

Service Update | DIATHERIX Laboratories

New Panel Available - Candidiasis Panel

Effective Wednesday, June 20th

Includes: *C. albicans*, *C. glabrata*, *C. krusei*, *C. parapsilosis*, and *C. tropicalis*.

Candidiasis – An Overview

A yeast infection results from an overgrowth of the organism anywhere in the body and Candidiasis is by far the most common type of fungus infection in humans. Although there are more than 20 species of *Candida*, the most common is *Candida albicans* as it demonstrates significant pathogenic potential. There are, however, other species of *Candida* that can either cause or contribute to an infection under certain conditions. *Candida* infections are typically in warm, moist areas of the body and can occasionally pose both diagnostic and therapeutic challenges. Usually, the skin or mucosal surface effectively blocks yeast, but any breakdown, cut, or change in immune status may allow this organism to penetrate and cause infection.

Some of the more common infections caused by *Candida* are diaper rash in infants, vaginitis, oral yeast infections (thrush), and skin surfaces that are in close contact with each other where moisture retention occurs. Rarely, yeast infection may spread throughout the body where the fungus enters the bloodstream and spreads. Disseminated *Candida* infection is often a reflection of a decline in immune status, but carries a mortality of up to 45%.

Diagnosis can often be challenging and, unfortunately, results from routine laboratory studies are often nonspecific and not very helpful. Clinicians are required to act definitively and early based on a high index of suspicion and laboratory data that support a diagnosis. Wet mounts of superficial infection, blood cultures and beta-D-glucan detection in systemic disease, biopsies of infected tissues, and culture of a variety of other clinical material represent the standard approach to diagnosing infections where *Candida* are suspected as the etiologic agent. Although often helpful, results from the standard assays commonly employed can be delayed and, therefore, problematic.

The limitations of classical diagnostic methods for *Candida* infections have been well documented in the literature and have led to the development of molecular techniques to improve diagnosis. Many of the challenges of molecular assays; e.g. efficient lysis of the cell wall and recovery of DNA suitable for amplification, have been overcome with newer technologies.

DIATHERIX Laboratories now offers a Tem-PCR assay that can detect molecular targets of the more commonly encountered yeasts in clinical specimens; e.g. *C. albicans*, *C. glabrata*, *C. krusei*, *C. parapsilosis*, and *C. tropicalis*. Rapid identification of *Candida* species is becoming increasingly important as the incidence of Candidiasis continues to rise in the clinical environment. Among the nosocomial bloodstream infections, *Candida* species were ranked fourth hospital-wide in a recent survey. *Candida* species were responsible for 10.2% of all cases of septicemia and 25% of all urinary tract infections in intensive care units. In the physician office or clinic setting, *Candida* infections are commonplace and represent a significant diagnostic challenge given the absence of the most basic diagnostic procedures.