

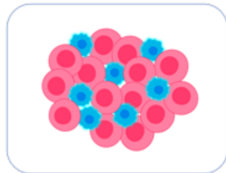
The tumor immune microenvironment of primary prostate cancer with and without germline mutations in homologous recombination repair genes

Germline mutations

*BRCA2, BRCA1,
ATM, FANCI, PALB2,
CHEK2, MSH2*

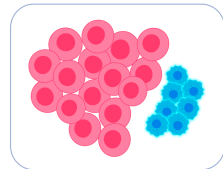
Sporadic

Similar density and composition of T cells
Distinct immune spatial profiles



Free immune spatial (FIS) profile

CD8⁺ cells in close
proximity to tumor cells
Higher HLA-A



Clustered immune spatial (CIS) profile

Clusters of CD4⁺ T cells
closely interacting with
PD-L1⁺ cells

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In Brief

The T cell immune microenvironment of primary prostate cancer tumors can show enrichment of CD8⁺ T cells closely interacting with tumour cells, which we define as a Free Immune Spatial (FIS) profile, or clustering of CD4⁺ T cells, which we define as a Clustered Immune Spatial (CIS) profile. The former was mainly found in tumours from patients with germline mutations in homologous recombination repair genes. A FIS profile is linked to longer time to biochemical recurrence, metastasis, smaller tumor size and lower Gleason scores.