

# Gaps in Diagnosing Suspected Infection in Immunocompromised Children with Cancer: A Systematic Review

Sarah Y. Park<sup>1</sup>, Nicole G. Coufal<sup>2</sup>, Samuel Dominguez<sup>3</sup>, Lauge Farnaes<sup>1</sup>, Kevin Messacar<sup>3</sup>, and Frederick Goldman<sup>4</sup>

<sup>1</sup>Karius Inc

<sup>2</sup>University of California San Diego Department of Pediatrics

<sup>3</sup>University of Colorado Anschutz Medical Campus Department of Pediatrics

<sup>4</sup>The University of Alabama at Birmingham Division of Hematology and Oncology

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## Abstract

While the survival of children with cancer has improved over time, infection remains a major morbidity and mortality risk. We conducted a systematic literature review to determine the unmet needs in diagnosing infection in immunocompromised children with cancer. The comprehensive search strategy followed the guidelines established by the Cochrane Handbook for Systematic Reviews of Interventions and the Preferred Reporting Items for Systematic reviews and Meta-Analyses (PRISMA) 2020 statement and spanned multiple bibliographic databases and other public sources from January 1, 2012–June 23, 2022. From 5,188 records, 34 unique pediatric-focused studies met inclusion criteria. This review highlights the lack of published data on infectious disease testing in pediatric oncology patients and the need for well-designed clinical impact and cost-effectiveness studies of both existing and novel diagnostic platforms. Such studies are necessary to optimize diagnostic and antimicrobial stewardship, leading to improvement in patient outcomes.

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