HEIDELBERG UNIVERSITY HOSPITAL

HEIDELBERG FACULTY OF MEDICINE

INSTITUTE FOR MEDICAL ARTIFICIAL INTELLIGENCE

IMAI LECTURE SERIES

The 2nd IMAI Lecture

Decoding human cancer immunity: lessons from response, resistance and toxicity

Prof. Dr. Samra Turajlić

Director, Cancer Research UK Manchester Institute
Senior Group Leader, Cancer Dynamics Laboratory, CRUK MI
Visiting Group Leader, the Francis Crick Institute
Honorary Consultant Oncologist, The Christie NHS Foundation Trust
Consortium Lead, MANIFEST

Immune checkpoint inhibitors have transformed cancer treatment, yet many patients do not benefit, resistance remains common, and immune-related toxicities can be severe. Understanding these outcomes requires moving beyond static tumour biopsies to study immunity as a dynamic, distributed system across space, time and tissues.

Using longitudinal studies of patients undergoing immunotherapy, Prof. Turajlić will explore what the immune system recognises, how different therapies remodel tumour ecosystems, and how immune responses extend beyond the tumour. Studies in kidney cancer reveal an unexpectedly complex antigenic landscape and show that durable tumour control depends not simply on immune-cell abundance or reactivity, but on their spatial organisation. Analyses of lymph nodes further highlight the distributed nature of anti-tumour immunity, while longitudinal profiling of immune-related adverse events reveals both shared mechanisms between response and toxicity and substantial inflammatory heterogeneity.

Together, these studies demonstrate the value of tracking the “experiment in the patient” to understand mechanisms of response, resistance and toxicity and inform more rational use of cancer immunotherapy.

WHEN

Thursday
12 November 2026
11:15 to 12:15

WHERE

Room to be announced

HOST

Prof. Dr. Jakob N. Kather
IMAI, Heidelberg

No registration required. Seating is limited and admission is on a first come, first served basis.

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