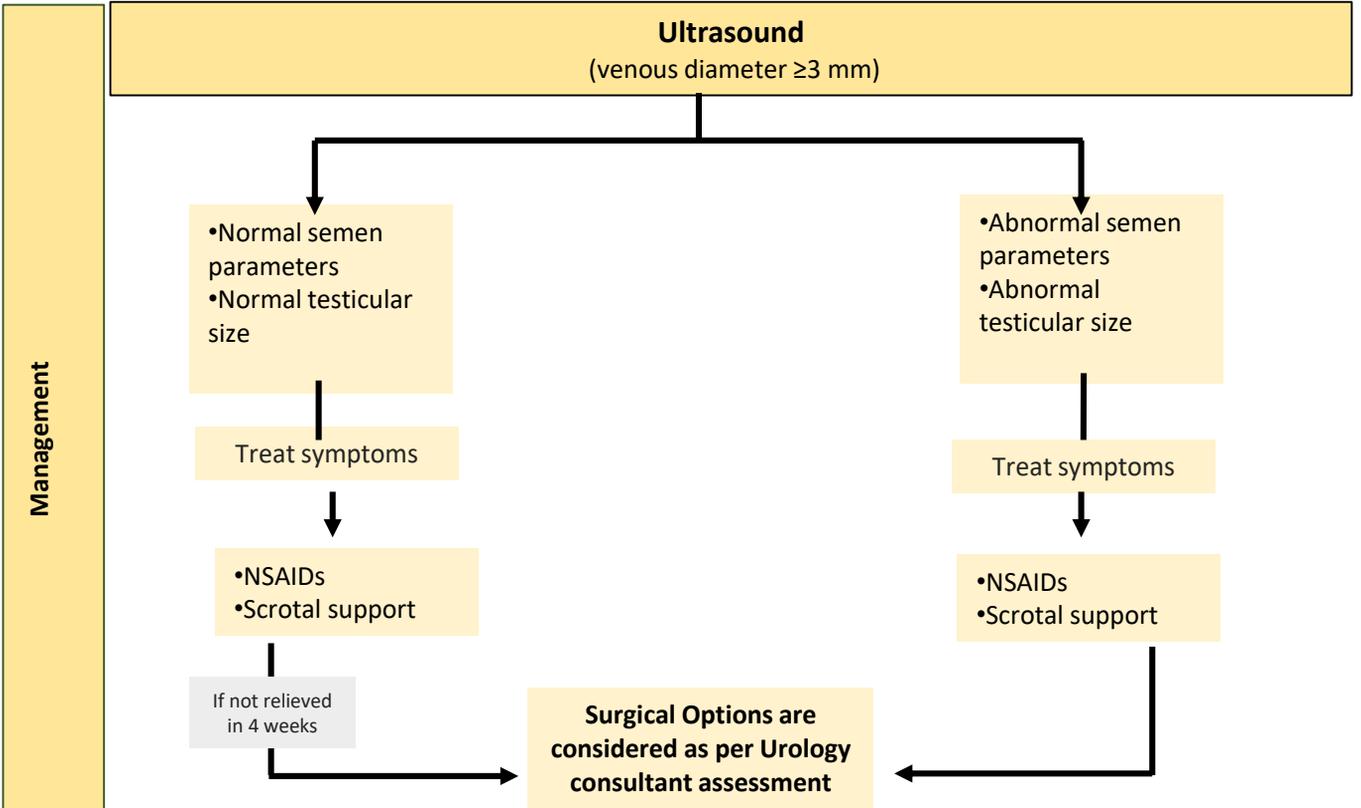


**Background**

- Vascular lesion characterized by the dilation of gonadal veins in the scrotum, sometimes described as having a "bag of worms" appearance.
- Prevalence in adult men is about 15% overall, but may reach up to 40% in men attending infertility clinics.
- Affects adolescents and young adult men

<b>Evaluation</b>	<b>Clinical Presentation</b>	<ul style="list-style-type: none"> <li>•Most varicoceles are asymptomatic</li> <li>•Painless scrotal swelling</li> <li>•Dull, aching, usually left-sided scrotal pain</li> <li>•Infertility</li> </ul>	•Symptoms suggest secondary varicocele*
	<b>Diagnosis</b>	<b>Physical Exam</b>	<ul style="list-style-type: none"> <li>•Should be attended in supine and standing positions, both with and without Valsalva maneuver (which helps in dilating varicocele and makes it more obvious)</li> <li>•Includes assessment of testicular size and consistency</li> </ul>
		<b>Grading</b>	<p>The grading system used by Dubin and Amelar, based on the clinical features</p> <ul style="list-style-type: none"> <li>•Subclinical: Not palpable or visible at rest or during Valsalva but detectable on US</li> <li>•Grade I (Small size): Palpable during Valsalva maneuver</li> <li>•Grade II (Medium size): Palpable at rest, but not visible.</li> <li>•Grade III (Large size): Visible and palpable at rest.</li> </ul>
<b>Testing</b>	<ul style="list-style-type: none"> <li>•Routine semen analysis, typically performed twice</li> <li>•Ultrasound is the imaging modality of choice (consider diagnostic if venous diameter <math>\geq 3</math> mm)</li> <li>•If patient's presentation suggest secondary varicocele, consider different imaging modality (US, CT or MRI) of abdomen</li> </ul>		



Varicocele treatment is not indicated in subclinical varicocele

**Red Flags\***

Symptoms that may suggest secondary varicocele including:

- Late-onset varicocele
- Gross hematuria, Flank pain (may suggest renal cell carcinoma or retroperitoneal fibrosis or tumors)
- History of alcohol abuse, History of hepatitis B or C infection (may suggest portal hypertension due to cirrhosis)

## References

- 1) Mohammed A, Chinegwundoh F. Testicular varicocele: an overview. *Urol Int.* 2009;82(4):373-379. doi:10.1159/000218523
- 2) Practice Committee of the American Society for Reproductive Medicine; Society for Male Reproduction and Urology. Report on varicocele and infertility: a committee opinion. *Fertil Steril.* 2014;102(6):1556-1560. doi:10.1016/j.fertnstert.2014.10.007
- 3) Report on varicocele and infertility, (AUA) and the Practice Committee of the American Society for Reproductive Medicine (ASRM).
- 4) Freeman, S. et al. "Ultrasound evaluation of varicoceles: guidelines and recommendations of the European Society of Urogenital Radiology Scrotal and Penile Imaging Working Group (ESUR-SPIWG) for detection, classification, and grading." *European Radiology* 30 (2019): 11-25.
- 4) Dynamed