Men’s Health Medley

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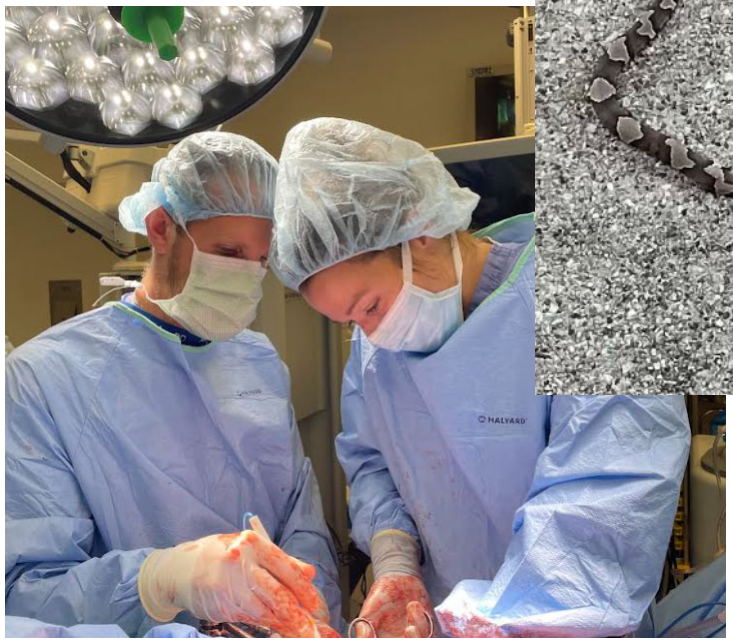
EXPLORE
HEALTHCARE SUMMIT

Introduction



Objectives: American Urological Association Guidelines

- Priapism
- Vasectomy
- **Early Detection of Prostate Cancer**
- **Benign Prostatic Hyperplasia**
- Urethral Stricture Disease
- **Microhematuria**
- Testicular Cancer
- Cryptorchidism
- **Testosterone Deficiency**
- **Erectile Dysfunction**
- Peyronie's Disease
- Male Infertility

Objectives

- Recognize AUA Guidelines for Early Detection of Prostate Cancer
- Understand urethral stricture disease treatment, BPH and difficult foley catheter placement
- Identify pharmacologic and surgical treatment for BPH
- Summarize the early workup for testicular/scrotal masses
- Understand testosterone deficiency and its treatment options
- Differentiate ED and Peyronie’s Disease and assess commonalities

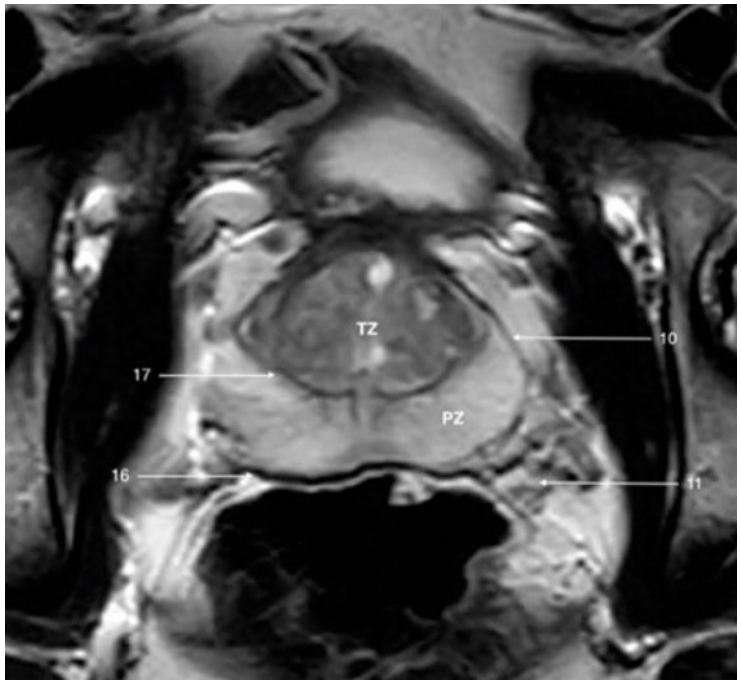
Early Detection of Prostate Cancer

- 41-year-old male with family hx of prostate cancer in father, brother and grandfather
- PSA results at 6.1, next step?
- Repeat PSA, results at 5.9

AGE-SPECIFIC REFERENCE RANGES FOR SERUM PSA			
Age Range (years)	Asian Americans	African Americans	Caucasians
40 to 49	0 to 2.0 ng/mL	0 to 2.0 ng/mL	0 to 2.5 ng/mL
50 to 59	0 to 3.0 ng/mL	0 to 4.0 ng/mL	0 to 3.5 ng/mL
60 to 69	0 to 4.0 ng/mL	0 to 4.5 ng/mL	0 to 4.5 ng/mL
70 to 79	0 to 5.0 ng/mL	0 to 5.5 ng/mL	0 to 6.5 ng/mL

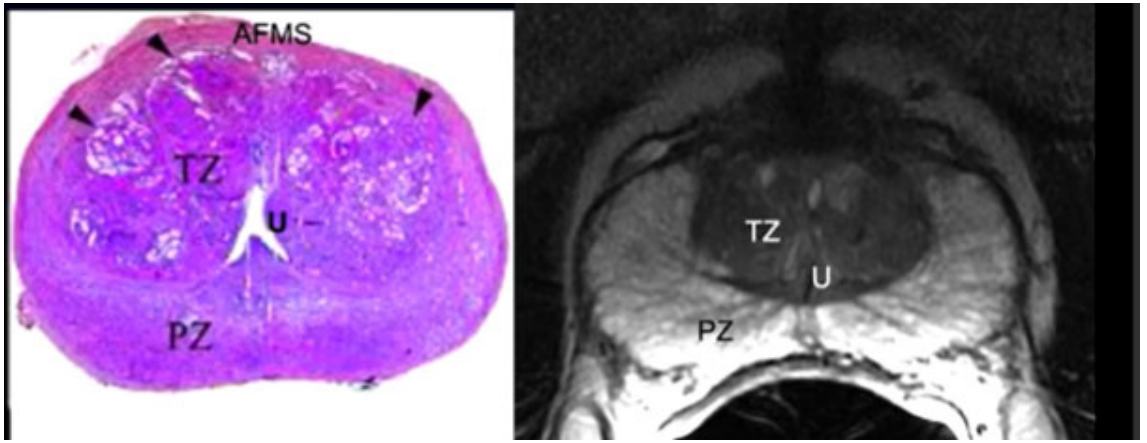
Early Detection of Prostate Cancer

- MRI is a helpful tool in risk stratification of elevated PSA
- Different types of MRI
  - Biparametric vs multiparametric (mpMRI)



