

Matthieu Genais (CRCT, Toulouse)

“Multi-omics prediction of clinical response to immunotherapy in advanced melanoma”

Abstract:

Immune checkpoint inhibitors (ICI) such as anti-PD-1 act on T cells to restore their ability to kill cancer cells. Cutaneous melanoma is a poor-prognosis skin cancer that can be treated by ICI. Despite major advances in the field of immunotherapy, melanoma kills half of patients within 5 years of treatment induction, due to primary or acquired resistance. Over the last 10 years, our team has identified a mechanism of resistance to immunotherapy that depends on the production of TNF, a major inflammatory cytokine that acts as a brake on the immune response against tumours in mouse melanoma models and could ameliorate adverse events caused by immunotherapy treatment. Here, we present an analysis of bulk transcriptomics on a preclinical mice model and public patient cohorts using inferred TF and pathway activities to define characteristics of responders (both in mice and human).