression technique displaces the bowel and validates its compressibility.
    c. Using the graded compression technique validates the compressibility of the appendix.

2. Evaluate the right lower quadrant with a **curved transducer** for a general survey. Take at least 6 images with this transducer in the longitudinal and transverse plane**. Then evaluate this area with a high frequency linear transducer** taking a least 6 images in the longitudinal and transverse plane.
    a. Any mass present should be imaged in two planes with measurements in three orthogonal planes. Color flow images should also be documented of any mass present. Provide cine clips images with and without compression.

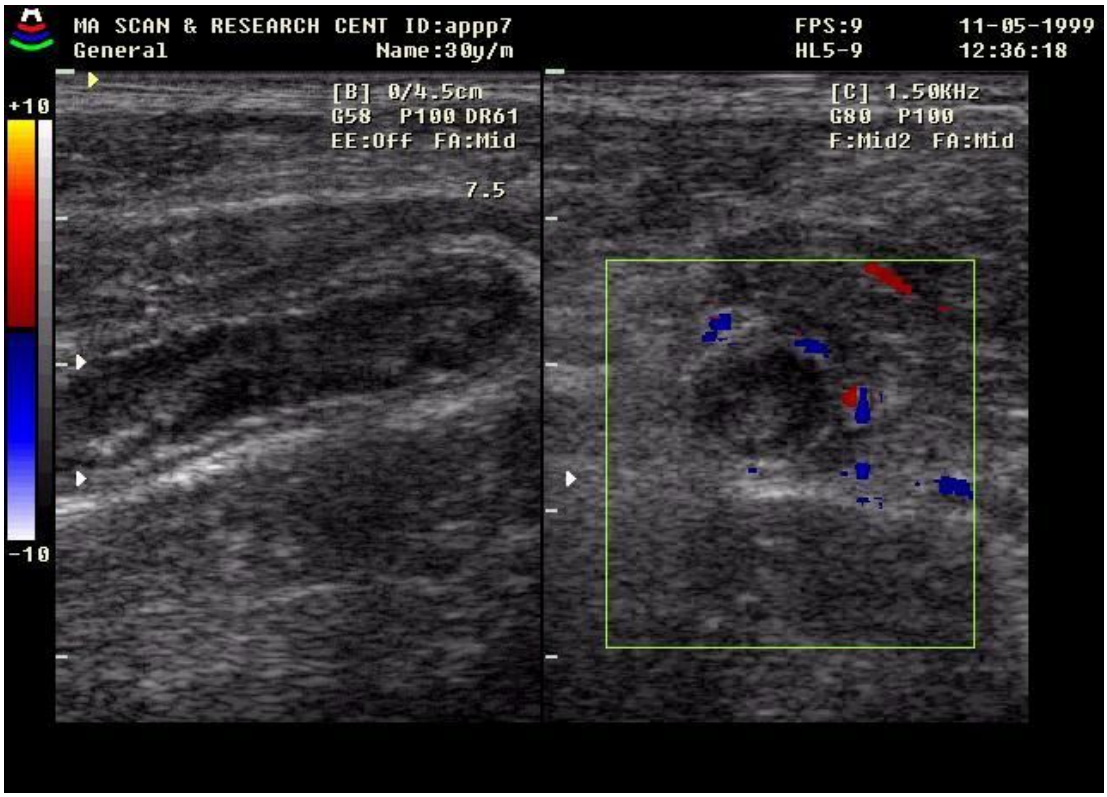
Guidelines for abdomen ultrasound:

