Urine Microscopic Exam
Change to Reflex Criteria

Microscopic urinalysis reflex testing after dipstick results that are positive for heme, leukocyte esterase, nitrite or protein is quite common in American hospital laboratories. The value of this analysis is not clear, nor is there good evidence that physicians need or use these “unsolicited” results. Traditional urine microscopic analysis is time consuming and very labor intensive: minimizing microscopic analysis that does not add actionable clinical information would be very desirable.

A paper in the American Journal of Clinical Pathology has looked at this issue(1). At their institution, they shifted to a system in which microscopic urine examination was only performed on physician request. They justified this change based on the fact that reflex on the nitrite or urine leukocyte esterase tests did not change clinical decisions and that, in general, the strip analysis was better than traditional microscopy in excluding a urinary tract infection. Similarly, routine microscopy does not add information to the hemoglobin test.

They did point out that for patients with proteinuria, the gold standard for pathologic casts is the microscopic urinalysis of fresh urine by an experienced technologist or nephrologist. It is our feeling that with fewer “routine” microscopic analyses the laboratory could concentrate on those cases where close examination was beneficial on patients with protein of 2+ or greater.

We are therefore changing our reflex criteria from > trace leukocyte esterase, positive nitrite, and/or > 1+ protein to only include >1+ protein. This change will take place on November 15, 2016. There will be no change in the reflex criteria for culture where a urine with reflex to culture is requested.

REFERENCE: