Shotgun Metagenomic Detection of Pathogens: a Micro-Comic Strip

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Next-generation sequencing has made shotgun metagenomic testing of primary clinical specimens for detection of pathogens feasible (1). These technologies can routinely detect a range of pathogens (bacterial, viral, fungal, and eukaryotic parasites), allowing for hypothesis-free testing, in which test selection does not depend on knowing what pathogens are likely to be present. Such testing has been applied for

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detecting infections or colonization of the nervous system (2–4), gastrointestinal tract (5, 6), prosthetic joints (7, 8), and blood or serum (9, 10). Shotgun metagenomic testing for pathogens is now available for patient testing at a small number of academic and commercial laboratories, and it is expensive compared to other microbiology tests. Where do the cost of and diversity of pathogens detected by shotgun metagenomic testing fit into the range of available microbiology tests? Read the comic strip to find out more.

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