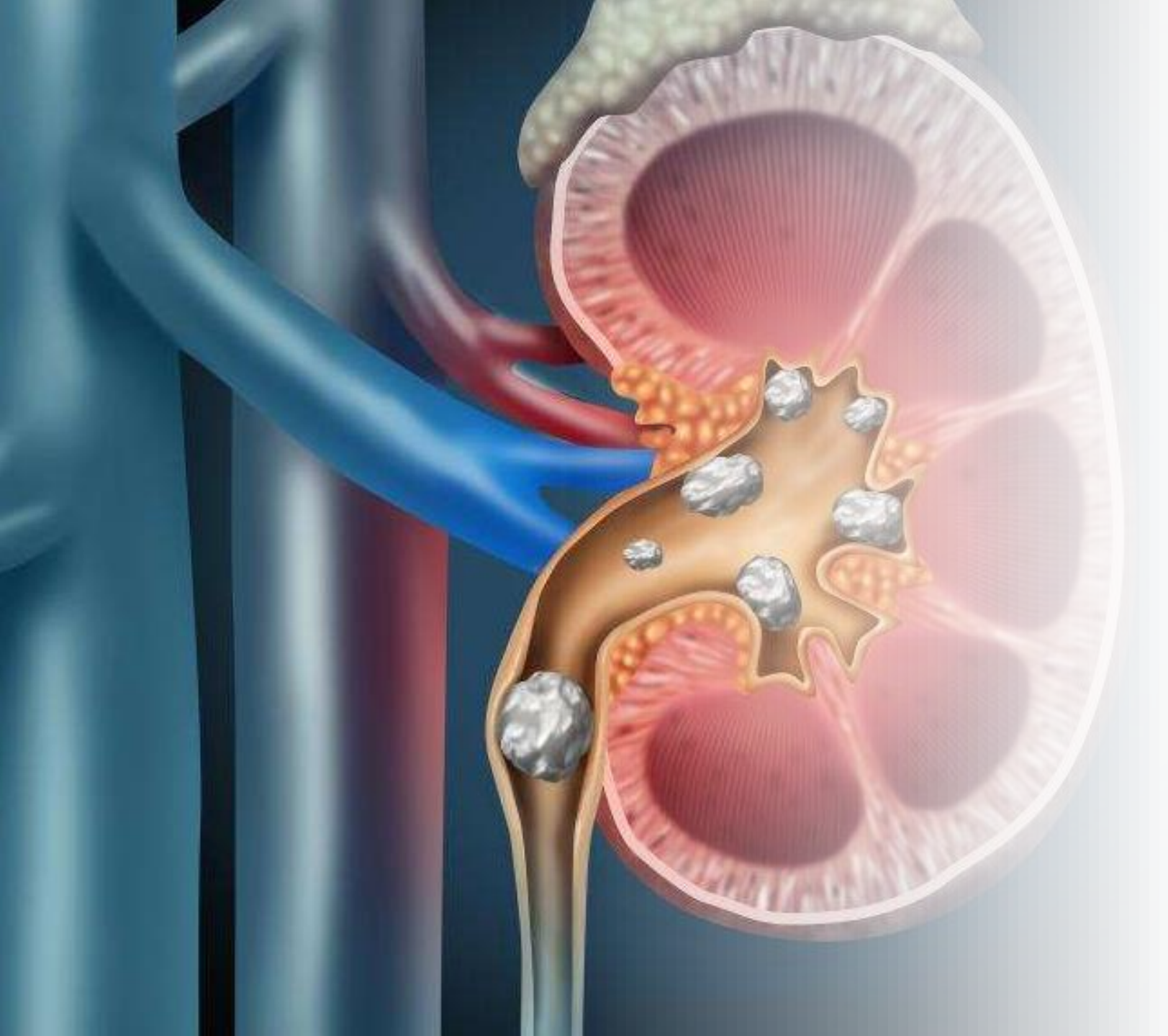


Urology Moans, Groans and Kidney Stones

Nick Rukin

Director of Urology

Redcliffe Hospital, MN Health

Moans, Groans and Kidney stones

Moans

- Urinary tract infections
- Stent pain
- Testosterone deficiency
- Haematospermia

Groans

- Renal cysts
- Haematuria
- Urine cytology

And Kidney Stones…..