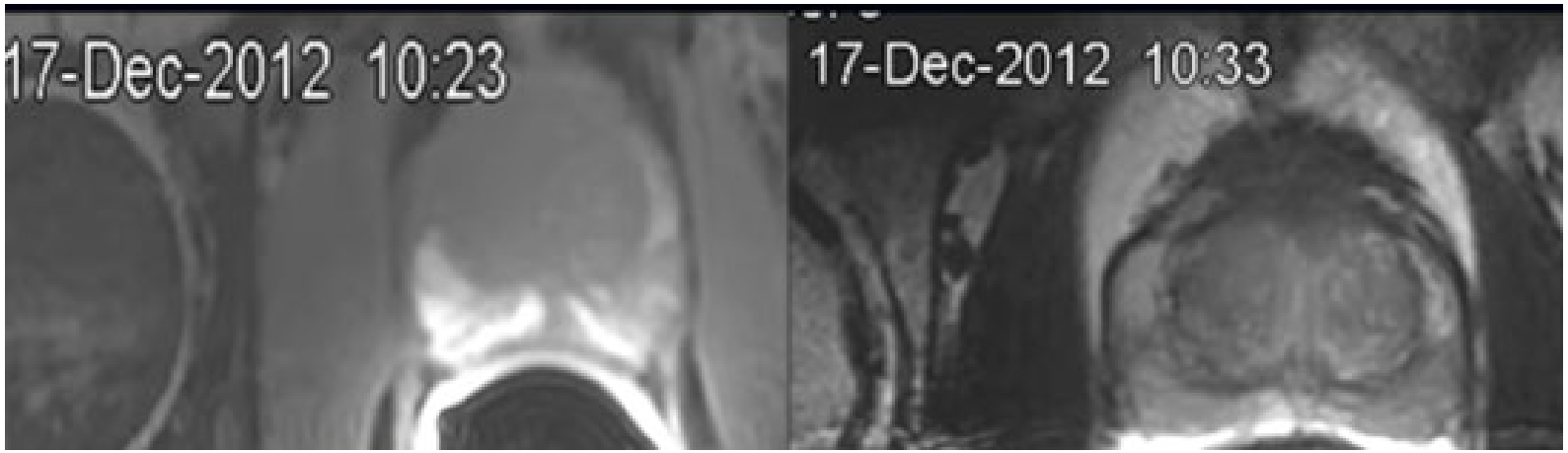
Prostate MRI

- Prostate MRI usually involves T1, T2, DWI, and DCE phases
- T1: biopsy-related hemorrhage (fat is bright, water/fluid is dark)
- T2: anatomical views, tumor assessment (water is bright, fat is dark)
- DWI: biology
- DCE: vascularity

