

## Renal Ultrasound for Evaluating Asymptomatic Microscopic Hematuria

*Ultrasound had very high sensitivity for identifying upper-tract cancer in this retrospective study.*

U.S. urology guidelines recommend computed tomographic (CT) urography to evaluate the upper urinary tract in patients with asymptomatic microscopic hematuria (*J Urol* 2012; 188:6 Suppl:2473). But some experts believe that renal ultrasound — which is less expensive and avoids the substantial radiation exposure from CT urography — is a reasonable alternative. During the past 20 years, an institutional algorithm at Gundersen, a U.S. integrated medical system in the upper Midwest, has specified renal ultrasound as the initial upper-tract imaging procedure for adults with microscopic hematuria. In this retrospective study, Gundersen researchers describe outcomes for 2138 adults who had asymptomatic microscopic hematuria (i.e.,  $\geq 3$  red blood cells/high power field on 2 occasions) and at least 3 years of follow-up.

Initial evaluation identified nine patients with renal cell carcinoma and three patients with upper-tract urothelial cancer. During mean follow-up of 12 years, only four additional upper-tract cancers (not evident at initial evaluation) were diagnosed at 4, 5, 8, and 11 years.

### COMMENT

This study suggests that renal ultrasound is appropriate for initial upper-tract imaging in patients with asymptomatic microscopic hematuria. The prevalence of upper-tract cancer was very low in these patients, and no upper-tract cancers were diagnosed during the first 3 years after initial evaluation with ultrasound. However, one caveat is that this study excluded about 200 patients who were lost to follow-up during the first 3 years. Finally, patients in this study also were referred routinely for cystoscopy to evaluate the bladder, but those results are not reported here. — **Allan S. Brett, MD**

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Smith MR et al. Evaluation of asymptomatic microscopic hematuria by renal ultrasound to detect upper tract malignancy: A 20-year experience in a community hospital. *Urology* 2019 Nov; 133:34. (<https://doi.org/10.1016/j.urology.2019.07.009>)