Frequency and clinical outcome of respiratory viral infections and mixed viral-bacterial infections in children with cancer, fever and neutropenia

Torres, Juan P.

Labraña, Yenis

Ibañez, Carolina

Kasaneva, Pilar

Farfán, Mauricio J.

De La Maza, Verónica

Villarroel, Milena

Vergara, Ivonne

Piemonte, Paula

Zubieta, Marcela

Salgado, Carmen

Tordecilla, Juan

Topelberg, Santiago

O'Rryan, Miguel

Santolaya, Ma

Background: The role of respiratory viral infections (RVIs) as a cause of overall fever and neutropenia (FN) episodes in children with cancer has been less characterized than bacterial infections. We conducted a study aimed to determine the frequency of RVI in children with low compared with high risk for invasive bacterial infection (IBI) FN episodes and compare the clinical outcome of RVI and mixed RV-bacterial infections. Methods: Prospective, multicenter study in children with cancer and FN admitted to pediatric hospitals in Chile between May 2009 and January 2011. Children were evaluated by clinical examination and laboratory tests, including bacterial cultures and their risk for IBI. Nasopharyngeal sample was obtained for the detection of 17 respiratory viruses using polymerase chain reaction-DNA microarray platform. Results: A total of

331 episodes of FN in 193 children were enrolled of whom 55% were male, with the median age of 7 years and 61% had a hematological malignancy. A