Recurrent UTIs

Definition: 3 or more uncomplicated UTIs in a 12-month period

- Recurrent UTIs cannot be ignored, as they may be the first sign of urothelial cancer.
- Conversely, asymptomatic bacteriuria should not be over tested or over treated as it is common.

Investigations: MSU, ultrasound renal tract +/- flexible cystoscopy (refer urology)

Recurrent UTIs

Medical Treatment Options:

1. Cranberry tablets: Proanthocyanidins (prevent *E.coli* attaching to the urinary tract)

2. Post-intercourse antibiotic: Trimethoprim 100mg OD

3. Low dose antibiotics: Trimethoprim 100mg OD
   Nitrofurantoin 50mg OD
   Cephalexin 250mg OD

4. Hiprex: one tablet, twice daily (lowers urinary pH + antibacterial activity)

thebmj Visual abstract

Non-antibiotic alternatives for treatment of urinary tract infections (UTIs)

Summary

Methenamine hippurate could be an appropriate non-antibiotic alternative to prophylactic antibiotics for women with recurrent UTIs, informed by patient preferences and antibiotic stewardship

Study design

Randomised non-inferiority trial | Open label | Recruited women from eight centres across the UK

Population

240 adult women with recurrent UTIs requiring prophylactic treatment

- Median average 6 UTIs in 12 months before trial entry in both groups
- Peri-/post-menopausal: 59%
- Average age: 50 years

Comparison

Experimental

Methenamine hippurate
Taken twice daily for 12 months

120

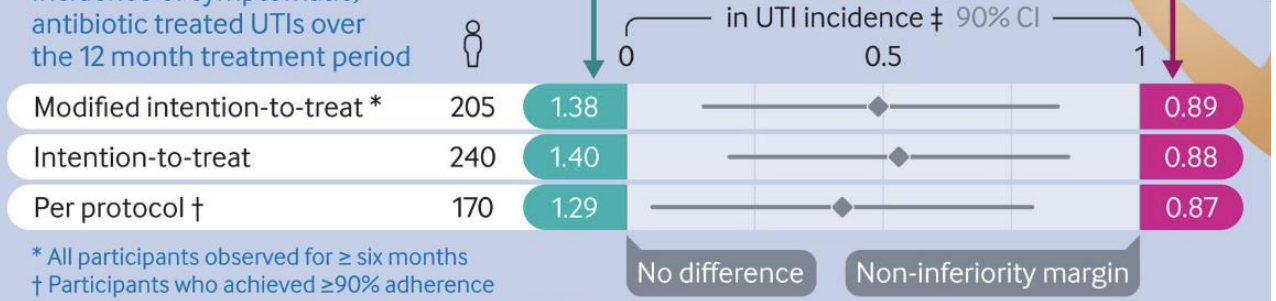
Control

Antibiotic prophylaxis
Nitrofurantoin, trimethoprim, or cefalexin taken daily for 12 months

120

Outcomes

Incidence of symptomatic, antibiotic treated UTIs over the 12 month treatment period

