Key Points

- Prior to urological referral for cystoscopy:
  - positive dipstick haematuria should be confirmed with formal urinary microscopy
  - imaging of the urinary tract should be obtained with either CT IVP or renal tract ultrasonography
  - urinary cytology (three consecutive mid-morning midstream urine samples) can be considered, especially in patients with macroscopic haematuria or presence of risk factors for malignancy.
- Anticoagulant and antiplatelet agent commencement or use does not exclude a patient from requiring a comprehensive haematuria work-up.
- Urinary tract infection should be treated, and repeat urine microscopy performed after 6–12 weeks interval to ensure resolution of haematuria.
- Referral to nephrology may be considered for patients with microscopic haematuria and presence of renal impairment and/or proteinuria.
- Up to 70% of patients with haematuria may have no cause identified.

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To learn more about how you can best support patients and caregivers affected by bladder cancer, please head to **www.bcaaustralia.org.au**

How to Treat: Haematuria

Updated Guidelines from a General Practice Perspective

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Introduction

The presence of haematuria may be a singular symptom signalling underlying urological pathology, either benign or malignant. However, a large proportion of patients with haematuria will have no identifiable cause found. Appropriate early investigation and management of haematuria in the primary care setting is important for timely referral of patients suspected of having serious underlying pathology while avoiding over-investigation in those patients prone to transient and benign causes. Until now, a void has existed in terms of managing haematuria at the general practice level.

Table 1. Aetiology of haematuria

Aetiology	Cause	Origin
Transient	Exercise induced	Bladder
	Trauma	Urethra
	Sexual intercourse Pelvic organ prolapse Vaginal atrophy	Vagina/urethra/uterus
Malignant	Urothelial cancer	Bladder/ureter/renal pelvis
	Prostate cancer	Prostate
	Renal cell carcinoma	Kidney
Infectious/ inflammatory	Pyelonephritis	Kidney
	Lower urinary tract infection Radiation cystitis Foreign body	Bladder
	Urethral caruncle	Urethra
Renal medical disease	Immunoglobulin A nephropathy Thin basement mem-brane disease Hereditary nephritis	Kidney
Obstructive	Urolithiasis	Kidney/ureter
	Benign prostatic hyperplasia/prostatic regrowth	Prostate

The aim of this review is to provide a user-friendly summary of the aetiology, investigation, and management of haematuria in the primary care setting, with a focus on urological assessment and outcomes.

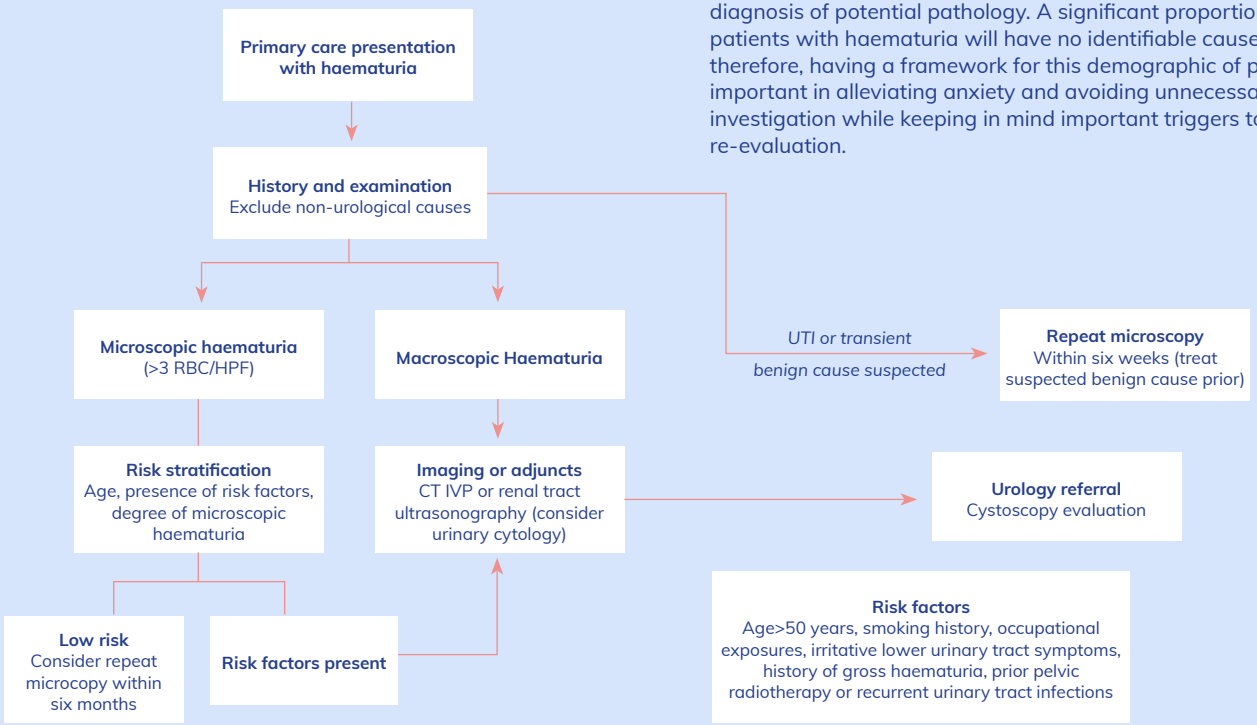
Methods

A range of published literature was reviewed, including national and international haematuria guidelines. The project was externally peer reviewed by members of the urology and general practice spheres in Australia.

Results

The approach to the diagnosis and investigation of haematuria differs depending on whether the haematuria is macro- or microscopic. In both cases, clinicians should begin by obtaining a careful patient history to include specific risk factors for urological malignancy, as often the decision for further work-up requires a risk-stratified approach. We outline a crucial resource, a flowchart **(Figure 1)** which can be adopted in General Practice to guide best-practice decision making.

Figure 1: *Algorithm for initial investigations and management of haematuria*



Risk factors for urinary tract malignancy in patients with haematuria

- Age
- History of gross haematuria
- Irritative lower urinary tract symptoms
- Smoking (current or past history)
- Occupational exposure (dyes, benzenes, aromatic amines)
- Cyclophosphamide exposure
- History of chronic urinary tract infection
- History of pelvic irradiation

Conclusion

Both microscopic and gross haematuria are very common presentations in primary care and an important heralding signal for potentially significant underlying pathology. Incidental detection of haematuria on routine assessment should prompt further evaluation, starting with history-taking and examination. Prior to referral to urological services, obtaining urinary tract imaging (either CT IVP or renal tract ultrasonography) and urinary cytology provides important adjunctive information to guide further evaluation. Presence of risk factors flagged in the referral pathway ensures timely assessment and therefore diagnosis of potential pathology. A significant proportion of patients with haematuria will have no identifiable cause found; therefore, having a framework for this demographic of patients is important in alleviating anxiety and avoiding unnecessary over-investigation while keeping in mind important triggers to prompt re-evaluation.