

Effective Date: 3/4/2025

Role(s): Inpatient, Ambulatory, Beaker Lab

Reflex of urine samples for culture

NorDx currently uses several criteria for determining if a urine sample should be “reflexed” to culture (lab test code UAPR: Urinalysis Reflex Microscopic Exam and Culture), including results from leukocyte esterase, nitrite, or presence of bacteria or white blood cells (WBC) on microscopy. This combination of results is overly sensitive and nonspecific, often leading to detection of asymptomatic bacteriuria.

National guidelines recommend using a reflex criterion based solely on WBC (pyuria). A threshold of more than 10 WBC per high power field has very good negative predictive value for urinary tract infection ([IDSA microbiology diagnosis guideline](#)). Limiting reflex criteria to pyuria helps reduce overdiagnosis, antimicrobial overuse, and antimicrobial resistance.

The above reflex criterion will apply to most urine samples (test code UAPR). However, there is an order pathway that can be used for special populations in which a urine culture can be ordered directly (without a pyuria screen) (test code URCUL: Urine Culture). The populations include: pregnant patients for bacteriuria screening, neutropenic patients who may not mount an inflammatory response, and patients prior to some urologic procedures.

Please reach out to Drs. Dan Diekema and/or Tarek Hammour with questions or concerns at daniel.diekema@mainehealth.org and Tarek.Hammour@spectrumhcp.com.