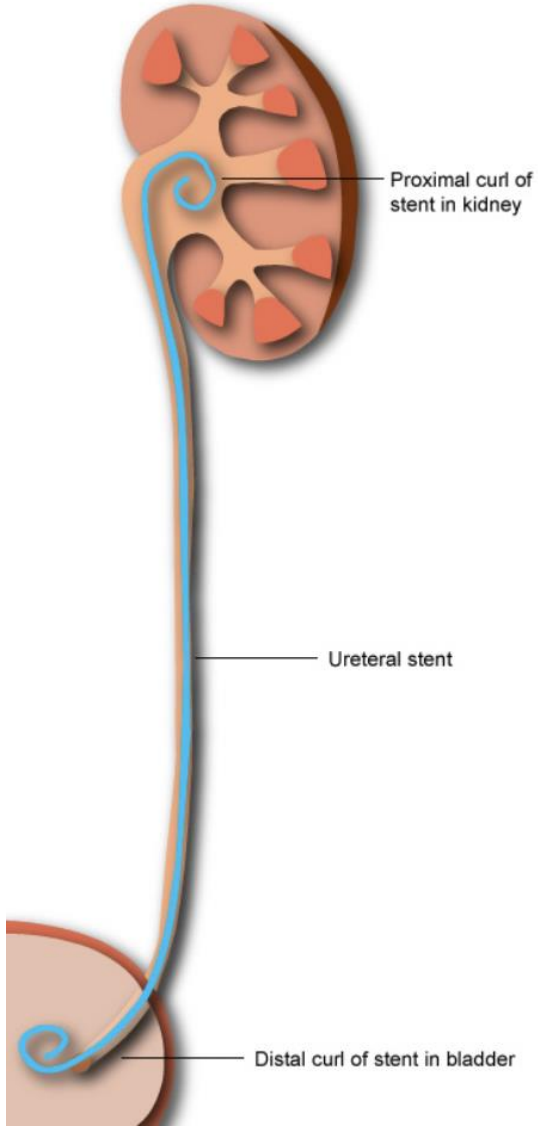


* All participants observed for ≥ six months
† Participants who achieved ≥90% adherence
‡ Methenamine hippurate minus antibiotic prophylaxis

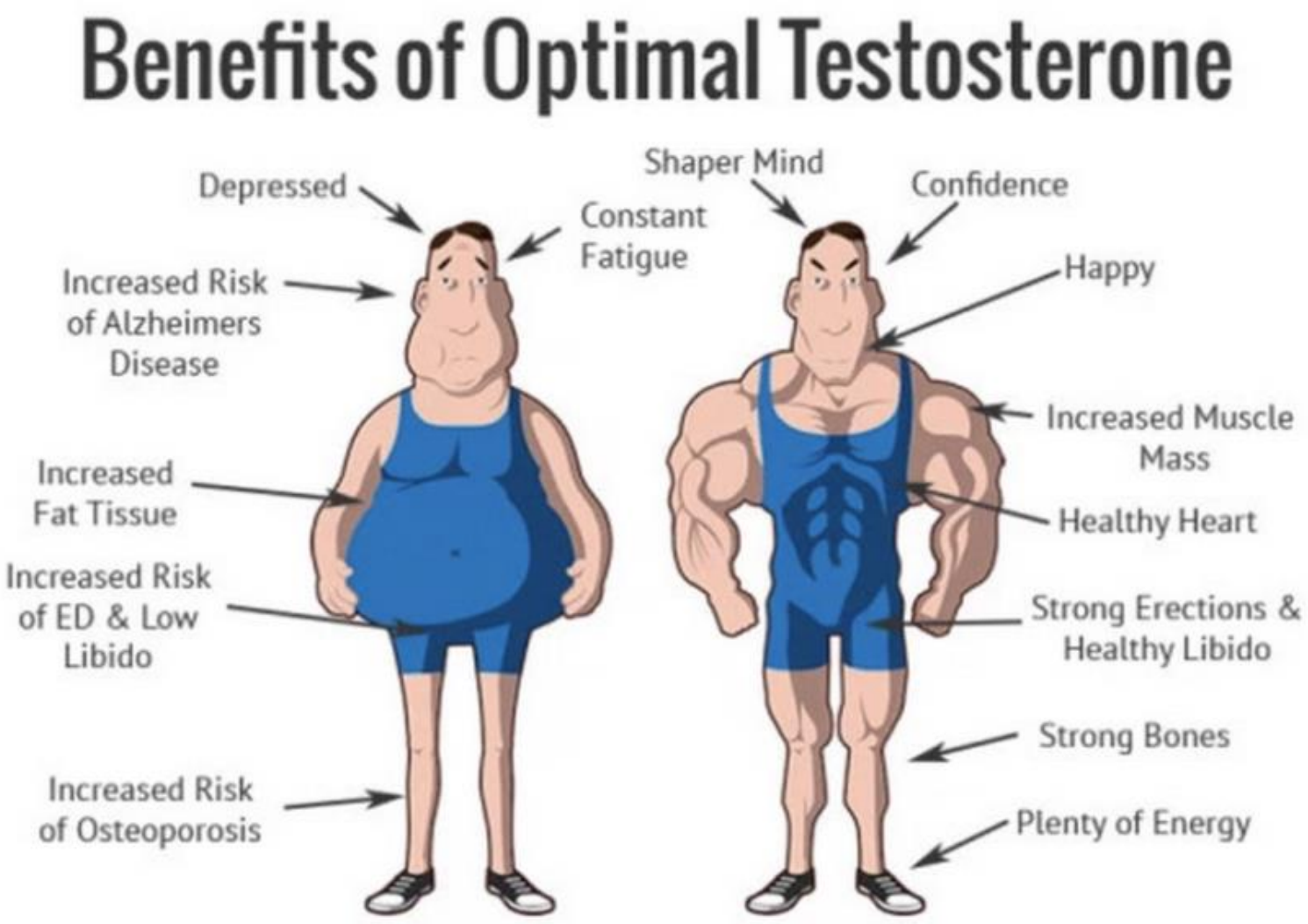
https://bit.ly/bmj-altar

Stent Pain (24-30cms, 4.8-6Fr)