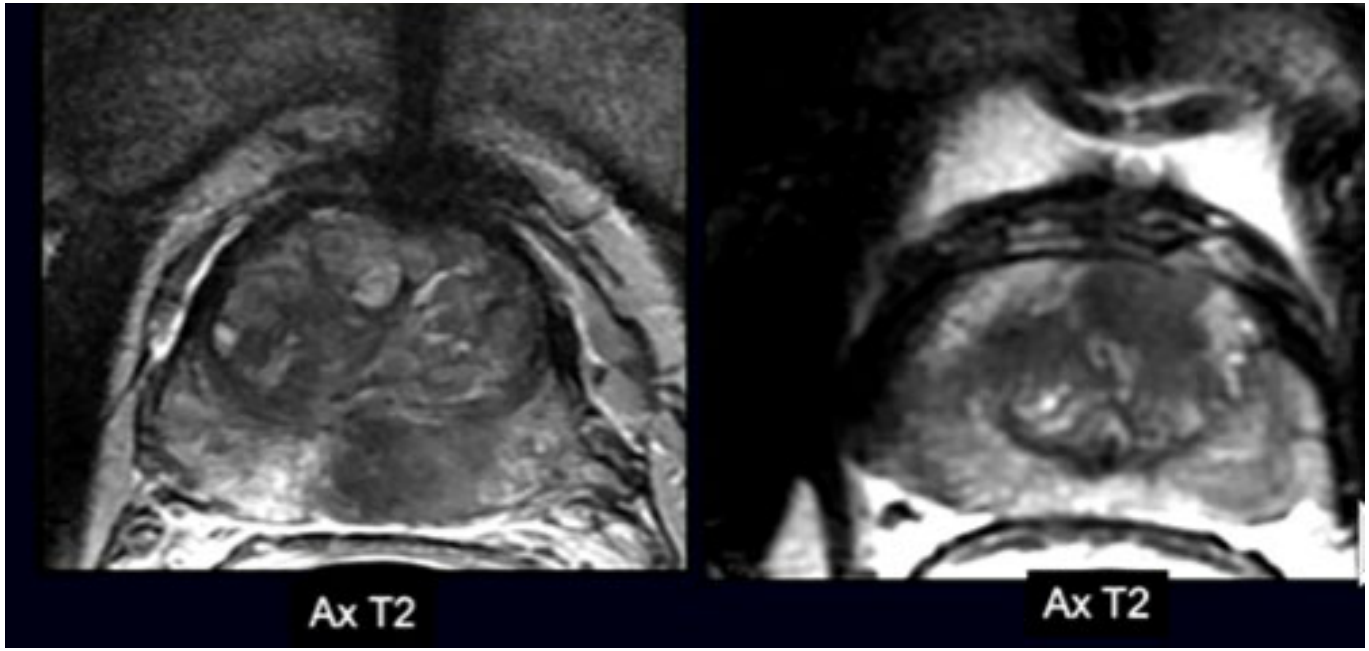


Prostate MRI

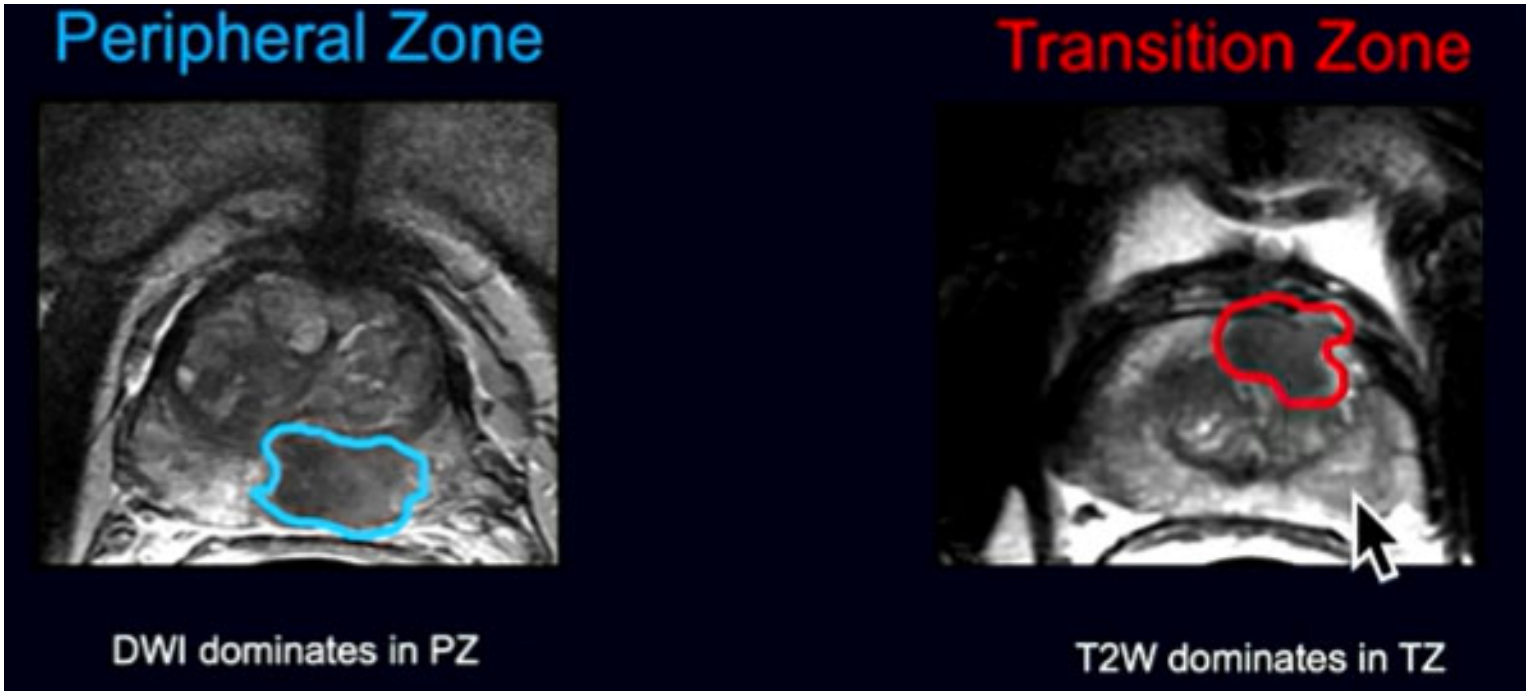
- T1
- T2



Prostate MRI

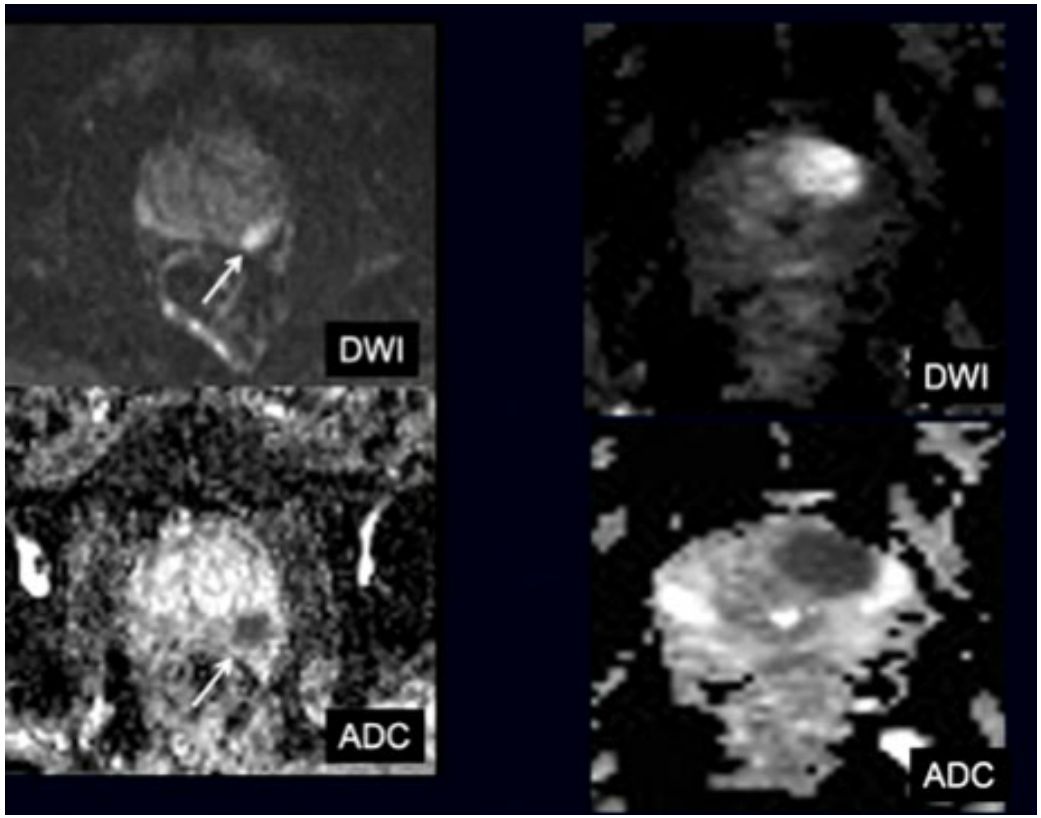


Prostate MRI



Prostate MRI

- DWI



PIRADS

PI-RADS 1	clinically significant cancer is highly unlikely to be present
PI-RADS 2	clinically significant cancer is unlikely to be present
PI-RADS 3	the presence of clinically significant cancer is equivocal
PI-RADS 4	clinically significant cancer is likely to be present
PI-RADS 5	clinically significant cancer is highly likely to be present

Early Detection of Prostate Cancer: Special Circumstances

- When may a prostate biopsy be omitted and cancer treatment pursued?
  - PSA >50 without other causes, especially in cases of advanced cancer
- If patients have a biopsy (negative or positive), prior to another biopsy, what is needed?
  - Prostate MRI
- What are risks associated with a prostate biopsy?

