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Creating a new paradigm for cancer-based clinical trials by leveraging clinical and molecular data

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Abstract

This lecture will address a variety of topics related to the development of molecular biomarkers for cancer therapeutics and the use of clinical data to target patient accrual to biomarker-based clinical trials. A prospective longitudinal study, Total Cancer Care currently underway at the Moffitt Cancer Center, has been used to accrue more than 96,000 patients for the creation of a comprehensive data warehouse that is able to integrate clinical and molecular data that is being used for *in silico* clinical trial design in solid tumor malignancies to match patients with novel therapeutics through collaborations with the pharmaceutical and biotechnology industry. The studies presented will provide insights to the challenges to use point-of-care clinical data and research-grade molecular data to aid in the design of clinical trials that more precisely align patients with new therapeutics currently in development. In addition, the informatics infrastructure that supports both clinical trials design and cohort surveillance will be discussed along with how this infrastructure is being expanded into a Research Information Exchange to provide a data sharing framework, creating a multi-institutional network that can be leveraged on both a national and global scale.

Biography

Dr. Fenstermacher is the Chief Research Information Officer at the Virginia Commonwealth University. He is the former founding Chair of the Department of Biomedical Informatics at the Moffitt Cancer Center and the Chief Bioinformatics Officer for M2Gen. He received his doctoral degree from the University of North Carolina at Chapel Hill. During his fourteen years in biomedical informatics he has designed and directed the implementation of several biomedical informatics distributed computing systems to support multiple institutional translational research projects. He currently serves on the editorial board for Journal of Translational Engineering in Health and Medicine.