

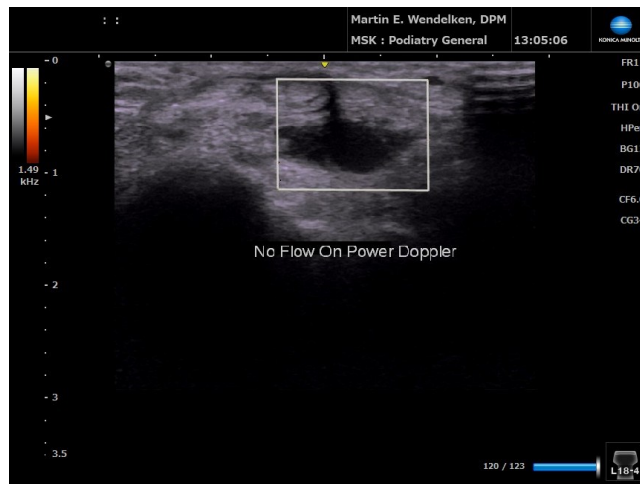
# Occult Ganglion Cyst Detected Below EDL Tendon and Edge Shadowing Artifact

Case study by **Marty Wendelken, DPM**, Product Specialist, Ultrasound, 20/20 Imaging, Division of Konica Minolta



Dr. Marty Wendelken has 20 + years of experience in musculoskeletal Ultrasound. He is a noted lecturer, and published author on diagnostic ultrasound. He also was an adjunct professor at Temple Univ. School of Podiatric Medicine. Currently Dr. Wendelken is working with 20/20 Imaging as their musculoskeletal educator and product specialist of the lower extremity / foot and ankle.

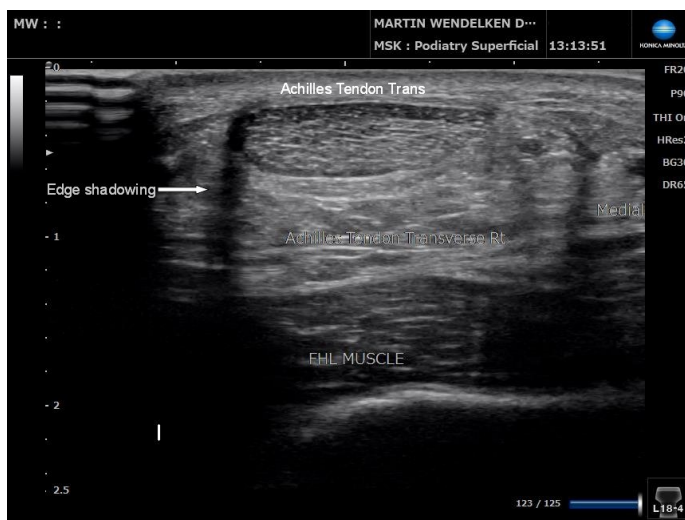
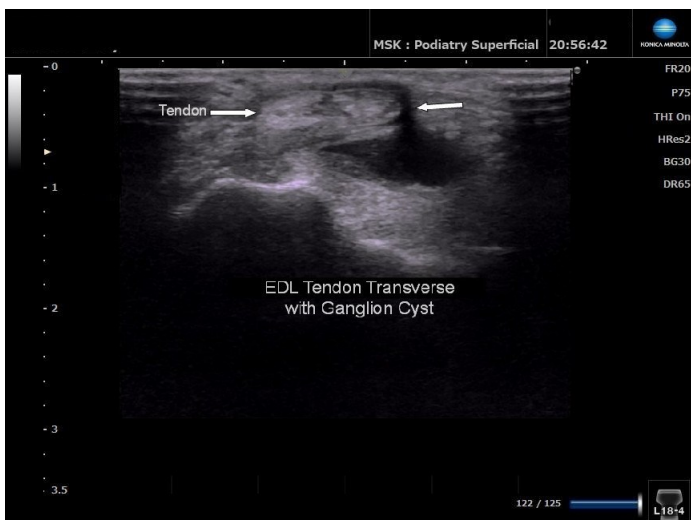
**History-** A 42 year-old active female presented with a recent onset of pain in the anterior left ankle. The patient stated that the pain was at first intermittent but now has become increasingly chronic. No history of injury was noted. Physical exam reveals normal pedal pulses, neurological, and range of motion of the left ankle. No swelling, erythema or edema was found in the area of chief complaint. Radiographs were obtained and were unremarkable. A musculoskeletal ultrasound was performed using a linear array 18 -4 MHz probe. The anterior ankle structures were evaluated including the ankle joint. The joint capsule was intact and no effusion was noted. AT tendon was normal in both the long and transverse axis. Attention was directed to the EDL tendon where on the medial aspect a cystic lesion was noted transversely. There was no flow noted



under Power Doppler (above). The lesion measures 13.6 x 4.4 mm. Examining the cystic lesion in long axis confirmed the location of the occult cyst relative to the EDL Tendon. Clinical impression was a ganglion cyst.

## Discussion: Edge Shadowing Artifact

In B-Mode ultrasound images, rounded structures and cavities such as cysts can exhibit “refractive” edge shadowing artifacts. It appears as a narrow hypoechoic shadow lines extending a distance to the lateral edges of the structure. Typically this is related to a sound mismatch. (see below)



In this case, the fact that the cyst was easily identified in both the longitudinal and transverse axis helping to rule out artifacts such as edge shadowing. (longitudinal scan below)



Having the clinical impression of an occult ganglion cyst, we were able to use the ultrasound scanner for guidance to aspirate and drain the cyst. Diagnostic musculoskeletal ultrasound is a wonderful tool to assist clinicians to discover many types of occult pathology. Soft tissue imaging with ultrasound has become an important and reliable tool in the hands of the podiatric physician