- Pain: 80% patients develop some type of pains afterwards
- Type of stent: Silicone Vs standard co-polymer stent
  SILICONE superior
- Stent pain treatment: Remove stent
  Tamsulosin therapy
  Oxybutynin/solifenacin



Testosterone Deficiency – Urological Risks



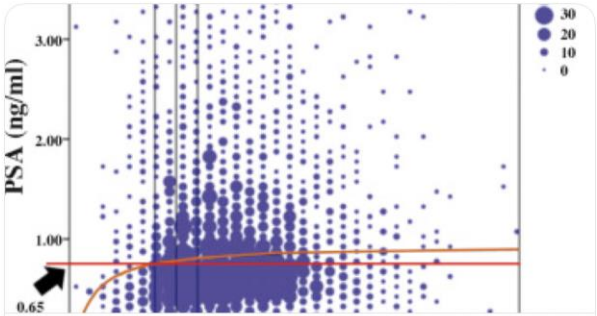
Reminder: 7-11am, fasting state blood test

07:45

Urology News @Uro_News · 8h

Insight into UK practice:
A 66 year old with localised GI 3+4 CaP, PSA <0.01; 1 year post RARP. Lacks energy and low mood; T 7nnmol/L. Would you start #testosterone?
@benchallacombe @ChannaJayasena @RogerKirby12 @gordonhmuir @Dr_Andrology @HussainAlnajjar @JudeDockray @MajShabbir

* For men on TRT no statistical significant difference in CaP ⬆️ vs placebo
* Low T associated with higher-grade CaP
* TRT ≠ ⬆️ risk of CaP/severity if diagnosed previously



TRT and Urology

Contra-indications: ACTIVE prostate and breast cancer, fertility issues

No effect: LUTS – NOT detrimental, improves IPSS, may increase prostate size, SEVERE symptoms no data

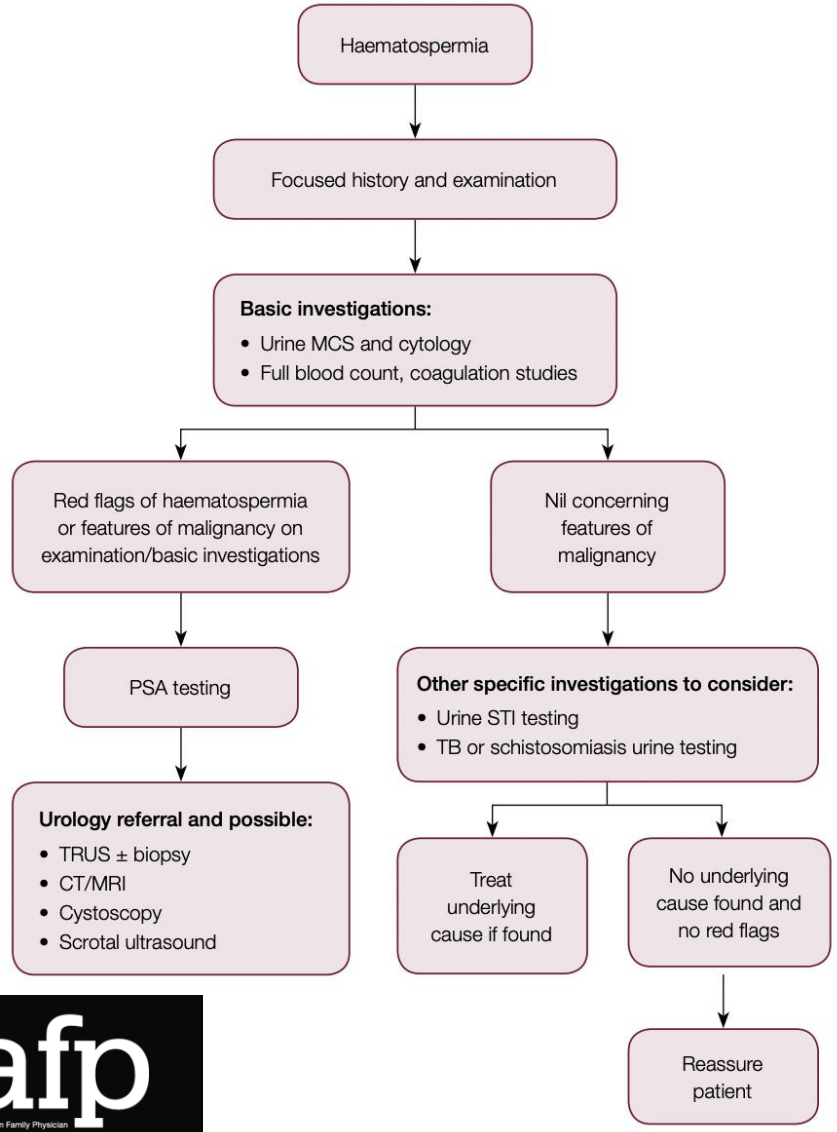
Prostate cancer: Risk: does not increase risk

