Urogenital Trauma
Practice Management Guideline

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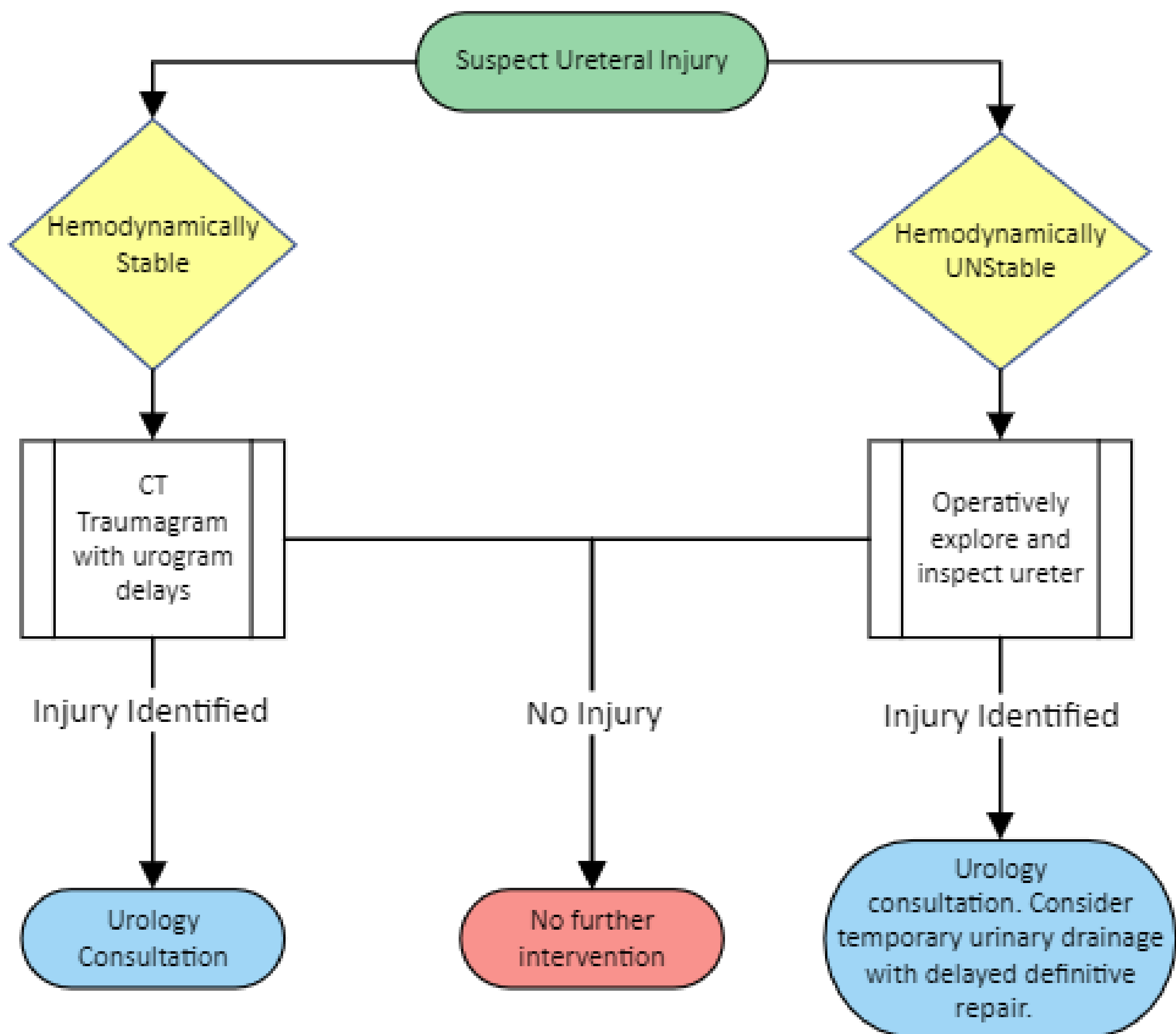
Renal Injuries

