

Laboratory News

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Changes to Urine Culture Reporting

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Effective March 20, Marshfield Labs will make several changes to the urine culture. These changes will: a) lower the interpretive cut points for which uropathogens are worked up in adults other than women of child bearing age; b) add more interpretive commentary to the culture report.

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Current Testing Options

There are currently three options for urine culture:

1. Urine Culture – with Susceptibilities
The standard diagnostic test for acute cystitis, and for assessing other urological abnormalities.
2. Culture, Urine – Urology Workup This test features a higher level of workup than the standard urine culture. It is intended for patients with serious urological abnormalities managed by urology or are scheduled for certain urological procedures, or both.
3. Urinalysis with Culture if Indicated With this test, every specimen receives a complete urinalysis. Specimens meeting criteria both predictive of UTI and without skin contamination (i.e. greater than 10 leukocytes/high power field AND less than 10 SECs per high power field respectively) will proceed to the standard urine culture (#1, above).

Modifications to Workup and Reporting

These urine culture choices will not change. However, there will be several modifications made to the workup and reporting of the standard urine culture. A summary of these changes are as follows:

1. Level of significance. The cut point for working up 1-2 uropathogens in adults other than women of childbearing age will be lowered one range, from greater than or equal to 100k CFU/mL to 50-100k CFU/mL. This change will both improve sensitivity & negative predictive value and lower specificity & positive predictive values.

The cut points for pediatric patients and women of childbearing age will remain unchanged at greater than 50k & greater than 1k CFU/mL respectively.

2. Reporting commentary will be updated to better assist the clinician with the interpretation of results. A summary of these changes are as follows:
 - a. "Organism(s) present with a low colony count. The significance of this count should be correlated with clinical signs and symptoms. No further work will be performed." This comment will be used when there are 1-2 uropathogens present below the relevant cut point.
 - b. "Growth of additional organism(s) in lower quantity suggests a contaminated specimen." This comment will appear when 1-2 organisms have been reported, but a lesser amount of skin and/or urogenital flora suggestive of a contaminated specimen is present.
 - c. "This organism is not typically considered a uropathogen. Significance should be correlated with clinical signs and symptoms. No further work will be performed." This comment applies to cultures that have 1-2 organisms above the applicable cut point but are not considered a uropathogen.
 - d. "The presence of mixed microbiota can be due to contamination at the time of specimen collection." This comment is applied when the culture consists solely of a mix of skin and/or urogenital flora.

When choosing a urine culture in the ambulatory setting the antimicrobial stewardship program highly recommends Urinalysis with Culture if Indicated. (See also [Diagnostic and Treatment Guidelines](#), Outpatient Treatment, Urinary Tract Infection.)

Definitions

- CFU: colony forming units (generally correlating with individual bacterial or yeast cells)
- SEC: squamous epithelial cells
- Uropathogens

Gram negative rods

Staphylococcus aureus

Aerococcus sanguincola

Staphylococcus saprophyticus

Aerococcus urinae

Staphylococcus lugdunensis

Enterococcus spp.

Staphylococcus intermedius group

Beta-hemolytic streptococcus

Staphylococcus schleiferi

Streptococcus pneumoniae

Yeasts

Questions

Calls to the microbiology lab (715-221-6141) to discuss culture workup or results are always welcome.