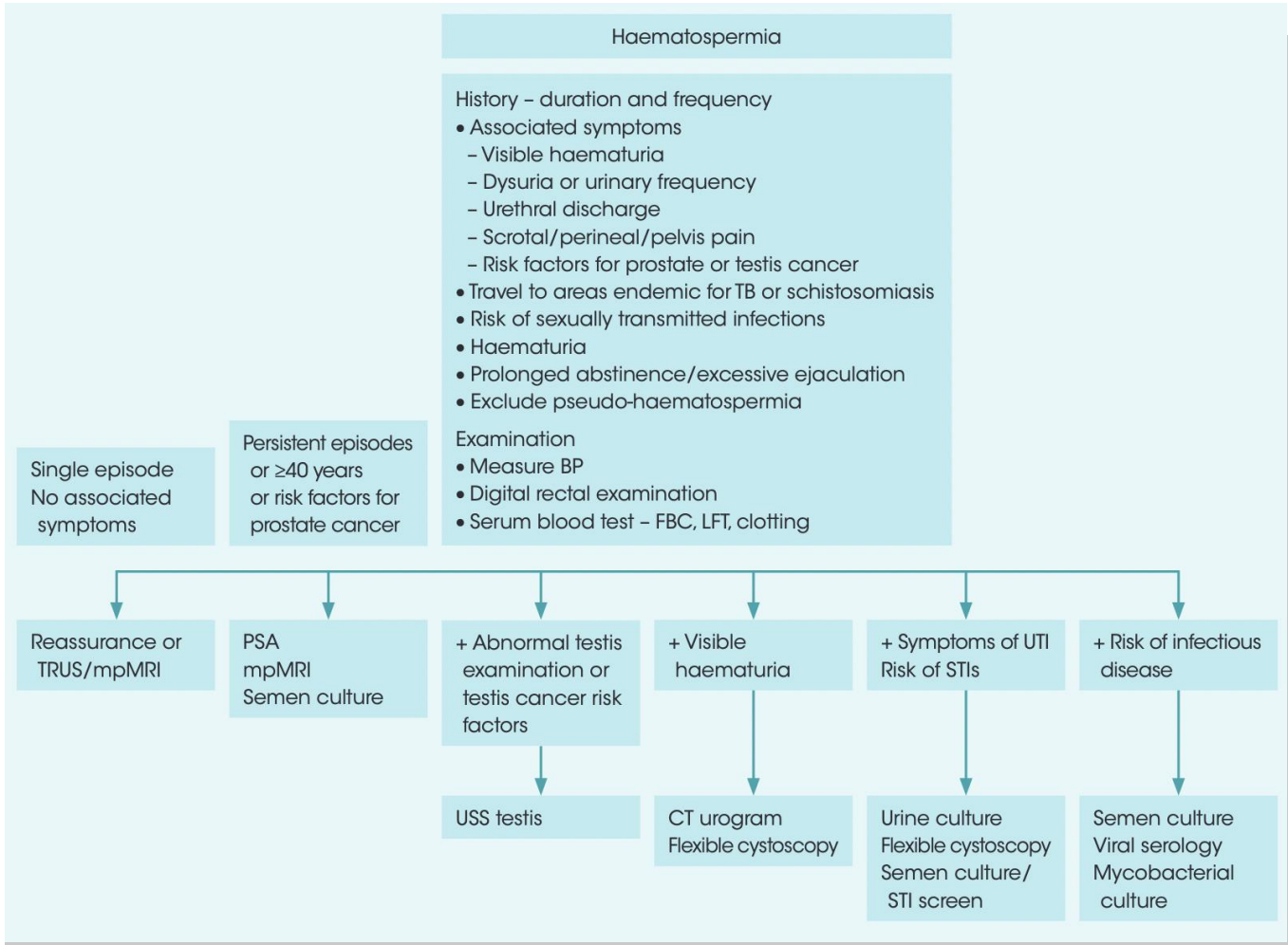
CaP: low risk patients, Gl<7, PSA<0.01 at 12 months

