

# PULMONARY SURVEILLANCE IN PEDIATRIC HEMATOPOIETIC STEM CELL TRANSPLANT— A MULTINATIONAL MULTIDISCIPLINARY SURVEY

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## Abstract

Background Hematopoietic Stem Cell Transplant (HSCT) is an established treatment for malignant and non-malignant conditions and pulmonary disease is a leading cause of late term morbidity and mortality. Accurate and early detection of pulmonary complications is a critical step in improving long term outcomes. Existing guidelines for surveillance of pulmonary complications post-HSCT contain conflicting recommendations. Objective To determine the breadth of current practice in monitoring for pulmonary complications of pediatric HSCT. Study Design An institutional review board approved, online, anonymous multiple-choice survey was distributed to HSCT and pulmonary physicians from the United States of America and Australasia using the REDcap platform. The survey was developed by members of the American Thoracic Society Working Group on Complications of Childhood Cancer, and was designed to assess patient management and service design. Results A total of 40 (34.8%) responses were received. The majority (62.5%) were pulmonologists, and 82.5% were from the United States of America. In all, 67.5% reported having a protocol for monitoring pulmonary complications and 50.0% reported adhering “well” or “very well” to protocols. Pulmonary function tests (PFTs) most commonly involved spirometry and diffusion capacity for carbon monoxide. The frequency of PFTs varied depending on time post-HSCT and presence of complications. In all, 55.0% reported a set threshold for a clinically significant change in PFT. Conclusions These results illustrate current variation in surveillance for pulmonary complications of pediatric HSCT. The results of this survey will inform development of future guidelines for monitoring of pulmonary complications after pediatric HSCT.

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