A renaissance in renal pathology, nephrology and transplantation brought about by regenerative medicine:
How to jump start the process

Kim Solez¹, Anson Dong¹, Nikhil Shah¹ and Lynn Cornell²
¹University of Alberta, Canada  
²Mayo Clinic Rochester, USA

On December 3rd, 2014, Specialties Match results for 2015 were released in the US. The results showed 51% of nephrology programs and 32% of nephrology positions going unfilled. On the same day, Kidney International published a mini review “Nephron reconstitution from pluripotent stem cells”. A tumultuous change is underway, a renaissance. Current nephrology training programs are completely silent on the fascinating puzzles in kidney pathophysiology and kidney pathology brought about by common defects in stem cell generated organs today. Communication problems exist at both ends: The serious practical problems in stem cell generation of complex organs are not discussed in regenerative medicine meetings which nephrologists do not attend despite the fact that the kidney is the organ most discussed. Stem cell generation of organs is described at transplantation and nephrology meetings as an activity outside of transplantation and nephrology that will make those specialties redundant. No one is taking responsibility within transplantation, within nephrology when these experts are supposed to be counted upon for expertise in the organ. The new pathology landscape brought about by regenerative medicine also needs to be considered in renal pathology. Progress in the field will happen as progress in others have before and the continued ignorance at both ends of the discussion; stem cell and transplantation pathology is irresponsible and ultimately destructive for patients and their families. The brighter tomorrow of renal pathology, nephrology and transplantation made possible with the new technology of stem cell generated organs is something that requires serious discussion in order to achieve progress towards a healthier future for patients.

Biography

Kim Solez, MD, FRCPC is a Professor of Pathology at the University of Alberta, and President and CEO of Transpath Inc., is one of the world’s foremost kidney pathologists. He is the father of the Banff classification that sets standards worldwide for how biopsies from kidney and other solid organ transplants are interpreted, and started the post-earthquake disaster relief task force of the International Society of Nephrology. He is a popular blogger on internetevolution.com, and directs NKF cyberNephrology, a joint venture of the National Kidney Foundation (U.S.) and the University of Alberta. He has also created many educational videos for the Lifeboat Foundation.

Kim.Solez@UAlberta.CA