Haematospermia

RED FLAG

- **age>40**
- **Recurrent or persistent haematospermia**
- **Prostate cancer risk factors (family Hx, African heritage)**
- **Constitutional symptoms (weight loss, anorexia, body pain)**





afp
Australian Family Physician

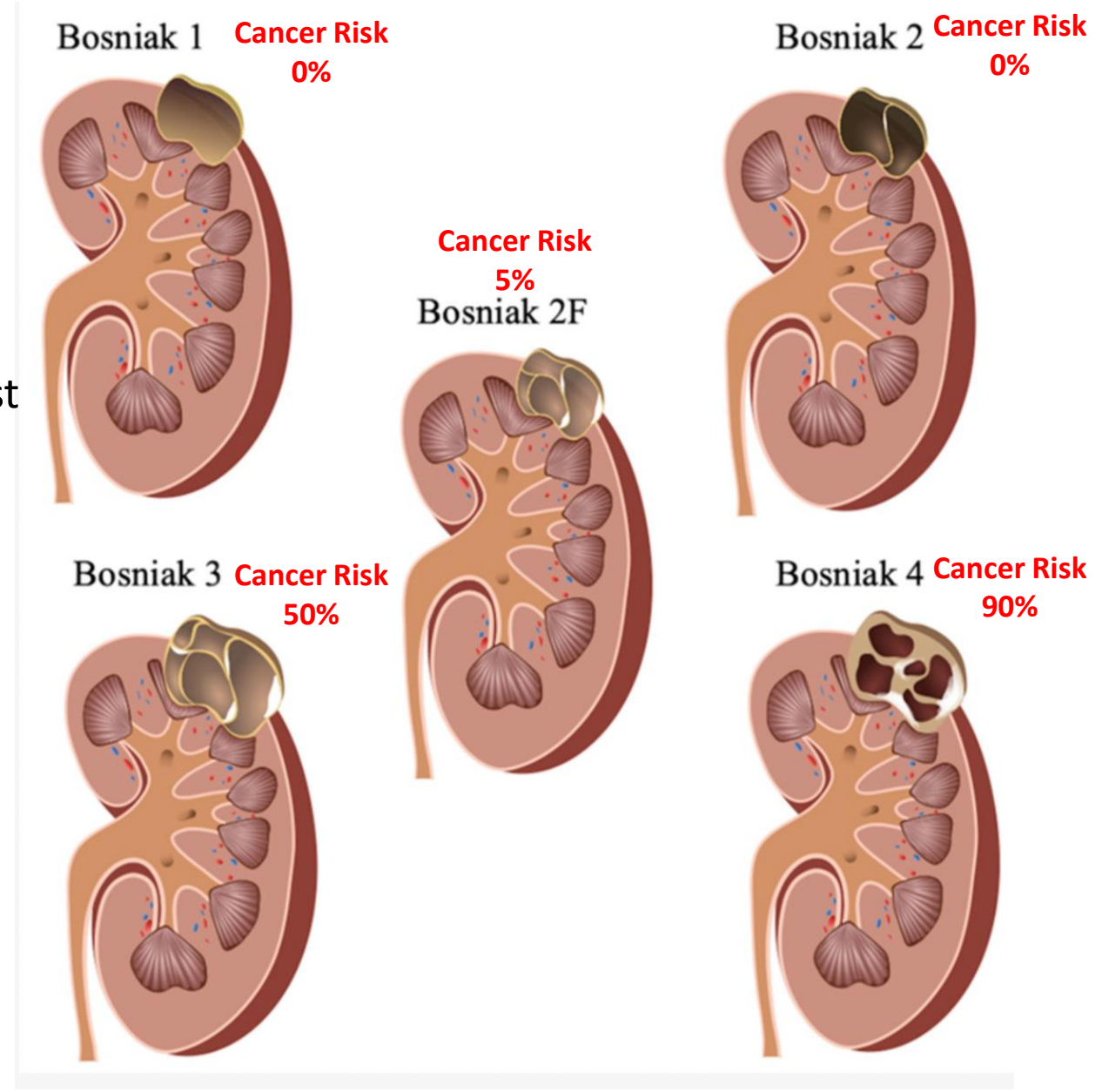
Renal Cysts

Simple Vs Benign Cysts – 50% over 50s have simple cysts

Renal CT with contract is *Gold Standard* to define the cyst

Cysts type define follow-up:

- Bosniak 1 and 2 cysts – no follow up
- Bosniak 2F – FU up to 5 years
- Bosniak 3 and 4 cysts – likely malignancy



Haematuria – Fast facts

- Visible haematuria (VH) – 20% cancer detection
- Non-visible haematuria (NVH) - 5% cancer detection
- MSU - exclude infective, RCC count
- Cytology x3
- CT urogram (USS renal tract - NVH)
- Cystoscopy – Flexible or rigid

Urine Cytology

- Not a morning urine sample as increased cytolysis.
- 25mls, 3 separate days
- Sensitivity: HG/CIS >85%, LG 16%

The Paris System - 2016	
No adequate diagnosis possible	No diagnosis
Negative for urothelial carcinoma	Negative
Atypical urothelial cells (Atypia)	Atypia
Suspicious for HG urothelial cancer	Suspicious
High grade/G3 Urothelial cancer	Malignant

- Atypia: FU as 21% progress to positive cytology/surgical pathology, mean progression 155 days

- Suspicious: FU 40% develop cancer (urothelial or prostate), mean duration 173 days. ALL had persistent suspicious cytology or persistent haematuria

Kidney Stones