See Solid Organ Injury PMG

Ureter Injuries

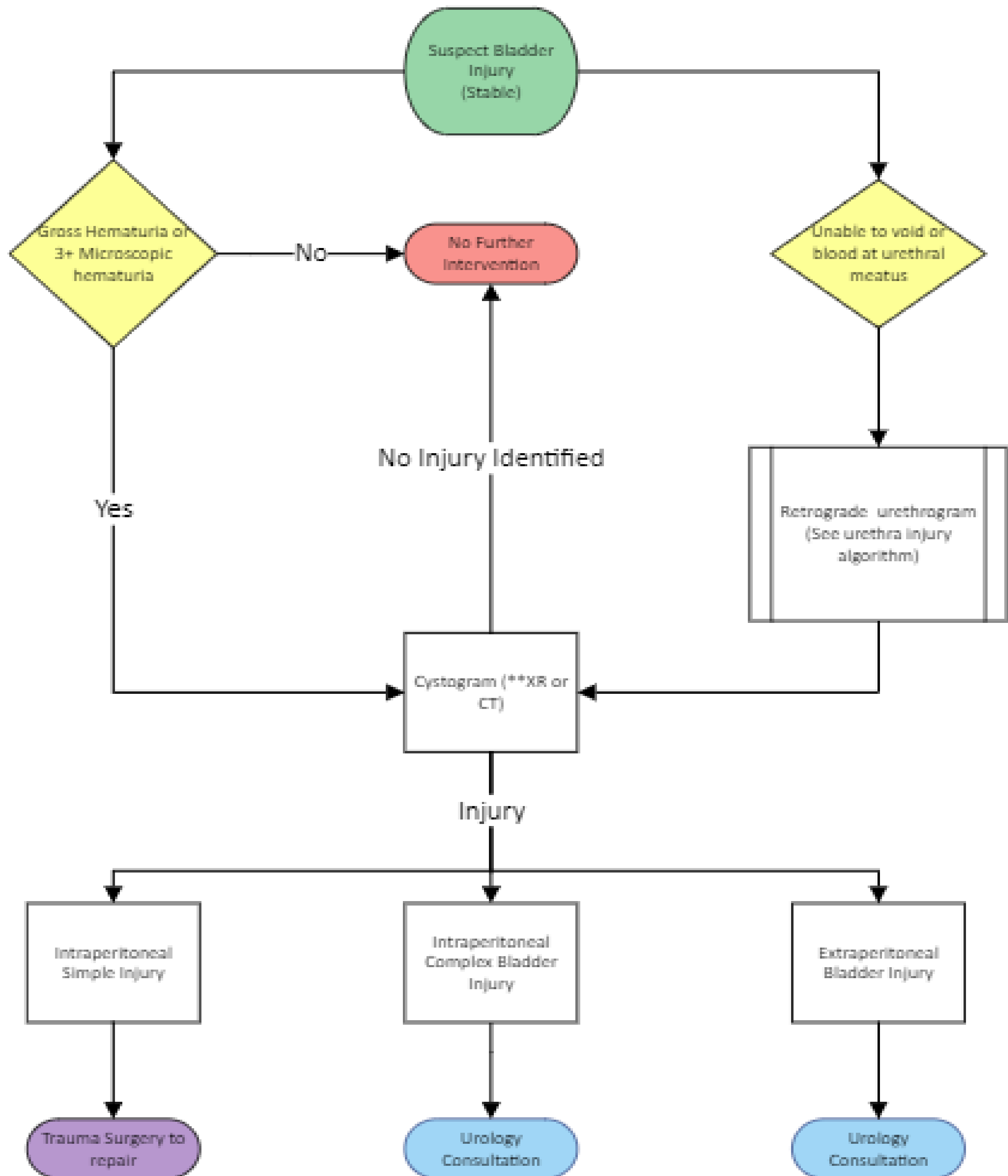
Risk Factors: Clinicians must have a higher suspicion for ureteral injury in the setting of penetrating trauma.

Eight (8) minute delayed images should be attained with the initial CT traumagram with concerning trajectory to evaluate for collecting system injuries in the hemodynamically stable patient. Absence of hematuria does NOT rule out ureteral injuries.



Bladder Injuries

Risk Factors: Blunt – Vast majority are associated with pelvic fractures. Penetrating – Concerning trajectory. About 60% of bladder injuries are extraperitoneal, 30% intraperitoneal, and about 10% are mixed.

