

TO: Clients of URMCLabs

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RE: Fecal Lactoferrin (A Replacement Test for Fecal Leukocyte Smear)

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Examination of stool specimens for the presence of leukocytes or lactoferrin (a marker for fecal leukocytes) has been recommended for the differentiation of inflammatory diarrheas from non-inflammatory (secretory) diarrheas. Inflammatory diarrheas caused by *Salmonella*, *Shigella*, *Campylobacter*, *Yersinia*, invasive *E. coli* and occasionally *C. difficile* are usually positive for fecal leukocytes and lactoferrin while non-inflammatory diarrheas caused by viruses, protozoan parasites and toxin-producing bacteria are usually negative. It must be noted, however, that the use of fecal leukocytes or lactoferrin for differentiation of inflammatory versus non-inflammatory diarrheas is controversial, and some reports have found these markers to be lacking in utility.

For maximum sensitivity, microscopic examination of unpreserved stool for leukocytes must be performed before lysis of leukocytes occurs, i.e., within 1 to 2 hours of specimen collection; transport of specimens from the community outpatient setting to a clinical laboratory for processing within the 1 to 2 hour timeframe is very rarely possible. Fecal lactoferrin, however, is reported to remain stable in unpreserved specimens at room or refrigerated temperatures for up to 2 weeks.

As an alternative to fecal smears we will offer an immunochromatographic test using anti-lactoferrin antibodies for the qualitative detection of elevated levels of fecal lactoferrin (Leuko-EZ-Vue™, Inverness Medical Diagnostics). **The test requires unpreserved stool** submitted in a leak-proof container which may be stored and transported at room temperature or 2-8° C; preserved specimens and swab specimens cannot be tested. The Fecal Lactoferrin test will be performed daily on all shifts beginning April 30, 2012, at which time we will discontinue performing Fecal Smears.

Please direct any questions to Dr. Hardy or Dr. Fiscella via the above methods.