



BRIEFINGS FROM WOMEN'S HEALTH EXPERTS

DEAR COLLEAGUE,

The importance of health maintenance and cancer screening cannot be overstated. Microscopic hematuria is an important early finding in urinary tract cancer; however, it is also a very common finding, particularly in our female patients. But when is a little blood in urine concerning?

UChicago Medicine's Urogynecology and Reconstructive Pelvic Surgery practice offers evaluation of microscopic hematuria for women, in addition to care for a wide range of conditions affecting continence, the bladder and vaginal support defects.

In this newsletter, you will learn more about:

- » The recommended workup for women and men with microscopic hematuria
- » When a microscopic hematuria workup is necessary
- » Current American Urological Association microscopic hematuria age-based guidelines
- » Current American College of Obstetrics and Gynecology and American Urogynecologic Society committee opinion modifications based on age and gender

It is our hope you will find this information valuable.

For further questions on microscopic hematuria or to discuss patient referrals with one of our experts, please contact us at womenshealth@uchospitals.edu or 773-702-6118.

Sincerely,

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Microscopic hematuria: Suggested workup for a common problem

by Dianne Glass, MD, PhD

Hematuria is divided into gross hematuria (can be seen with the naked eye) and microscopic hematuria (only seen with a microscopic exam of the urine sediment). It is only considered "asymptomatic microscopic hematuria" if found in the absence of an identifiable source of bleeding (bladder infection, vaginal bleeding, trauma, etc.). Microscopic hematuria remains an important early clinical sign of urinary tract malignancy.

Recommended workup for women and men with microscopic hematuria [1, 2]:

- » Confirmation of blood seen on urine dipstick with urine microscopy (UA micro)
- » Laboratory evaluation of renal function (basic metabolic panel)
- » Cystoscopy to look for bladder cancer – a urogynecologist or urologist can do this
- » CT abdomen/pelvis with and without contrast. Contrast images should be collected in delayed phase to allow a proper evaluation of the ureter and kidneys to look for kidney stones or upper tract masses.

When should you do a microscopic hematuria workup?

The newest guidelines from the American Urological Association (AUA)[1], issued in 2012, recommend evaluation after seeing blood on just one sample. These guidelines make recommendations based on age.

Current American Urological Association microscopic hematuria guidelines (age-based) [1]:

For low risk men and women 35 years and older, further evaluation is recommended if 3 or more red blood cells per high powered field are seen on urine microscopy *once* in the absence of other identifiable cause.

In 2017, the American College of Obstetrics and Gynecology (ACOG) and the American Urogynecologic Society (AUGS) issued an opinion advocating gender specific guidelines [2]. Women have a shorter urethra and an increased rate of urine specimen contamination that can often be the source of blood. Additionally, urinary tract cancer rates are lower in women. While bladder cancer is the fourth leading type of cancer in men, it is not one of the 10 most prevalent cancers in women [3]. Therefore, ACOG/AUGS recommends modifications to the AUA guidelines [1] for asymptomatic, low risk women under 50 years old, who have never smoked. The rate of urinary tract cancer for this subgroup is less than or equal to 0.5% [4]. Since the risk of cancer increases with the amount of blood found, ACOG and AUGS recommend deferring evaluation for patients in this group until a substantially larger amount of blood is seen on microscopy than is advised for similarly low risk men.

(Continued)

Current American College of Obstetrics and Gynecology and American Urogynecologic Society committee opinion modifications (age- and gender-based):

For low risk, never-smoking women aged 35-50, workup for microscopic hematuria should be reserved for women with 25 or greater red blood cells per high powered field on urine microscopy.

I recommend following the ACOG/AUGS amendment to the AUA guidelines, reserving a workup for women with 25 or greater red blood cells/hpf on urine microscopy. If patients do not have an identifiable source of blood (urethral caruncle, menstruation, UTI, etc.) they should receive an office cystoscopy. The majority of general gynecologists prefer to refer patients to an urogynecologist or urologist for cystoscopy. In addition to cystoscopy, a BMP and CT abdomen/pelvis with and without contrast should be performed. A negative workup should be repeated if microscopic hematuria is persistent for 3-5 years or if amount of blood in urine increases.

Summary:

- » Microscopic hematuria workup includes office cystoscopy, a BMP and a CT abdomen/pelvis with and without contrast
- » You can defer hematuria workup for women younger than 50 who are never-smokers and at low-risk for urinary tract malignancy unless there are >25 RBCs/hpf.

1. Davis, R., et al., Diagnosis, evaluation and follow-up of asymptomatic microhematuria (AMH) in adults: AUA guideline. *J Urol*, 2012. **188**(6 Suppl): p. 2473-81. 2. Committee Opinion No.703: Asymptomatic Microscopic Hematuria in Women. *Obstet Gynecol*, 2017. **129**(6): p. e168-e172. 3. Siegel, R.L., K.D. Miller, and A. Jemal, Cancer statistics, 2019. *CA Cancer J Clin*, 2019. **69**(1): p. 7-34. 4. Lippmann, Q.K., et al., Evaluation of microscopic hematuria and risk of urologic cancer in female patients. *Am J Obstet Gynecol*, 2017. **216**(2): p. 146.e1-146.e7.



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Urgent appointments are also available.

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