



Karius Test for Detection of *Coxiella burnettii* in Endocarditis

Diagnosis and Genotyping of *Coxiella burnettii* Causing Endocarditis in a Patient with Prosthetic Pulmonary Valve Replacement Using Next-Generation Sequencing of Plasma

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The Karius Test enabled earlier diagnosis of *Coxiella burnettii* culture-negative endocarditis (Q Fever) leading to early targeted antimicrobial therapy.

PATIENT HISTORY

29-year old male with a history of Tetralogy of Fallot, multiple pulmonary valve replacements, and 18 months of intermittent fever and night sweats.

Relevant history also included travel to South and South East Asia, use of a LivaNova 3T Heater-Cooler device during surgery (therefore at risk for *Mycobacterium chimaera* infection), and drinking unpasteurized milk.

DIAGNOSTIC WORKUP

Cardiac CT and echocardiography showed pulmonary opacities and echodensity on pulmonary valve.

Blood cultures were negative. Serologic testing was ordered and results were still pending at the time of ordering the Karius Test.

RESULTS

The Karius Test detected *Coxiella burnettii* directly from plasma, which led to targeted treatment.

Comprehensive examination of the sequencing data was performed for strain typing and demonstrated high relatedness to the CbuK_Q154 (group IV) strain typically seen in North America.