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Please read this bit first

The HPCSA and the Med Tech Society have confirmed that this clinical case study, plus your routine review of your EQA reports from Thistle QA, should be documented as a "Journal Club" activity. This means that you must record those attending for CEU purposes. Thistle will **not** issue a certificate to cover these activities, nor send out "correct" answers to the CEU questions at the end of this case study.

The Thistle QA CEU No is: **MT00025.**

Each attendee should claim **THREE** CEU points for completing this Quality Control Journal Club exercise, and retain a copy of the relevant Thistle QA Participation Certificate as proof of registration on a Thistle QA EQA.

Cycle 22 Organism 6:

Candida non-*albicans* species - *Candida krusei*

Candida species are ubiquitous yeasts, found on many plants and as members of the normal flora of the alimentary tract of mammals and mucocutaneous membrane of humans. All areas of the human gastrointestinal tract can harbor *Candid.* The most commonly isolated species (50% to 70% of yeast isolates) from human gastrointestinal tract is *Candida albicans,* followed by *Candida tropicalis, Candida parapsilosis,* and *Candida glabrata*.

C. glabrata is regarded as a symbiont of humans and can be isolated routinely from the oral cavity and from the gastrointestinal tract, genitourinary, and respiratory tracts of most individuals. As an agent of serious infection it has been associated with endocarditis, meningitis, and multifocal disseminated disease. It is recovered often from urine specimens and has been estimated to account for as many as 21% of urinary yeast isolates

Other medically important *Candida* species include *C. krusei, C. guilliermondii, C. keyfer, C. lipolytica, C. lusitaniae, C. norvegensis,* and *C. parapsilosis*

Candida species can be present in clinical specimens as a result of environmental contamination, colonization, or actual disease. An accurate diagnosis requires proper handling of clinical material. *Candida* species that are members of the normal flora can invade tissue and cause life-threatening disease. In patients whose immune defenses have been altered by disease. *C. albicans* is the most common species isolated from patients with nearly all forms candidiasis. Only *C. tropicalis* appears more virulent than *C. albicans* when present in patients with leukemia or lymphoreticular malignant disease. The species that are emerging as opportunistic pathogens include *C. lusitaniae*, and *C. krusei*. These species have isolated from patients with fungemia. *C. lusitaniae* which is generally a low-virulence organism, may be either innately or potentially resistant to amphotericin B. *C. guilliermondii* may also be resistant to amphotericin B. *C. krusei* is usually intrinsically resistant to fluconazole.

Questions:

1. How would you isolate a *Candida* species from a clinical specimen?
2. What methods can be used to identify *C. krusei?*
3. What methods can be employed to perform antimicrobial susceptibility tests on yeasts?