Genomic pathology and tissue engineering pathology compared and contrasted

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Technology in genome sequencing is expanding at an exponential rate. Already this technology has revolutionized cancer pathology. A new era of Genomic Pathology is upon us where we see much earlier disease diagnosis and personalized patient treatment programs. However there is a discrepancy in the field between the rapidly advancing genome technology and available pathologists who are qualified in the practice of using the genomic data as a means to identify and diagnose disease and as an adjunct to conventional anatomical pathology. Pathologists have had to relearn genetics! New classifications will need to be devised because in some instances the genomic differences may prove to be more important than previously noted anatomical differences. On the other hand the tissue specimens themselves have remained much as in the past in Genomic Pathology and it has remained mainly adjunctive to conventional pathology. Contrast that then with what Kim Solez has called Tissue Engineering Pathology, specimens coming from stem cell generated organs and regenerative medicine. Here the specimen type itself is brand new and some of the anatomical abnormalities observed are also without past precedent. New classifications will need to be devised. It is a brand new area of pathology practice not adjunctive. Both Genomic Pathology and Tissue Engineering Pathology will become routine parts of mainstream pathology practice in the next decade.

Biography
Korey Fung is an undergraduate student in the Nutrition and Food Sciences program at the University of Alberta. His current academic interests involve Global Health and Food Sensory Perception. He plays an important role assisting Dr. Solez in the Technology and Future of Medicine course and in the organization of the upcoming 2015 Banff Transplant Pathology meeting in Vancouver and other related matters, including the technical support for NKF cyber Nephrology Email discussion groups, such as the 2200 member RENALRD group for renal dietitians across the world. In addition to his academics, Korey is an avid cook, artist and violinist.

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