

FROM THE FAMILY PRACTICE INQUIRIES NETWORK

Should we screen adults for asymptomatic microhematuria?

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■ EVIDENCE-BASED ANSWER

Screening patients for asymptomatic microhematuria does not appear to improve outcomes, since screening does not identify a population with increased prevalence of urologic malignancy (strength of recommendation [SOR]: **A**, based on prospective cohort studies) or the presence of urologic disease of any type (SOR: **B**, based on 1 cohort study). Asymptomatic microhematuria is sometimes associated with urologic disease that requires intervention to prevent death or disability (SOR: **B**, based on cohort studies). However, no studies demonstrate improved outcomes from screening for asymptomatic microhematuria.

■ EVIDENCE SUMMARY

Asymptomatic microhematuria is common in adult primary care populations, with a prevalence ranging from 2.5% to 4.3% in 3 studies.¹⁻³ It is variably associated with urologic disease.

A retrospective cohort study of 2005 British men aged >40 years found 85 (4%) with asymptomatic microhematuria. Subsequent evaluation including intravenous pyelogram and cystoscopy found 2 men with infections—1 with bladder cancer and 1 with polycystic kidneys. Benign prostatic hypertrophy, prostatitis, anatomic abnormalities, and stones accounted for the rest.³

A prospective cohort study similarly evaluated 1034 patients with asymptomatic micro-hematuria found through annual health screening of Japanese adults; 471 (45%) had some urologic diagnosis, including 30 (2.9%) with serious disease (urologic malignancies or progressive glomerulopathy), 195 (18.9%) with moderate disease (such as stones, infection, stable glomerulopathy), and the remainder with less serious disease.⁴

However, it is unclear whether asymptomatic microhematuria is a useful marker for detecting urologic disease. Two retrospective cohort studies assessed the prevalence of urologic disease in patients with asymptomatic microhematuria compared with those without. Of 501 male steel-workers—an occupation believed to have a

higher risk for urologic malignancy—57 men had urologic disease of any type. Six men with urologic disease had asymptomatic microhematuria, while 51 men with urologic disease did not. The correlation between asymptomatic microhematuria and the presence of urologic disease was not significant ($P>.05$). There were 3 cases of urologic cancer in the study, all diagnosed in men without asymptomatic microhematuria.⁵

Among 20,751 California HMO patients who had a periodic health appraisal, screening identified 598 patients with asymptomatic microhematuria (prevalence=2.9%). The medical records for all patients were reviewed for the year prior to screening to find pre-existing urologic disease and then reviewed for new diagnoses over the next 6 years. Three cases of urologic cancer occurred in the group of patients with asymptomatic microhematuria (incidence=0.5%) and 102 cancer cases among the 20,153 patients without asymptomatic microhematuria (incidence=0.5%). Its presence was not significantly associated with either urologic cancers or other serious urologic disease.²

No studies demonstrate improved outcomes from screening for asymptomatic microhematuria. Earlier discovery of serious diseases would not often change patient outcome, according to expert opinion.^{6,7} Invasive studies, such as intravenous pyelogram and cystoscopy, used to evaluate asymptomatic microhematuria have a rate of serious complications approaching 0.3% (number needed to harm=333).⁷

■ RECOMMENDATIONS FROM OTHERS

The American Urological Association recommends that all patients with asymptomatic microhematuria be evaluated. However, they do not recommend routine screening for asymptomatic microhematuria to detect urologic malignancy.⁸ The US Preventive Services Task Force does not recommend routine screening for bladder cancer by any means, including screening for hematuria.⁹

CLINICAL COMMENTARY

This poor screening measure is not helpful

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A fairly sensitive and specific way to screen for urological malignancies would certainly be worthwhile, but, as this inquiry points out, none exists. The presence of asymptomatic microhematuria in the adult population does not aid in detecting urologic malignancies or any other serious pathology. The incidence of serious disease in the control group is just as high as in the patients with a positive screen for hematuria. A poor screening measure like this one not only is not helpful but also holds the potential to harm patients because of false positive results and the ensuing invasive workups. The USPSTF does not recommend this screening measure.

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