

## Gastrointestinal applications

# EVALUATING FOR APPENDICITIS

### Ultrasound findings in appendicitis

Diagnosing appendicitis relies on multiple findings. Not all will be present, but the defining criterion is a noncompressible, blind-ending tubular structure.



Noncompressible, blind-ending structure



Dilated > 6 mm



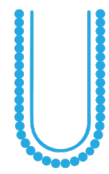
Appendicolith



Free fluid



Hyperemic with color Doppler

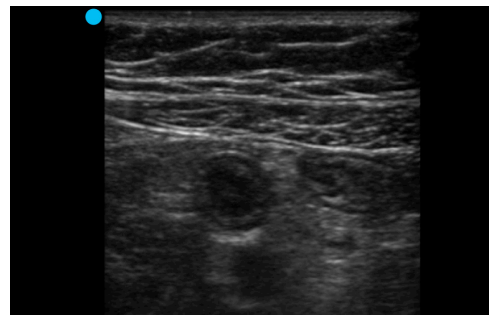


Surrounding echogenic fat

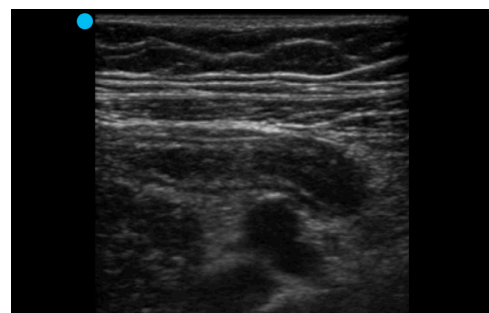
It is important to realize that some findings of uncomplicated appendicitis—particularly free fluid—can overlap with ruptured appendicitis. Remember to interpret ultrasound findings in light of the clinical history. A confirmatory computed tomography (CT) scan may be necessary if ultrasound is non-diagnostic or if there are other features of the case that suggest rupture.

### Examples of appendicitis

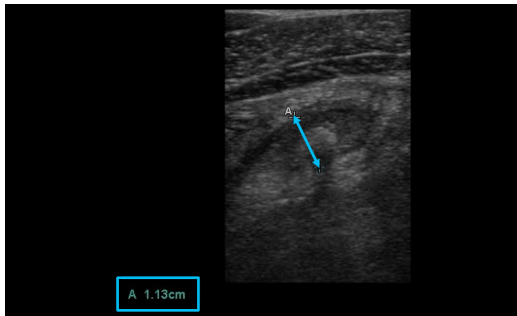
In short-axis, the appendix often appears as a target sign.



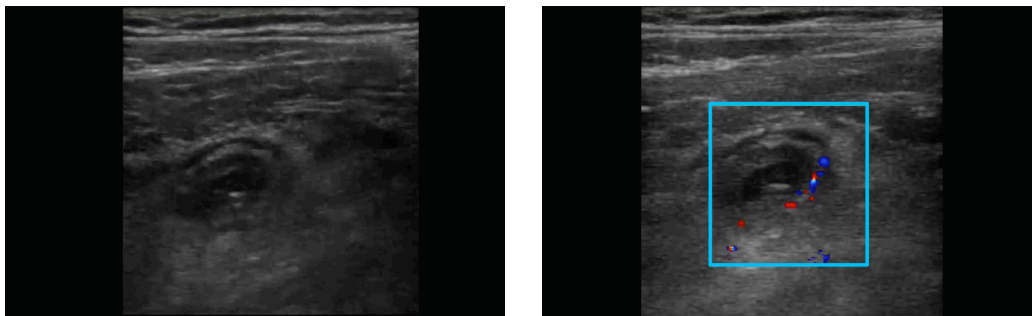
In long-axis, the appendix typically appears as a blind-ending tubular structure. Always image in both planes.



An appendicolith will create an acoustic shadow. Note the dilation of the appendix.



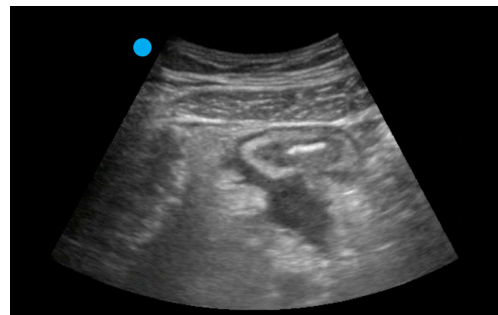
Periappendiceal echogenic fat appears hyperechoic and hazy. Apply color Doppler to evaluate for hyperemia.



Free fluid is consistent with appendicitis, but can also indicate rupture. Note the complex free fluid deep to the appendix in this patient, which is present in long- and short-axis.



Long-axis view



Short-axis view