Patient with microhematuria
>3 RBC/HPF on UA with microscopy

History and physical exam
Focus on risk factors for urothelial cancer and non-malignant causes

Evaluation directed by signs/symptoms
Include urine culture if infection is suspected

Non-malignant or gynecologic source

Non-malignant or gynecologic source ruled out

Risk stratification

Non-malignant or gynecologic source identified

Treat non-malignant or gynecologic source

Repeat urinalysis positive

Repeat Urinalysis

Repeat urinalysis negative

Release from care

Low Risk
All of the following:
Women age < 50; Men age < 40 yrs
Never smoker or < 10 pack-years
3-10 RBC/HPF on one UA
No additional risk factors for urothelial cancer
No prior episodes of MH

Intermediate Risk
Any of the following:
Women age 50-59; Men age 40-59 yrs
10-30 Pack-years smoking
11-25 RBC/HPF on one UA
One or more additional risk factors for urothelial cancer
Previously low-risk, no prior evaluation and 3-25 RBC/HPF on repeat UA

High Risk
Any of the following:
Women and men age > 60 yrs
>30 Pack-years smoking
> 25 RBC/HPF on one UA
History of gross hematuria
Previously low-risk, no prior evaluation and > 25 RBC/HPF on repeat UA

Cystoscopy and Renal Ultrasound

Cystoscopy and CT Urogram

Evaluation performed

Evaluation negative

Evaluation positive

Treat as indicated
If urologic diagnosis is non-malignant, repeat urinalysis after treatment

Release from urologic care

Shared decision-making regarding repeat evaluation vs. observation
Consider cross-sectional imaging with urography or retrograde pyelograms if not performed previously

Re-evaluate
If patient develops gross hematuria, increase in degree of microhematuria or new urologic symptoms

1. Main risk factors for urothelial cancer are those in the AUA risk stratification system (age, male sex, smoking, degree of microhematuria and history of gross hematuria). Additional risk factors for urothelial carcinoma include but are not limited to irritative lower urinary tract voiding symptoms, history of cyclophosphamide or ifosfamide chemotherapy, family history of urothelial carcinoma or Lynch Syndrome, occupational exposures to benzene chemicals or aromatic amines, history of chronic indwelling foreign body in the urinary tract.
2. If medical renal disease is suspected, consider nephrologic evaluation, but pursue concurrent risk-based urological evaluation.
3. Patients may be low-risk at first presentation with microhematuria, but may only be considered intermediate- or high-risk if found to have persistent microhematuria.
4. There are non-malignant and gynecologic sources of hematuria that do not require treatment and/or may confound the diagnosis of MH. Clinicians can consider catheterized urine specimen in women with vaginal atrophy or pelvic organ prolapse. Clinicians must use careful judgment and patient engagement to decide whether to pursue MH evaluation in the setting of chronic conditions that do not require treatment, such as the aforementioned gynecologic conditions, non-obstructing stones or BPH.
5. Clinician may perform cross-sectional imaging with urography or retrograde pyelograms if hematuria persists after negative renal ultrasound.
6. MR Urogram or Non-contrast imaging plus retrograde pyelograms if contraindications to CT Urogram.