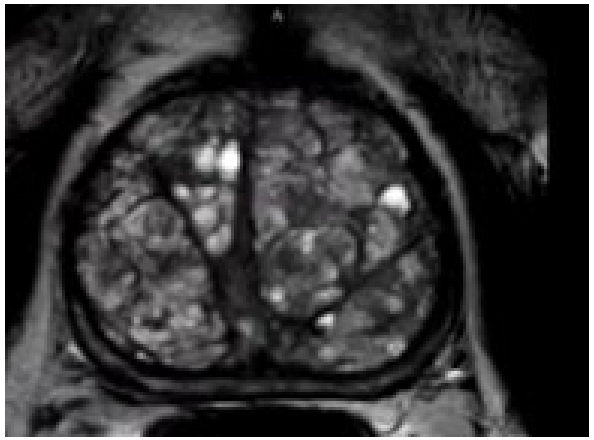
Early Detection of Prostate Cancer: Special Circumstances

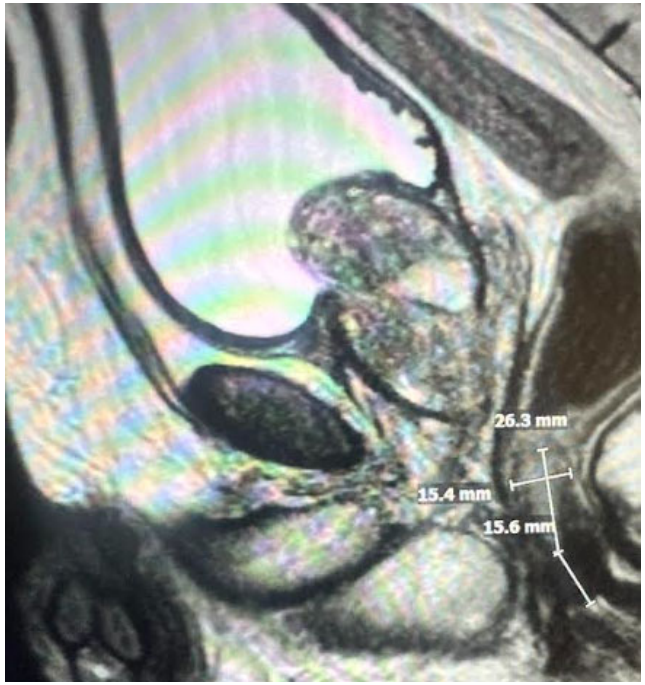
Infection				5-7%
	Hospitalization			1-3%
Bleeding				
	Hematuria			50%
		Needs intervention		<1%
	Rectal Bleeding			30%
		Needs intervention		2.5%
	Hematospermia			50%
		Prolonged (>4 weeks)		30%
Other				
	LUTS	Transient	(~1 month)	6-25%
	Urinary Retention			0.2 -2.6%
	ED	Transient	(~1 month)	Less than 1%

Early Detection of Prostate Cancer: Special Circumstances

- MRI: a tool to help avoid unnecessary biopsy
- False negative rates around 6-10%

Early Detection of Prostate Cancer

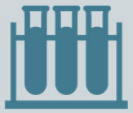




AUA Guidelines: Benign Prostatic Hyperplasia

Initial evaluation of LUTS: Medical history, Physical exam, IPSS and urinalysis

Lifestyle and behavioral modifications are generally first line followed by medications and surgery



Patients can be re-evaluated at the 4-12 week mark after initiation of these treatments with IPSS and consideration of PVR and flow test

AUA Guidelines BPH: https://www.auanet.org/guidelines-and-quality/guidelines/benign-prostatic-hyperplasia-(bph)-guideline

AUA Guidelines: Benign Prostatic Hyperplasia

- Terazosin and doxazosin can treat HTN and BPH
- Tamsulosin, alfuzosin, and silodosin: lower rates of orthostatic hypotension and syncope
- Ejaculatory Dysfunction
  - Silodosin (OR 32.5): rates as high as 50% in patients <60
  - Tamsulosin (OR 8.57)
  - Doxazosin (0.80)
  - Terazosin (0.14)

AUA Guidelines: Benign Prostatic Hyperplasia

- As noted, alpha blockers are typically the first line drug for BPH
- In patients with planned cataract surgery → wait until after surgery to start alpha blocker
- When should 5-alpha reductase inhibitor treatment be considered?
  - Prostate volume >30g, PSA >1.5, palpable enlargement on DRE
- In a patient on finasteride who has a PSA of 4, what is the actual PSA estimated to be?

AUA Guidelines: Benign Prostatic Hyperplasia

- 5ARI Side Effects
  - ED
  - Ejaculatory Dysfunction
  - Decreased Libido
  - Gynecomastia
  - Breast Tenderness
  - Psychological side effects?

AUA Guidelines: Benign Prostatic Hyperplasia

- Patients can be offered daily Cialis for BPH
- Anticholinergic drugs alone or in combo with alpha blockers

Medication name (generic)	Medication class	Starting dose	Maximum dose
Oxybutynin	Anticholinergic	IR: 5 mg up to 4 times daily XR: 5–10 mg daily	30 mg daily
Solifenacin	Anticholinergic	5 mg daily	10 mg daily
Tolterodine	Anticholinergic	IR: 1 mg twice a day XR: 2 mg daily	IR: 2 mg twice a day XR: 4 mg daily
Trospium	Anticholinergic	IR: 20 mg daily XR: 60 mg daily	IR: 20 mg twice a day XR: Same as starting dose
Darifenacin	Anticholinergic	7.5 mg daily	15 mg daily
Fesoterodine	Anticholinergic	4 mg daily	8 mg daily
Mirabegron	β-3 adrenergic agonist	25 mg daily	50 mg daily
Vibegron	β-3 adrenergic agonist	75 mg daily	Same as starting dose

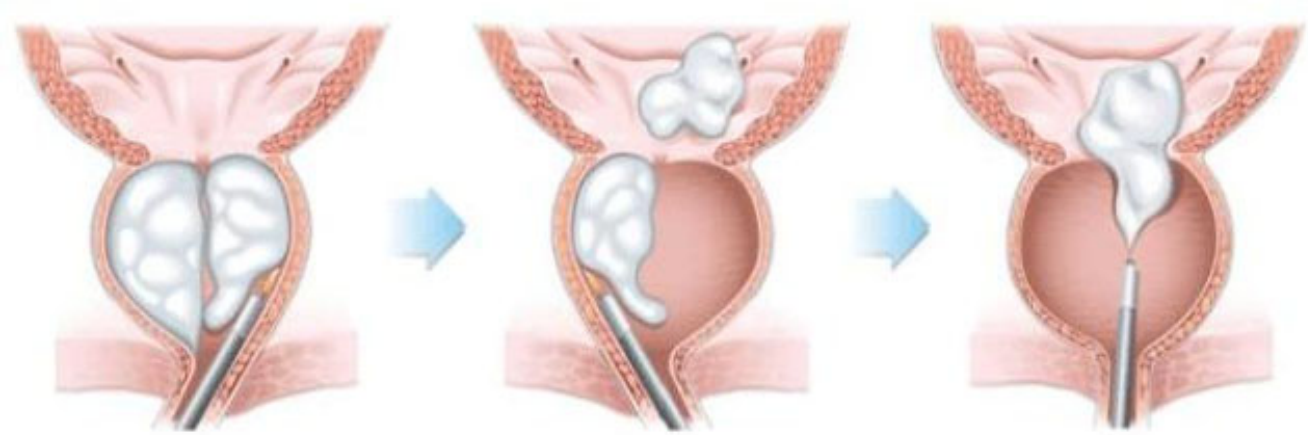
Abbreviations: FDA, US Food and Drug Administration; IR, immediate release; XR, extended release.

