



Harnessing the microenvironment for early interception in kidney cancer

Tom Mitchell is a Clinician Scientist whose research is focussed on the early genesis of kidney cancer. He is also a practicing urologist at Addenbrooke's Hospital where he treats patients with kidney cancer. He leads a research group at the Early Cancer Institute at the University of Cambridge.

His work in cancer genetics began by creating computational tools to infer how and when the genetic changes acquired in cancer occurred. These tools, when applied to kidney cancer showed that the initiating event occurred many decades prior to diagnosis (Mitchell *et al.* Cell, 2018). The findings highlighted long latent period during which early intervention might occur. However, it was not clear what form such interception might be.

Since then he has concentrated his research efforts in understanding processes that occur at a multi cellular level after cancer initiation, through the use of single cell sequencing (Young *et al.* Science 2018). His most recent work closely examined the cellular processes that occur at the tumour-normal interface (Li *et al.* Cancer Cell 2022). In particular, a subset of macrophages appear to drive epithelial to mesenchyme transition in cancer cells. He is now looking at ways to translate these findings so that they could be of therapeutic benefits to the patient's he treats in Addenbrooke's Hospital.