

Evidence Discussion (PV 20.1)

- The initial imaging modality of choice for the workup of scrotal/testicular pain and/or mass is scrotal ultrasound with/without duplex imaging. This is a highly sensitive test for most differential diagnoses of the scrotum and is both readily available and non-invasive. In cases where ultrasound is inconclusive, MRI pelvis with/without contrast may be indicated as well as nuclear scintigraphy which can assess blood flow to the scrotum.
 - Imaging for cryptorchidism in the adult patient may include scrotal ultrasound, MRI pelvis with/without contrast, or CT pelvis with contrast.
 - Advanced imaging of the abdomen and pelvis with contrasted CT may be obtained for the workup of right-sided varicocele to rule out intra-abdominal pathology.
1. Gerena M, Allen BC, Turkbey B, et al. ACR Appropriateness Criteria® Acute Onset of Scrotal Pain—Without Trauma, Without Antecedent Mass. Last review date: 2024. <https://acsearch.acr.org/docs/69363/Narrative/>
 2. Kim W, Rosen MA, Langer JE, Banner MP, Siegelman ES, Ramchandani P. US—MR Imaging Correlation in Pathologic Conditions of the Scrotum. *RadioGraphics*. 2007;27(5):1239-1253. doi:10.1148/rg.275065172
 3. AIUM Practice Guideline for the Performance of Scrotal Ultrasound Examinations. *Journal of Ultrasound in Medicine*. 2015;34(8):1-5. doi:10.7863/ultra.34.8.15.13.0006
 4. Parenti GC, Feletti F, Carnevale A, Uccelli L, Giganti M. Imaging of the scrotum: beyond sonography. *Insights Imaging*. 2018;9(2):137-148. doi:10.1007/s13244-017-0592-z.11

Evidence Discussion (PV 20.2)

- Imaging of a known or suspected paratesticular mass or mass of the spermatic cord should begin with ultrasound of the scrotum. Advanced imaging with MRI of the pelvis with/without contrast may be necessary to better delineate the lesion if ultrasound is inconclusive given that the specificity of ultrasound can be relatively low compared to the nearly 100% sensitivity.
1. Kim W, Rosen MA, Langer JE, Banner MP, Siegelman ES, Ramchandani P. US–MR Imaging Correlation in Pathologic Conditions of the Scrotum. *RadioGraphics*. 2007;27(5):1239-1253. doi:10.1148/rg.275065172
 2. Wolfman DJ, Marko J, Gould CF, Sesterhenn IA, Lattin GE. Mesenchymal Extratesticular Tumors and Tumorlike Conditions: From the Radiologic Pathology Archives. *RadioGraphics*. 2015;35(7):1943-1954. doi:10.1148/rg.2015150179
 3. AIUM Practice Guideline for the Performance of Scrotal Ultrasound Examinations. *Journal of Ultrasound in Medicine*. 2015;34(8):1-5. doi:10.7863/ultra.34.8.15.13.0006
 4. Parenti GC, Feletti F, Carnevale A, Uccelli L, Giganti M. Imaging of the scrotum: beyond sonography. *Insights Imaging*. 2018;9(2):137-148. doi:10.1007/s13244-017-0592-z.11

Evidence Discussion (PV 20.3)

- Testicular microlithiasis has been associated with an increased risk of testicular cancer in conjunction with other risk factors. For this reason, surveillance imaging with scrotal ultrasound, given its high sensitivity for detecting masses, is recommended annually for individuals with a higher than average risk of testicular cancer which includes family history of germ cell tumor, history of cryptorchidism and/or orchiopexy, and testicular atrophy.
1. Kim W, Rosen MA, Langer JE, Banner MP, Siegelman ES, Ramchandani P. US–MR Imaging Correlation in Pathologic Conditions of the Scrotum. *RadioGraphics*. 2007;27(5):1239-1253. doi:10.1148/rg.275065172
 2. Tan IB, Ang KK, Ching BC, Mohan C, Toh CK, Tan MH. Testicular microlithiasis predicts concurrent testicular germ cell tumors and intratubular germ cell neoplasia of unclassified type in adults. *Cancer*. 2010;116(19):4520-4532. doi:10.1002/cncr.25231
 3. Decastro BJ, Peterson AC, Costabile RA. A 5-Year Followup Study of Asymptomatic Men With Testicular Microlithiasis. *The Journal of Urology*. 2008;179(4):1420-1423. doi:10.1016/j.juro.2007.11.080
 4. Winter TC, Kim B, Lowrance WT, Middleton WD. Testicular Microlithiasis: What Should You Recommend? *American Journal of Roentgenology*. 2016;206(6):1164-1169. doi:10.2214/ajr.15.15226
 5. Richenberg J, Belfield J, Ramchandani P, et al. Testicular microlithiasis imaging and follow-up: guidelines of the ESUR scrotal imaging subcommittee. *European Radiology*. 2014;25(2):323-330. doi:10.1007/s00330-014-3437-x
 6. Richenberg J, Brejt N. Testicular microlithiasis: is there a need for surveillance in the absence of other risk factors? *European Radiology*. 2012;22(11):2540-2546. doi:10.1007/s00330-012-2520-4
 7. Stephenson A, Eggener SE, Bass EB, et al. Diagnosis and Treatment of Early Stage Testicular Cancer: AUA Guideline. *Journal of Urology*. 2019;202(2):272-281. Amended 2023. doi:10.1097/ju.0000000000000318