AUA Guidelines: Benign Prostatic Hyperplasia

- Acute urinary retention related to BPH needs alpha blocker
- Insert catheter → at least 3 days of alpha blocker → voiding trial
- Patients may try to stay on alpha blockers if they pass trial

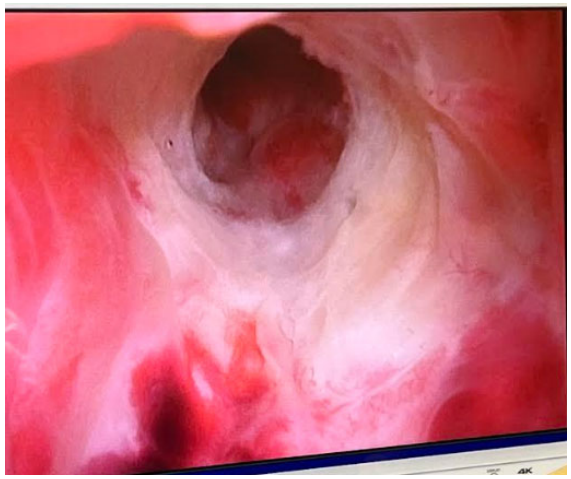
AUA Guidelines: Benign Prostatic Hyperplasia

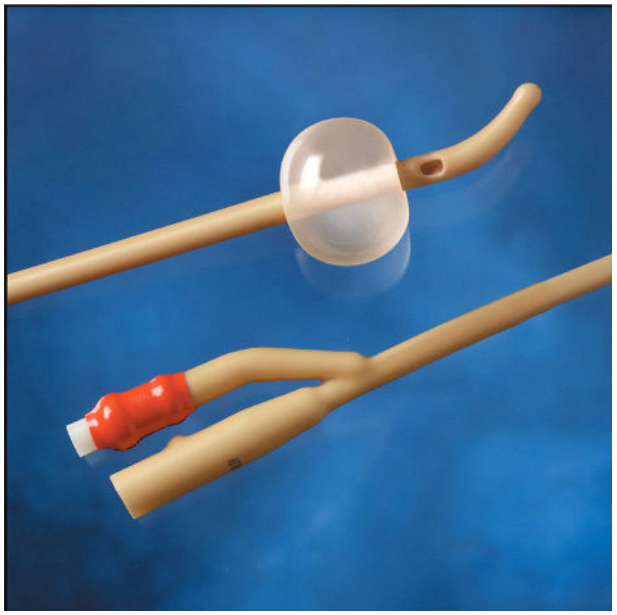
- Cross sectional imaging or US for prostate volume
- Surgery: TURP, HoLEP, UroLift, Aqua, etc.



Difficult Foley Placement

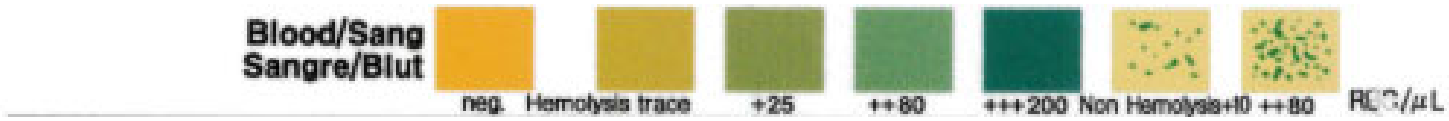
- Start with 16F catheter
- 18F or 20F Coude-tip catheter
- 14F catheter





AUA Guidelines: Microhematuria

- Definition of MH: greater than or equal to 3 RBC/hpf
- Risk stratification into low, intermediate or high-risk
- In the setting of pathology such as a stone that is causing microhematuria, a UA should be repeated

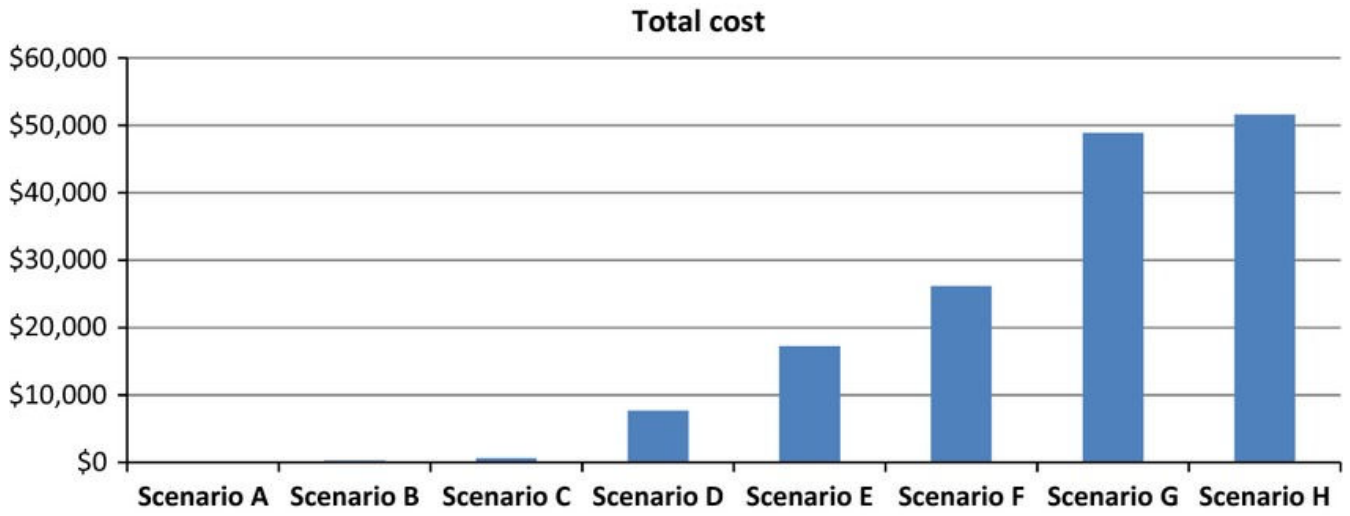


AUA Guidelines: Microhematuria

- Sex
- Age
- Number of RBCs
- Smoking History
- Other Risk Factors

Testicular/Scrotal Masses

- USPSTF recommends against routine TSE (Grade D)



