

Using metagenomics to investigate infections

Alt-text Figure 9 - Illustration of pathogen-specific real-time PCR versus metagenomics for pathogen detection.

Illustrative image comparing pathogen-specific real-time PCR versus metagenomics for pathogen detection. Target-specific PCR amplification (real-time PCR) pros: fast, inexpensive, sensitive; cons: unexpected or novel pathogens not detected, multiple reactions required for multiple pathogens, limited by specimen volume. Sequencing of total DNA or cDNA (metagenomics) pros: pan-pathogen detection in a single reaction; cons: relatively expensive with slower time-to-result than PCR.