Educational video: the role of PD-L1 in the local tumour microenvironment

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Watch the video here.

ABSTRACT

Building on our previous educational video on the interaction between cancer and the immune system, we highlight in this video the role of programmed death ligand 1 (PD-L1) in the tumour microenvironment. We explain the function of important immune cell types found in the tumour microenvironment and how they interact with each other and with cancer cells. Dendritic cells take up tumour antigen and transport it to the regional lymph node for T cell priming. T cells are the main mediators of the adaptive immune system and kill tumour cells via release of cytotoxins. Macrophages are the main effector cells of the innate immune system and have various functions such as phagocytosis and antigen presentation. Therapeutic monoclonal antibodies that bind to PD-1 or PD-L1, so called immune checkpoint inhibitors, prevent the interaction of these immune-suppressive molecules and thus facilitate an effective T cell-mediated antitumour immune response.