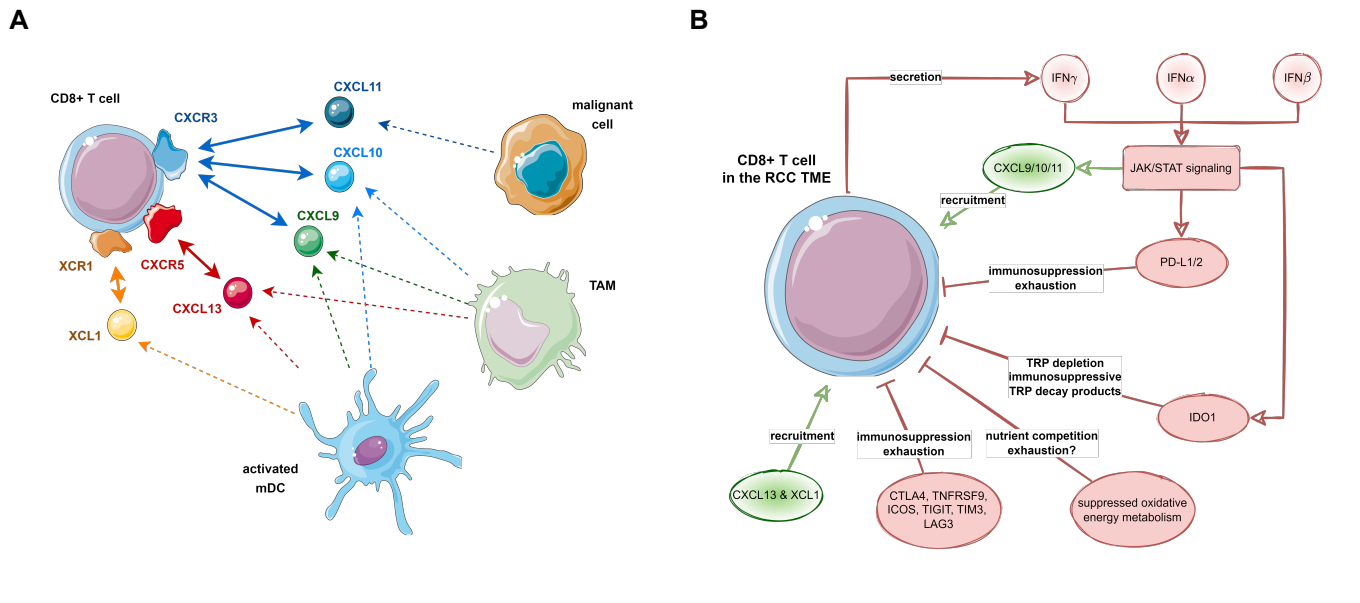
A
CD8+ T cell
CXCR3
CXCL11
CXCL10
CXCL9
malignant cell
XCR1
CXCR5
CXCL13
XCL1
TAM
activated mDC
B
CD8+ T cell in the RCC TME
secretion
IFNγ
IFNα
IFNβ
CXCL9/10/11
JAK/STAT signaling
recruitment
PD-L1/2
immunosuppression exhaustion
TRP depletion immunosuppressive TRP decay products
IDO1
recruitment
immunosuppression exhaustion
nutrient competition exhaustion?
CXCL13 & XCL1
CTLA4, TNFRSF9, ICOS, TIGIT, TIM3, LAG3
suppressed oxidative energy metabolism