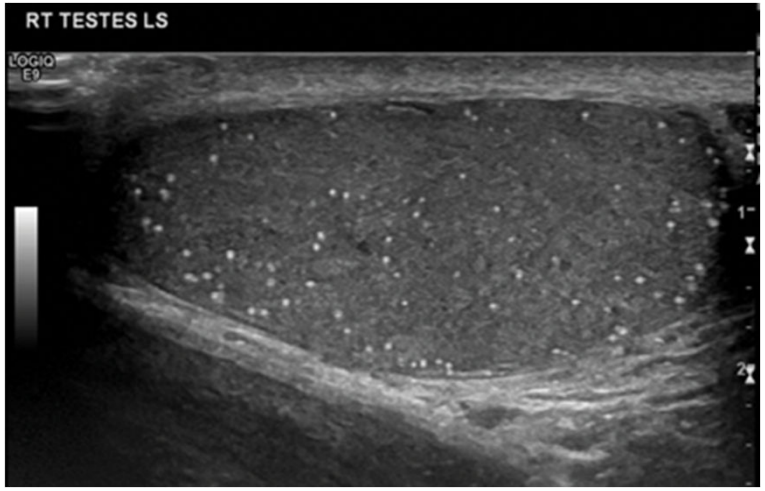
Cancer Medicine, Volume: 3, Issue: 6, Pages: 1629-1634, First published: 08 August 2014, DOI: (10.1002/cam4.318)

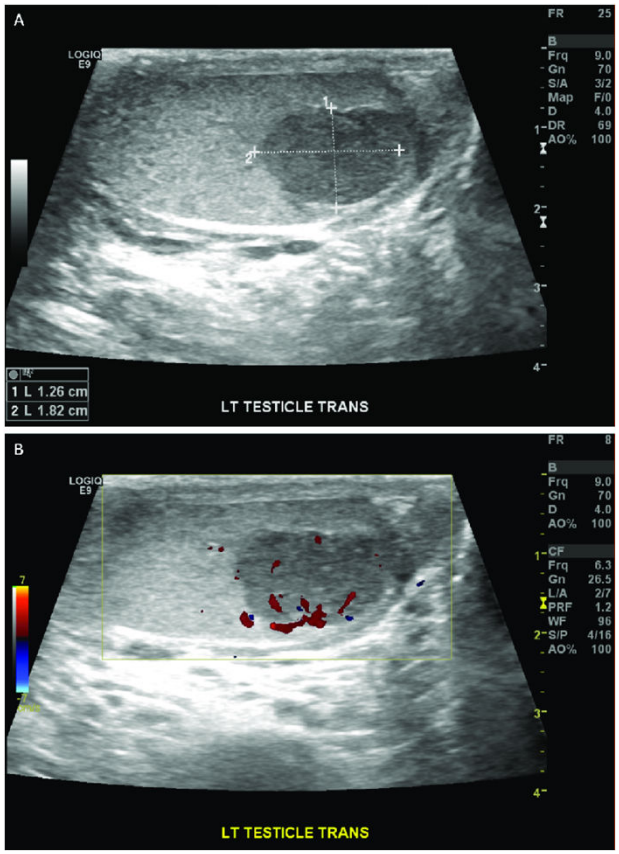
AUA Guidelines: Testicular Cancer

- Solid testicular mass on physical exam or imaging: manage as neoplasm
- Scrotal US with Doppler in patients who have scrotal mass
- Solid mass in testis: draw serum tumor markers PRIOR to any treatment
- Patients with normal tumor markers and indeterminate findings on exam/US → repeat US at 6-8 weeks

AUA Guidelines: Testicular Cancer

- Testicular cancer risk factors
- Cryptorchidism





AUA Guidelines: Testicular Cancer

- Survivorship clinic due to 95% survival rate at 10 years
- Radiation, chemo or both: elevated risk of cardiovascular disease
- Radiation, chemo or both: increased risk of secondary malignancy
- Hypogonadism: serum morning testosterone and LH

AUA Guidelines: Testosterone Deficiency

- Total Testosterone <300
  - Two Total T levels <300 with symptoms, early morning lab draw

- Patients at higher risk
  - Unexplained anemia, bone density loss, diabetes, chemotherapy, testicular radiation, HIV/AIDS, chronic narcotics, infertility, chronic corticosteroids, pituitary dysfunction

AUA Guidelines: Testosterone Deficiency

- Confirmed low T → measure LH
- Low T plus low/low-normal LH → measure PRL
- Counsel on infertility and workup if present
- Measure H&H prior to T replacement
- PSA in men >40 years old prior to T replacement

AUA Guidelines: Testosterone Deficiency

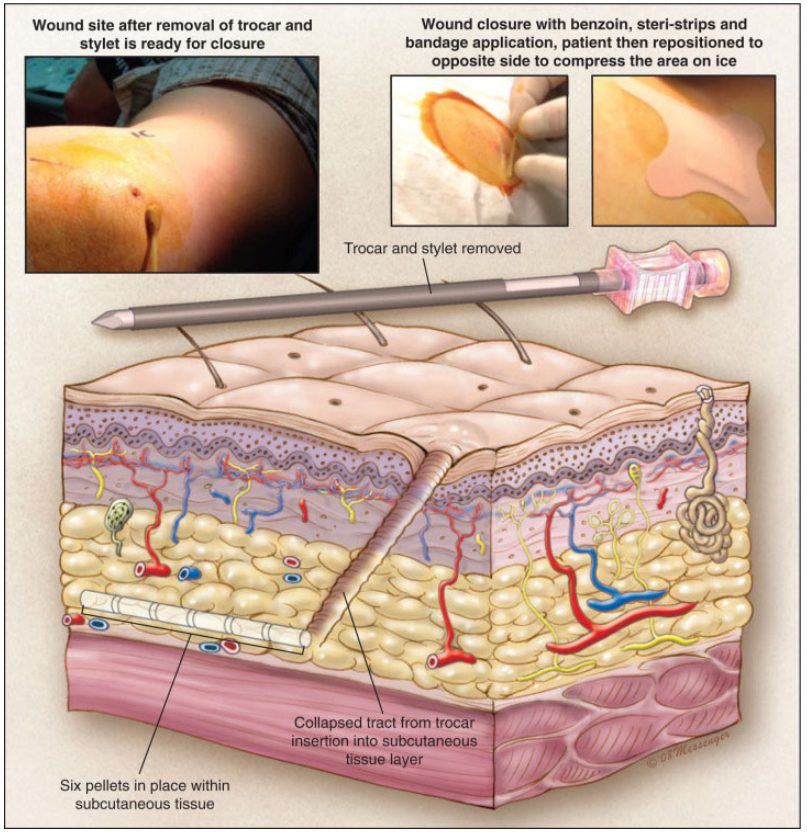
- Sperm production is hindered in patients on exogenous testosterone
- Overweight and obese patients have been shown to improve Total T levels with a weight loss of 5-10% or more
- Dose T levels to be in the 450-600 ng/dL range (middle tertile)

AUA Guidelines: Testosterone Deficiency

- Do not start T replacement for 3-6 months after cardiovascular event
- Oral T replacement generally not recommended
- Many formulations for T replacement: See Handout

