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Immune regulation in urological malignancies

Bladder cancer (BCa) is an important a public health concern due to its prevalence, morbidity, treatment side-effects or failure, mortality and associated management costs. Although Bacillus Calmette-Guérin intravesical instillations is the standard treatment for this non-muscle-invasive BCa, repeated BCG treatments are associated with significant toxicity and failure, underlying the necessity for alternative or complementary immunotherapy and overall for better understanding of T-cell responses generated within bladder mucosa.

In a recent study, we highlighted the prominent role of the unconventional Vdelta2 T cells in anti-tumor response in BCa patients. In this project, we plan to interrogate the cellular heterogeneity of Vdelta2 T cells directly from BCa patients, in order to define a Vdelta2 T-cell immune signature and/or Vdelta2 T-cell subsets linked to BCa recurrence/progression and new treatment for BCa targeting these cells.