

P017 Blockade of VCAM1 and ICAM1 inhibits CD8+ T cell response to virus at the level of translymphatic migration.
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The effective induction of a primary immune response to a viral infection depends upon the presentation of antigen to cytotoxic T cells for activation and clonal expansion. Most steps in this process take place within the lymph nodes, where key cell adhesion molecules stabilize vital recognition events such as capture of naïve peripheral blood T cells from flow in post-capillary high endothelial venules and formation of T cell-antigen presenting cell (APC) complexes in cortical cords. However, a key step upstream of lymph nodes - the initial recruitment of APC from tissue via lymph, is poorly understood. Using a transgenic mouse model of the CD8+ T cell response to human influenza virus nucleoprotein, we present new evidence that endothelial expression of the adhesion molecules ICAM-1 and VCAM-1 in afferent lymphatics is critical for clearance of virus-loaded APC from the site of injection. Furthermore, we show that administration of CAM adhesion blocking antibodies prevents initiation of the anti-viral T cell response at the stage of translymphatic migration. These results underline the importance of lymphatic endothelial adhesive interactions in immunity and identify new targets for antibody immunotherapy.