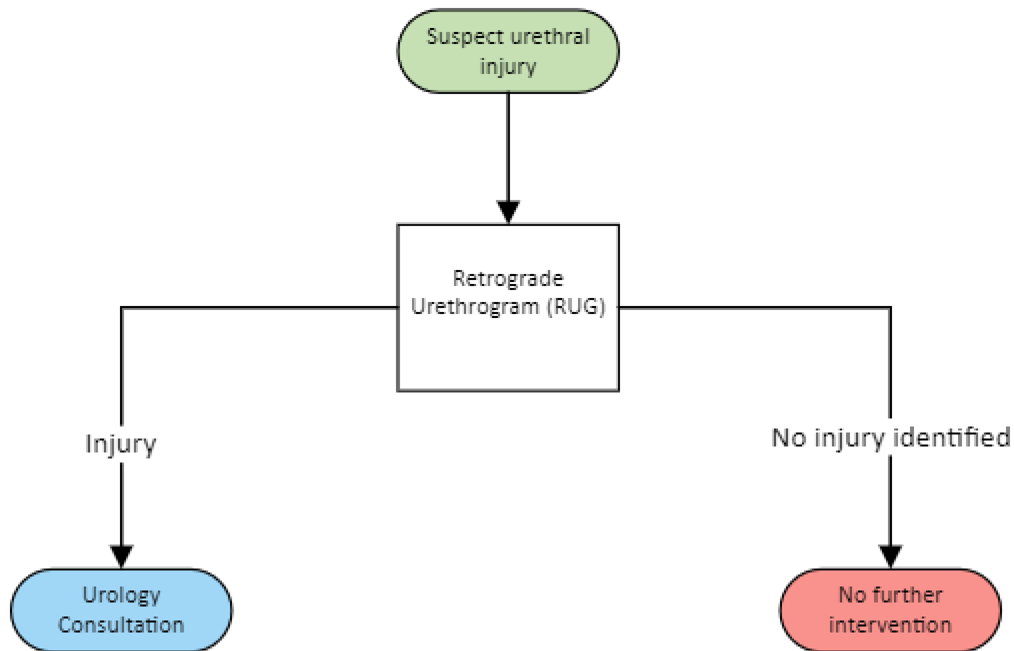


Definitions: **Gross hematuria** - If unclear based on urine color, obtain urinalysis. If 3+/Large blood, considered as positive. If 2+ or less microhematuria on UA, no further intervention. **XR Cystogram** - Fill bladder with at least 300mL contrast or until tolerance reached. Must obtain at minimum contrast-filled AP, and post-drainage films, prefer to have lateral view as well. About equivalent diagnostic yield to CT cystogram. **Complex Bladder Injury** - Stellate rupture, involving the trigone, bladder neck or urethral orifices, and/or associated vaginal or rectal injuries. Or associated pelvic fractures with bone spicules.

Surgical Management: Trauma Team repair of Simple Intraperitoneal Bladder Injury – Intraoperatively evaluate the integrity of the urethral orifices and bladder neck. Repair with absorbable suture. Confirm integrity of repair with leak test intraoperatively. Foley catheter should remain for 7 days. Follow up cystography should be performed in complex repair (as should urology consultation) but may not be necessary for simple bladder repairs.

Urethra Injuries

Risk Factors: Blunt – Straddle injuries, associated with pelvic fractures. Penetrating - concerning trajectory.



Management: If Foley has already been placed and no blood at meatus and suspicion for urethral injury is low, no further imaging warranted. If blood at meatus around Foley, a pericatheter urethrogram should be performed to identify missed injury.

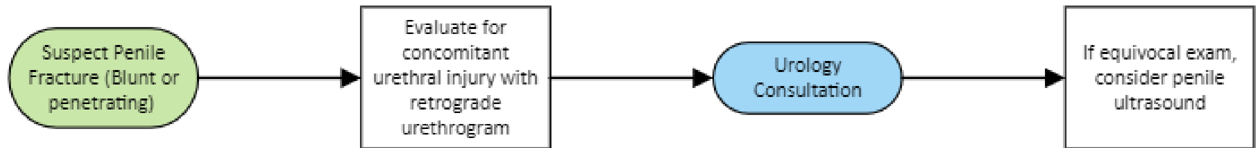
If for some reason unable get a radiology RUG, consult urology for the RUG or initial foley placement.

