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Zev Leifer's lab access to an international collection of digital pathology images: Archiving and retrieval in a database format

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Diagnostic pathology is a critical aspect in determining the nature of the disease process. Typically, a biopsy sample is converted to a slice of tissue on a glass slide, which is analyzed by a pathologist using a microscope. Today, we are in the world of digital pathology. The slide is digitized. The digital image is stored and retrievable. The image is viewed on a computer functioning as a microscope. Now, multiply this by hundreds or thousands of slides per day in a large medical center. Each slide may contain between 50 and 400 MB of data. In parallel, there is an obvious need to train medical students in the analysis of pathologies, training of residents and the review of new or uncommon conditions by senior clinicians. Enter "Zev Leifer's Lab" using Quartzzy.com. This system, using a commercial product designed to track lab chemicals and supplies, has been adapted to deal with the data mining challenge of the massive storage of digital images. It is a listing of links to images stored in the collections of numerous medical institutions. The unique aspect lies in the metadata tags and the sorting capacity. One may search and organize by tissue type, pathology type, etc. This mined data of digital images can be used for study, testing and research.

Biography

Zev Leifer has an MA from Harvard University and a PhD from New York University in Microbiology. He has been the Course Director of the Pathology Laboratory for over 30 years. Recently, he has published and spoken at many international meetings in the area of Pathology Education. His work was written up in a featured section in the Springer monograph, "Digital Pathology". His current research specializes in the adaptation of commercial software for use in Digital Pathology Education.

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