- Risk: Lifetime risk 1 in 11, often incidental finding.
- Symptoms: Renal colic, UTIs, haematuria or asymptomatic.
- Investigations: Renal function, urate/calcium, MSU
- Radiology: CT KUB 'Gold Standard', smaller stones can be missed on ultrasound/X-ray KUB
- Pain control: *BEST* option is NSAIDs – oral or PR (diclofenac/indomethacin)
- Ureteric stone: Approx. 50-60% chance of spontaneous passage
  URGENT referral if a stone is in the ureter

Acute Stone Treatment

1. Presence of infection with urinary tract obstruction (Urosepsis)
2. Bilateral obstructing stones
3. Intractable pain or vomiting, or both
4. Acute kidney injury
5. Obstruction in solitary/transplanted kidney
6. Work related reason, e.g. pilot/submariner

BJU Int 2022; **129:** 442–456 doi:10.1111/bju.15522

BJUI
BJU International

Review

Natural history of small asymptomatic kidney and residual stones over a long-term follow-up: systematic review over 25 years

Catherine E. Lovegrove[1,2], Robert M. Geraghty[3,4], Bingyuan Yang[1], Eleanor Brain[5], Sarah Howles[1,2,6], Ben Turney[1,2] and Bhaskar Somani[7]

Asymptomatic Kidney Stones

What do you do with an incidental, asymptomatic renal stone on imaging?

- Risk of becoming symptomatic over 2-year period: up to 59%
- Risk of needing surgical intervention over a 3-year period: up to 35%
- Risk of emergency admission over a 4-year period: up to 20%

Suggest: Referral for discussion of management options, follow-up, and future stone prevention options