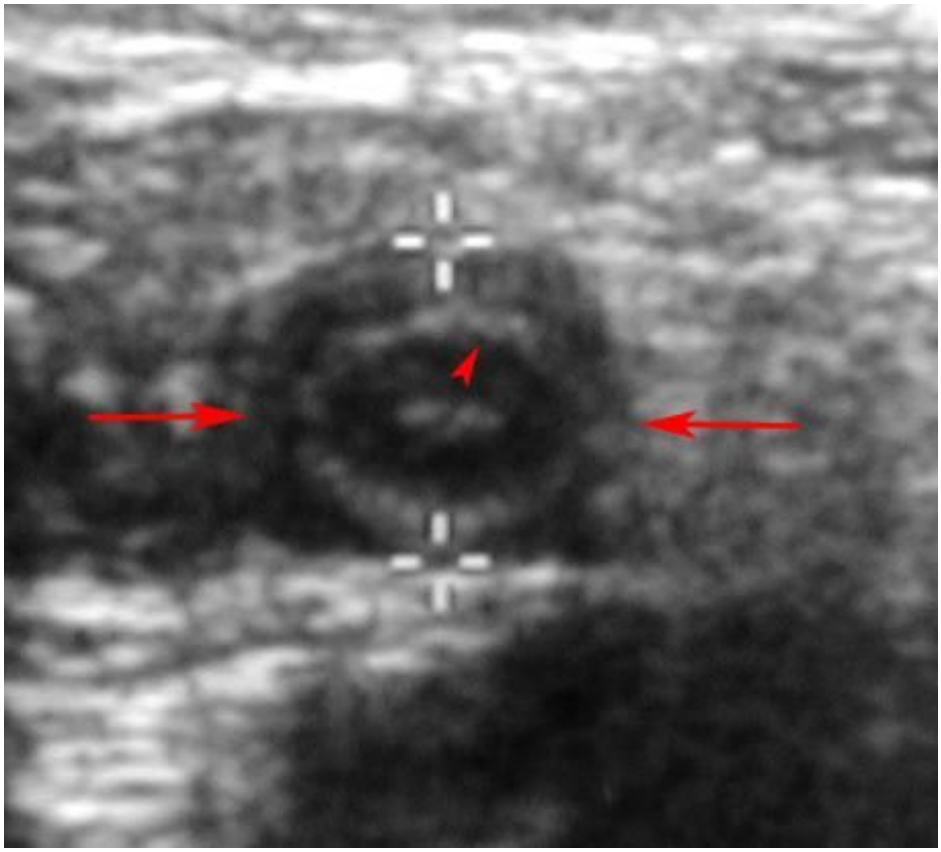
1. If the appendix is visualized take multiple longitudinal and transverse images.
2. Document measurements of the appendix outer wall thickness and single wall thickness.
3. Document color images of appendix to show vascularity.
4. Document if the lumen is filled with fluid and/or debris.
5. Document if the appendix is compressible.
6. Document if a fluid collection is seen.
7. Document any other pertinent anatomy or pathology in the right lower quadrant visualized.
8. Please note that often the appendix is not seen when normal; it can also not be seen on occasion when abnormal but hidden by bowel loops.

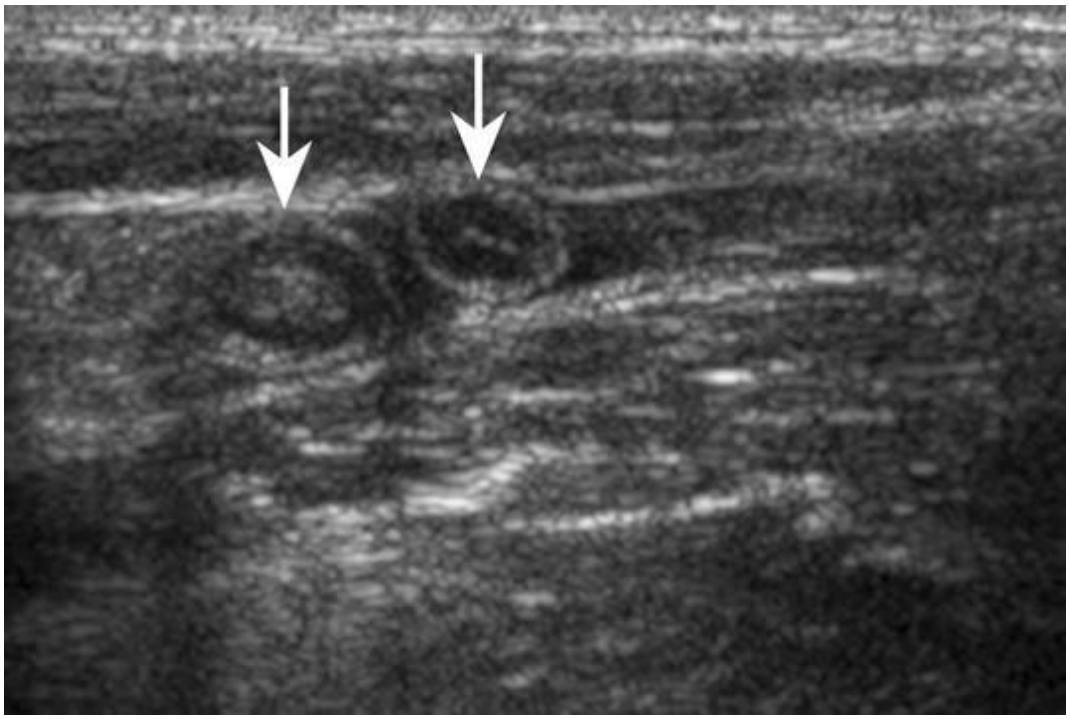
Signs of Appendicitis:

