



Karius Test for Pediatric Patients with Invasive Fungal Infections

Plasma Next-Generation Sequencing for Pathogen Detection in Pediatric Patients at Risk for Invasive Fungal Infection

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The Karius Test can detect invasive fungal infections (IFI) directly from blood in high-risk pediatric immunocompromised patients and can identify non-fungal pathogens in individuals that have prolonged febrile neutropenia but do not meet criteria for proven or probable IFI.

PATIENT POPULATION

This study enrolled 40 evaluable patients with underlying oncologic diagnoses who were determined to be at risk for IFI.

There were 6 patients who met established EORTC/MSG criteria for proven IFI, one for probable IFI, and 13 for possible IFI.

STUDY DESIGN

Immunocompromised pediatric patients with suspected IFI were enrolled.

A plasma sample was obtained at the time of enrollment for Karius testing. Results were not available to clinicians in real-time.

RESULTS

The Karius Test identified the same pathogen as tissue or blood culture in four out of the six proven IFI cases. The test identified *Pneumocystis jirovecii* in one patient with probable IFI based on positive β -D-glucan test.

Among the 33 patients without proven or probable IFI, the Karius Test detected a fungal pathogen (*Candida glabrata*) in one patient.

In patients with prolonged fevers without proven IFI, the Karius Test identified viral pathogens that fit the clinical symptoms.

