



CANCER PREVENTION & RESEARCH INSTITUTE OF TEXAS

Award ID:
RP180805

Project Title:
Pediatric Cancer Data Core

Award Mechanism:
Core Facility Support Awards

Principal Investigator:
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Entity:
The University of Texas Southwestern Medical Center

Lay Summary:

Curative treatment in childhood cancer may cause an unacceptable burden of side effects and long-term deficits. Therefore, there is a need for both less toxic and more effective therapies. Because pediatric cancers are rare, sufficient numbers for analysis usually require multi-institutional studies. The most effective research will result from the combination and interrogation of datasets across institutes and will include comprehensive clinical, genomic and imaging insights from historical and prospective trials. However, inconsistent terminology naming among groups, different sample labelling rules, and lack of technical support have hampered researchers' efforts to share data and communicate with each other. In addition, a large amount of potentially valuable clinical and lab data are recorded in unstructured free text notes in electronic health records, which is prohibitively challenging for researchers to use. The overall goal of the proposed Pediatric Cancer Data Core is to provide a research platform and services to facilitate data management, harmonization, sharing and analysis for the pediatric cancer research community. The specific aims of this Core are as follows:

Aim 1: Develop and apply data standards for various types of pediatric cancer to collect and curate clinical data.

Aim 2: Collect, process and integrate sample information, genomic and image data with clinical data.

Aim 3: Develop a centralized pediatric cancer data commons to store, query, analyze and visualize clinical, genomic and image data.

Aim 4: Provide customized support to individual pediatric cancer research projects.

Aim 5: Design and implement an education and training plan.

Although childhood cancer is rare, the impact of life-saving therapy is dramatic. If implemented successfully, the proposed Core will be able to break the academic silos across institutes and research disciplines and therefore improve research and patient care in pediatric cancer.