

# Relationship between episodes of fever and neutropenia and five-year survival rate for children with cancer, treated at a public pediatric hospital in Santiago, Chile.

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## Abstract

**Background:** Cancer is one of the most significant non-transmissible diseases at public health level, and febrile neutropenia (FN) one of its most serious life threatening complications. **Objective:** To estimate 5-year survival rates for children with cancer and FN from a referral health center in Santiago, Chile, by clinical-demographic variables. **Method:** Prognostic and analytic historical cohort survival study. (FONDECYT n° 1090194, 2009-2011). **Results:** 116 subjects were included, and grouped in three categories, by type of cancer: 1) leukemia/lymphomas (51.7%), 2) osteosarcoma (25.9%) and 3) another type of solid organ tumors (22.4%), the median number of days between chemotherapy and the first episode of FN was 5 days [1-7], 7 [7-8] and 7 [5-8] respectively. The five year overall specific survival rate was 64.7%. There were protective factors identified through Cox Model: age, post cancer comorbidity and average educational level of the caregiver. Risk factors identified were: presence of another type of solid organ tumor (HR 3.43 95% CI 1.64-7.19), sepsis (HR 2.89 95% CI 1.47-5.70), delay in chemotherapy treatment (HR 2.94 95% CI 1.17-7.40) and invasive fungal infection (HR 3.36 95% CI 1.22-9.22). **Conclusion:** This is the first pediatric study in Chile to analyze prognostic factors in children with cancer and FN. The predictor variables that were identified comply with previous reports from international literature.

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