Blunt urethral injuries – Suprapubic tube drainage vs primary realignment (SPT preferred per AUA guidelines). Penetrating anterior urethral injuries – *Uncomplicated:* Primary repair preferred. *Complicated:* SPT drainage, delayed repair.

Genital Trauma

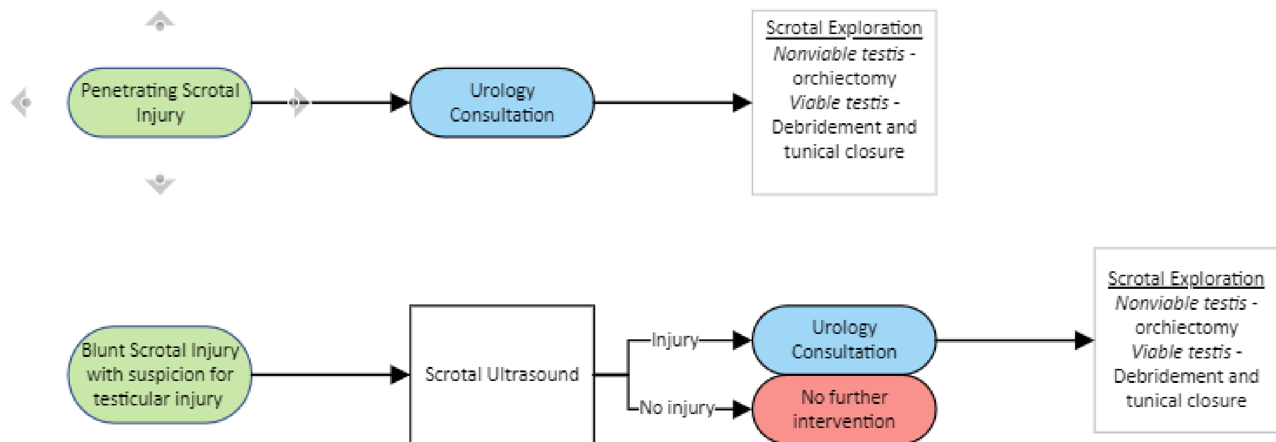
Penile Fractures

Risk Factors: Blunt - Cracking/snapping during intercourse, associated with ecchymosis and swelling, detumescence. Penetrating – concerning trajectories.

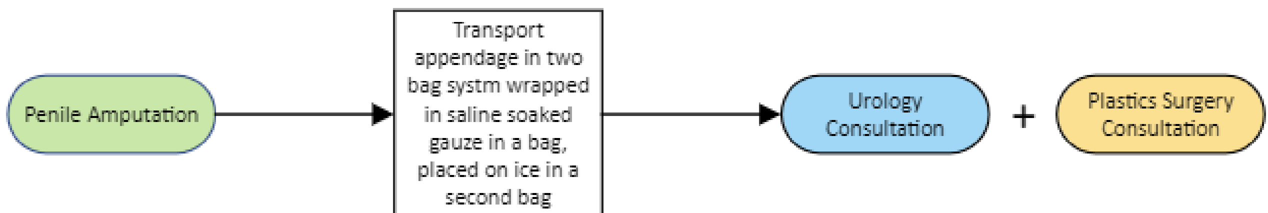


Scrotal Injury

Risk Factors: Blunt - Straddle injuries, direct impact. Penetrating – Concerning trajectories.



Penile Amputation



References:

1. Morey AF, Broghammer JA, Hollowell CM, McKibben MJ, Souter L. Urotrauma guideline 2020: AUA guideline. The Journal of urology. 2021 Jan;205(1):30-5.
2. Yeung LL, McDonald AA, Como JJ, Robinson B, Knight J, Person MA, Lee JK, Dahm P. Management of blunt force bladder injuries: A practice management guideline from the Eastern Association for the Surgery of Trauma. Journal of Trauma and Acute Care Surgery. 2019 Feb 1;86(2):326-36.
3. Holevar M, DiGiacomo JC, Ebert J, Luchette F, Nagy K, Nayduch D, Sheridan R, Spirnak JP, Yowler C. Practice management guidelines for the evaluation of genitourinary trauma. Chicago: Eastern Association for the Surgery of Trauma. 2003.
4. Holevar M. Practice management guidelines for the management of genitourinary trauma. The Eastern Association for the Surgery of Trauma. 2004:15-8