

Predictors of severe sepsis not clinically apparent during the first twenty-four hours of hospitalization in children with cancer, neutropenia, and fever: A prospective, multicenter trial

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Background: Severe sepsis is not clinically apparent during the first 24 hours of hospitalization in most children with cancer and febrile neutropenia (FN), delaying targeted interventions that could impact mortality. The aim of this study was to prospectively evaluate biomarkers obtained within 24 hours of hospitalization as predictors of severe sepsis before it becomes clinically evident. **Methods:** Children with cancer, admitted with FN at high risk for an invasive bacterial infection in 6 public hospitals in Santiago, Chile, were monitored throughout their clinical course for occurrence of severe sepsis. Clinical, demographic and 6 biomarkers [eg, blood urea nitrogen, serum glucose, lactic

dehydrogenase, serum C-reactive protein (CRP), interleukin (IL)-8, and procalcitonin] were obtained at the time of admission and after 24 hours. Biomarkers independently associated with severe sepsis diagnosed after the first 24 hours of hospitalization were identified by logistic regression analysis