AUA Guidelines: Testosterone Deficiency

- Androgel
- T Cypionate
- Testopel



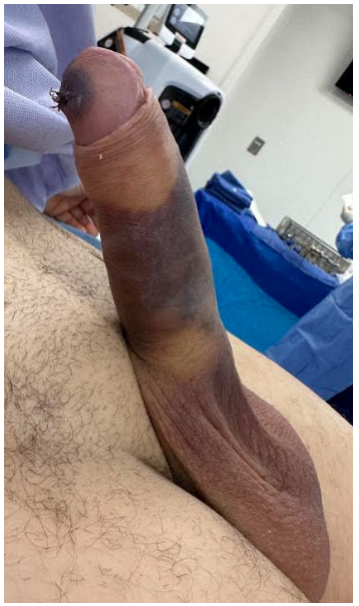
AUA Guidelines on T Deficiency: https://www.auanet.org/guidelines-and-quality/guidelines/testosterone-deficiency-guideline

AUA Guidelines: Testosterone Deficiency

- Total T: measure every 6-12 months
- H&H: measure every 6-12 months and keep HCT <54%
- PSA: follow screening guidelines

AUA Guidelines: Erectile Dysfunction

- H&P, psychosocial history
- In men with ED, morning Total T recommended
- ED is a risk for cardiovascular disease
- Many causes



AUA Guidelines: Erectile Dysfunction

- Can be helpful to involve mental health professional
- ED can be used as a conduit to suggest patients improve lifestyle
- IIEF/SHIM

AUA Guidelines: Erectile Dysfunction

Over the past six months:

1	How do you rate your **confidence** that you could get and keep an erection?	Very low	Low	Moderate	High	Very high
		1	2	3	4	5
2	When you had erections with sexual stimulation, how often were your erections hard enough for penetration?	Almost never/never	A few times (much less than half the time)	Sometimes (about half the time)	Most times (much more than half the time)	Almost always/always
		1	2	3	4	5
3	During sexual intercourse, **how often** were you able to maintain your erection after you had penetrated (entered) your partner?	Almost never/never	A few times (much less than half the time)	Sometimes (about half the time)	Most time (much more than half the time)	Almost always/always
		1	2	3	4	5
4	During sexual intercourse, **how difficult** was it to maintain your erection to completion of intercourse?	Extremely difficult	Very difficult	Difficult	Slightly difficult	Not difficult
		1	2	3	4	5
5	When you attempted sexual intercourse, how often was it satisfactory for you?	Almost never/never	A few times (much less than half the time)	Sometimes (about half the time)	Most times (much more than half the time)	Almost always/always
		1	2	3	4	5

AUA Guidelines: Erectile Dysfunction

TABLE 2: General ED Population:

Change in IIEF-EF Scores from Pre-Treatment Baseline to Post-Treatment

Treatment	# study arms^	Minimum	Maximum	Mean
Placebo	62	-1.60	7.10	+1.78
Sildenafil	26	+1.70	+11.75	+9.00
Tadalafil	37	+1.98	+12.00	+7.82
Vardenafil	26	+5.30	+12.90	+8.80
Avanafil	5	+5.50	+9.40	+8.10

AUA Guidelines: Erectile Dysfunction

TABLE 3: Characteristics of PDE5i Medications			
PDE5i	**Onset of action**	**Duration of action**	**Effect of food intake**
Avanafil	15-30 min	Up to 6 hours	Not affected
Sildenafil	30-60 min	Up to 12 hours	High-fat meal decreases efficacy
Vardenafil	30-60 min	Up to 10 hours	High-fat meal decreases efficacy
Tadalafil	60-120 min	Up to 36 hours	Not affected

AUA Guidelines on ED: https://www.auanet.org/guidelines-and-quality/guidelines/erectile-dysfunction-(ed)-guideline

AUA Guidelines: Erectile Dysfunction

Tadalafil: Rates of Commonly-Reported Adverse Events (means)				
	# study arms	On demand	# study arms	Daily
Dyspepsia	42	6.10	17	4.21
Headache	48	10.62	19	4.59
Flushing	34	3.50	8	3.54
Back pain	40	4.44	15	3.81
Nasal conges-tion	25	3.38	6	2.83
Myalgia	23	3.87	14	2.59
Dizziness	12	2.75	5	1.14

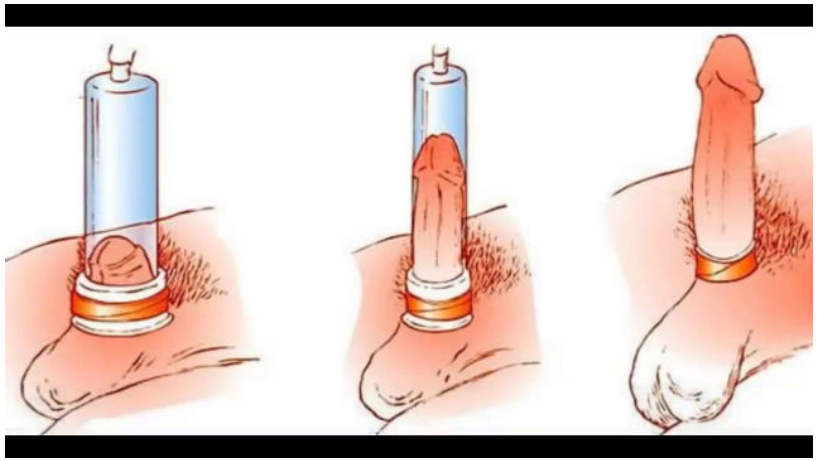
AUA Guidelines on ED: https://www.auanet.org/guidelines-and-quality/guidelines/erectile-dysfunction-(ed)-guideline

AUA Guidelines: Erectile Dysfunction

TABLE 4: Outcomes for VED Studies				
Measure	**# studies**	**Min**	**Max**	**Mean**
Patient satisfied percent	12	34	100	76.49
Partner satisfied percent	7	45	100	77.39
Responder other criteria Percent	28	20	100	76.23

AUA Guidelines: Erectile Dysfunction

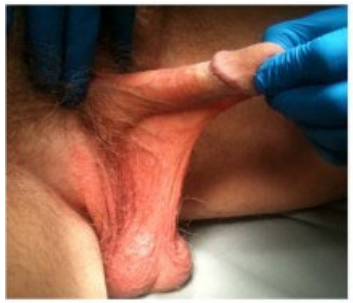
- VED can be purchased online
- Should have a vacuum limiter
  - This governor reduces potential for penile injury



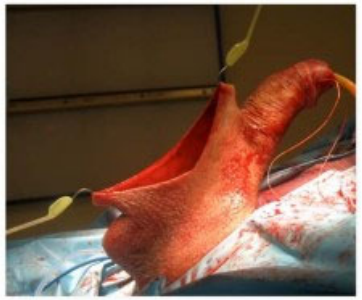
AUA Guidelines: Erectile Dysfunction

- Intraurethral alprostadil
- Intracavernosal injections of erectile agents
- Penile prosthesis

