TRANSPIRE: Lung Injury in a Longitudinal Cohort of Pediatric HSCT Patients

Status: RECRUITING

Eligibility Criteria

Sex: ALL
Age: Up to 24 years old
Healthy Volunteers: This study is NOT accepting healthy volunteers
Inclusion Criteria:

- Subjects ≤ 24 years of age undergoing allogeneic or autologous HSCT.

Exclusion Criteria:

- Subjects over 24 years of age.

Conditions & Interventions

Conditions:
Hematopoietic Stem Cell Transplant (HSCT), Diffuse Alveolar Hemorrhage, Thrombotic Microangiopathies, Interstitial Pneumonitis, Bronchiolitis Obliterans

More Information

Description:
Hematopoietic stem cell transplant (HSCT) is an effective but toxic therapy and pulmonary morbidity affects as many as 25% of children receiving transplant. Early pulmonary injury includes diffuse alveolar hemorrhage (DAH), thrombotic microangiopathy (TMA) interstitial pneumonitis (IPS) and infection, while later, bronchiolitis obliterans is a complication of chronic GVHD associated with severe morbidity and mortality. Improved diagnosis and treatment of pulmonary complications are urgently needed as survival after HSCT improves, and as HSCT is increasingly used for non-malignant disorders such as sickle cell disease. Currently, there are large and important gaps in the investigator's knowledge regarding incidence, etiology and optimal treatment of pulmonary complications. Moreover, young children unable to perform spirometry are often diagnosed late, and strategies for monitoring therapeutic response are limited. This is a prospective multi-institutional cohort study in pediatric patients undergoing allogeneic hematopoietic stem cell transplantation (alloHSCT). Assembly of a large prospective uniformly screened cohort of children receiving HSCT, together with collection of biological samples, will be an effective strategy to identify mechanisms of lung injury, test novel diagnostic strategies for earlier diagnosis, and novel treatments to reduce morbidity and mortality from lung injury after transplant.

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