The Critical Role of Pathology in Personalized Healthcare

The concept of personalized healthcare represents a transformational event across all fields of medicine and presents particularly compelling opportunities for the field of pathology. Pathologists have critical new roles to play as the personalized healthcare and companion diagnostic conceptual paradigms are increasingly adopted into drug development and routine clinical practice. These new roles will center around the development and provision of information enabling identification of patient subpopulations with differential prognosis and treatment response characteristics, securing and expanding pathology as a clinically relevant specialty in the overall healthcare system.

While pathologists have much to contribute to personalized healthcare across disease areas, the greatest unmet medical needs are clearly in cancer. Rapidly emerging molecular and translational oncology data strongly suggests the need for new tools and technologies that allow the comprehensive profiling of tumors at the DNA, RNA and protein levels. While some of this profiling will come from extraction-based methods (e.g. RT-PCR, sequencing, RNA expression profiling), at least some of it will be in the form of novel genetic, genomic and proteomic in situ methods. With these capabilities, pathologists will be able to provide critical tumor characterization data not only on a ‘per tumor’ basis but also on a ‘per clone’ and if necessary, a ‘per cell’ basis. Having access to biomarker data at such a resolution will be increasingly important as we further elucidate mechanisms of drug sensitivity, primary resistance and acquired resistance, especially in light of the dramatic genomic and proteomic heterogeneity that is being discovered in cancer patients.

To best meet these challenges and fully enable the promise of the personalized healthcare paradigm, the field of pathology and the role of the pathologist is evolving to focus on the molecular pathway aspects of disease in addition to its morphologic appearances.

Speaker: Eric E. Walk, MD, FACP
Date: Wednesday, February 9th
Time: 11:00 am to 12:00 pm Central Time

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