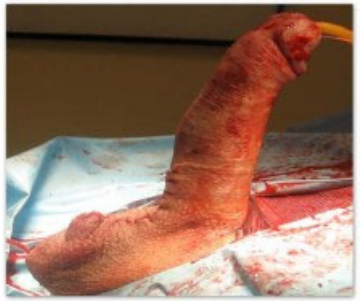
AUA Guidelines: Erectile Dysfunction



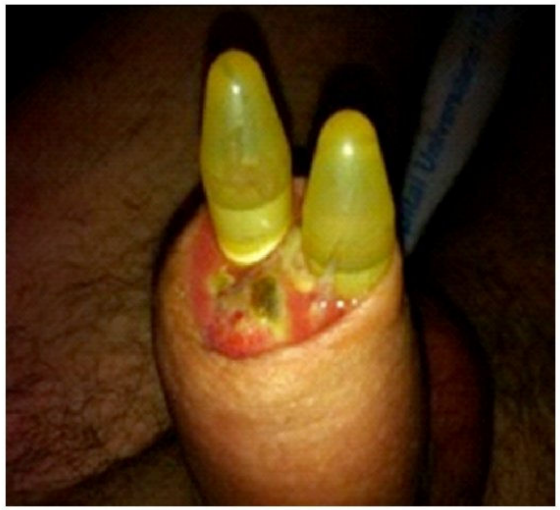
A. Penoscrotal webbing

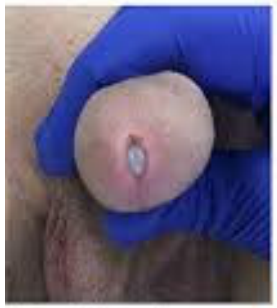


B. Conversion of transverse incision into vertical. Excess skin removed next



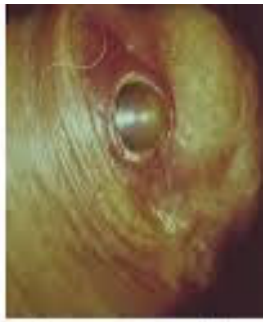
C. Improved visible penile length





A. Erosion into urethra

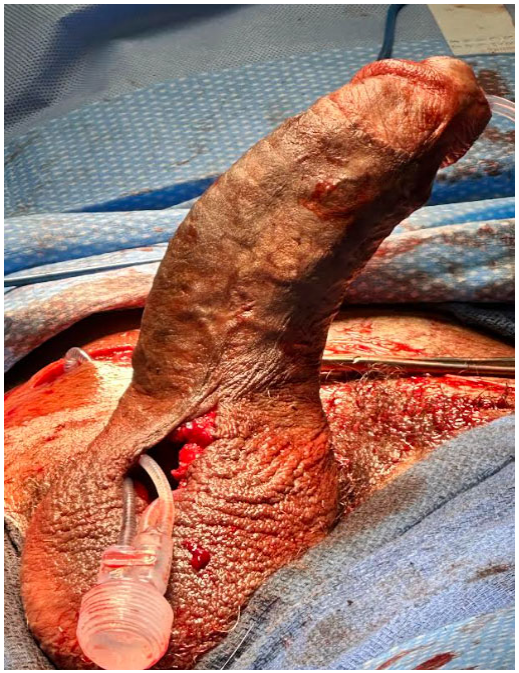
B. Erosion through penile skin



C. Infection erosion through glans hyperemia & purulent drainage

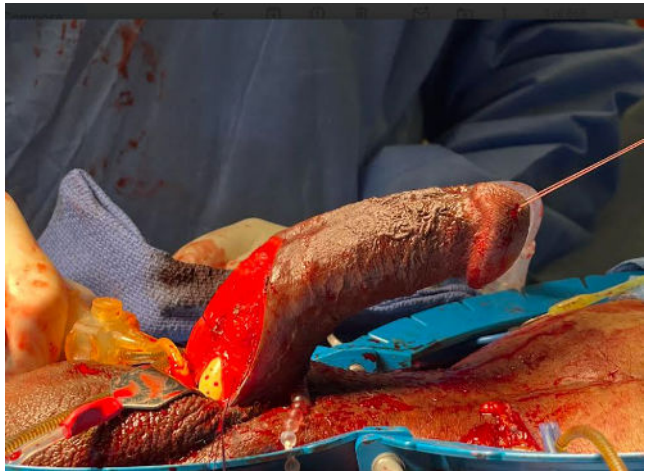
AUA Guidelines: Peyronie's Disease

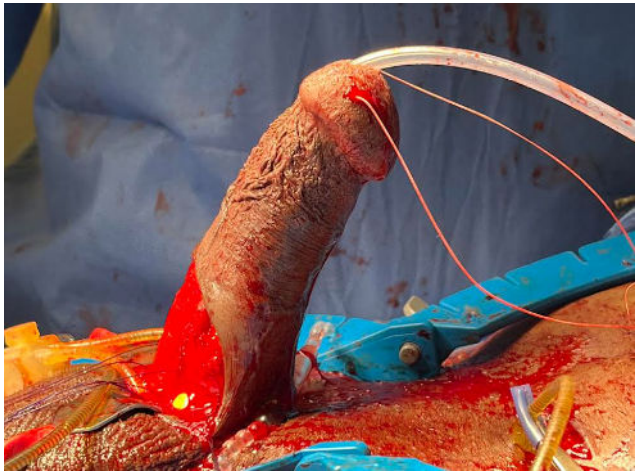
- Penile pathology with fibrous scar tissue in the tunica
- Assess history including pain, deformity, etc
- Cialis 5mg daily and NSAIDs (Topical Volteran)



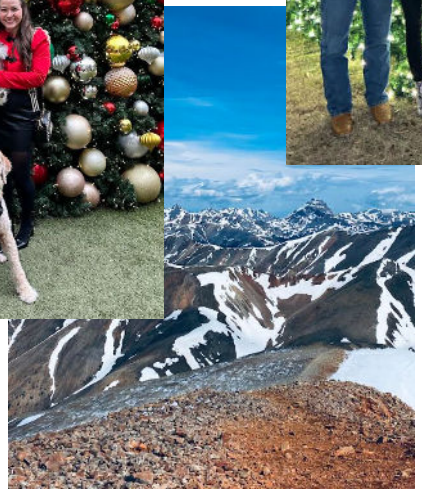
AUA Guidelines: Peyronie's Disease

- Association with hand and foot contractures
- Referral to Urology





Thank You



AUA Guidelines: Priapism

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AUA Guidelines: Vasectomy

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AUA Guidelines: Urotrauma

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AUA Guidelines: Renal Mass

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AUA Guidelines: Overactive Bladder

- asdf