Prevention of Kidney Stones

50% of patients will have 2nd episode within 10 years

General advice: Fluid intake 2.5-3.0 L/day

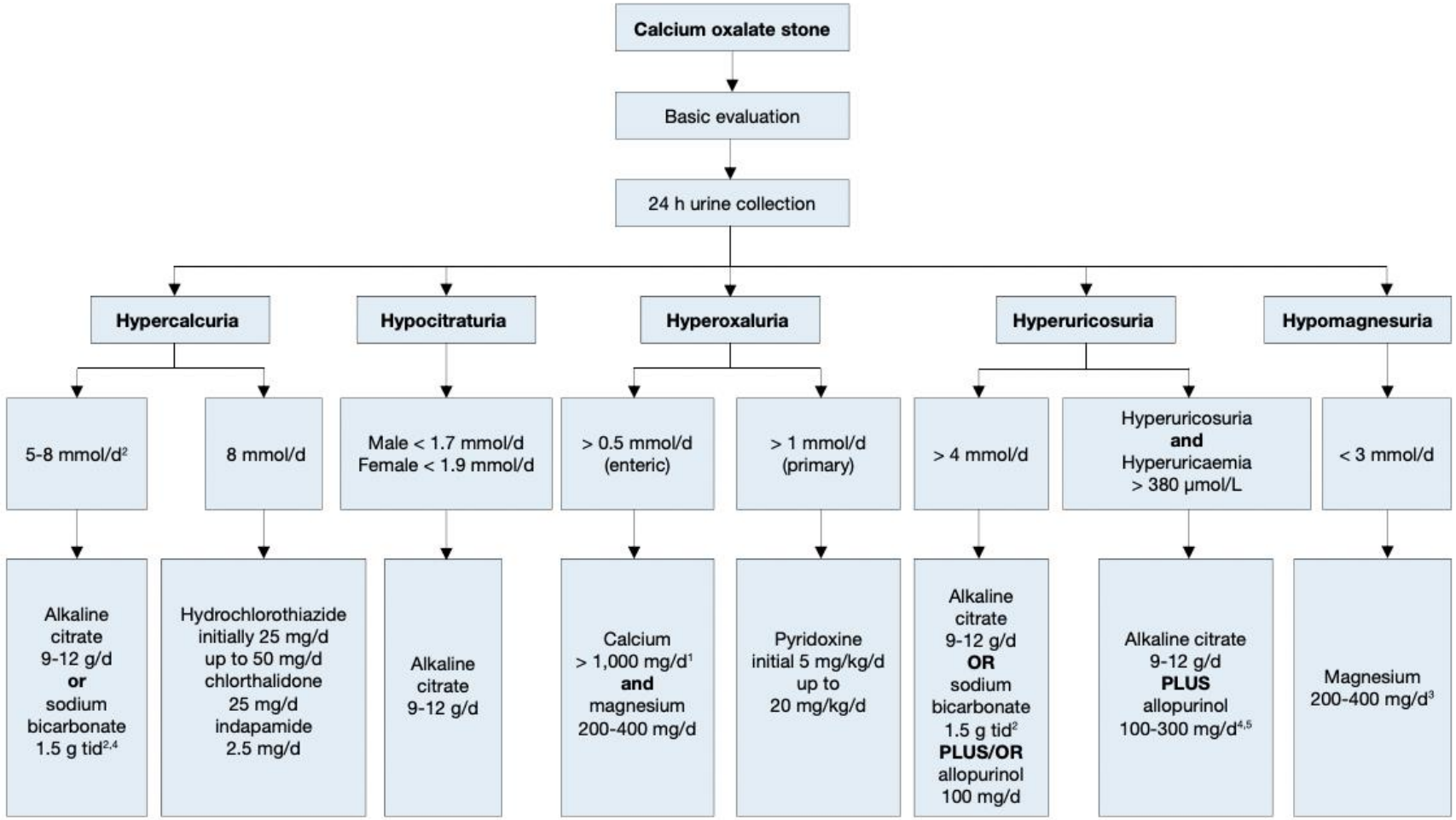
Balanced diet: High fibre/vegetables

Low salt/animal protein

Physical activity/normal BMI

Metabolic evaluation: High risk stone formers

Figure 4.2: Diagnostic and therapeutic algorithm for calcium oxalate stones



[1] Be aware of excess calcium excretion.

[2] tid = three times/day (24h).

[3] No magnesium therapy for patients with renal insufficiency.

[4] There is no evidence that combination therapy (thiazide + citrate) or (thiazide + allopurinol) is superior to thiazide therapy alone [511, 518].

[5] Febuxostat 80 mg/d.

Moans, Groans and Kidney stones

Moans

- Urinary tract infections
- Stent pain
- Testosterone deficiency
- Haematospermia

Groans

- Renal cysts
- Haematuria
- Urine cytology

And Kidney Stones…..