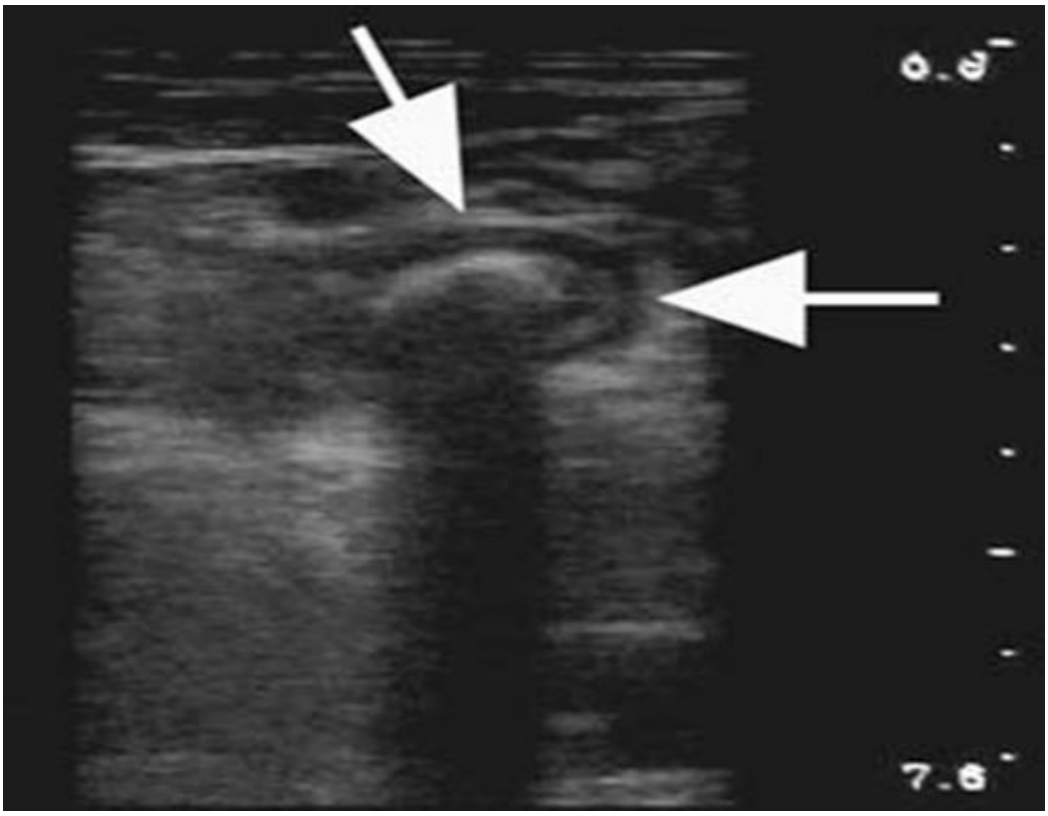
1. Outer diameter greater 6 mm (during compression).
2. Lumen filled with fluid and/or debris.
3. Increase in vascularity of wall (or absent blood flow if gangrenous).
4. Non compressible.
5. Single layer of the appendix wall thickness is greater 3 mm.
6. Patient is tender when compressing the appendix
7. Focal fluid collection (abscess from ruptured appendix, sometimes associated with an appendix that is not seen).
8. Calcified feces (appendicolith) within appendix with shadowing.
9. If you think you see a distended appendix watch it for a while to check for peristalsis. If you see peristalsis you are NOT seeing the appendix but rather likely small bowel instead. Please note you might see thick small bowel which can be related to small bowel diseases however.

Images of acute appendicitis.





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