



Lecture Code : PA01-S2

Session Name : Pathology

Session Topic : -

Date & Time, Place : June 19 (Thu) / 13:30-14:30 / Room 3 (GBR 103)

Spatial Transcriptomics to Understand Kidney Biology and Disease

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Spatial transcriptomics is a relatively new technology that allows investigators to measure the gene expression profiles of individual cells within their spatial context. Using a single section of kidney tissue placed onto a microscope slide, it is now possible to quantify the expression of hundreds to thousands of genes with high spatial resolution. In this talk, I will briefly introduce the technical underpinnings of this technology. I will provide examples of how the technology has been used to gain novel insights into kidney biology mechanisms. Excitingly, spatial transcriptomics could also be applied to help patients with kidney disease. By performing this technology on patient's kidney biopsies it may be possible to understand their disease mechanism and prognosis. I will discuss our recent experience with spatial transcriptomics to understand mechanisms of glomerular diseases using kidney biopsies. Developing laboratory tests using novel technologies is challenging and so I will also discuss some practical considerations on how spatial transcriptomics could be translated from a research tool into a clinical test.

Keywords: Pathology, Kidney biopsy, Spatial Transcriptomics, Glomerular diseases, Clinical translation

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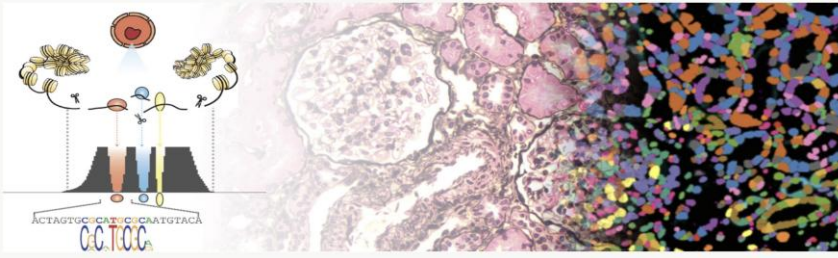
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