In a recent study, the authors analyzed the gene expression profile of different Banff grades of skin and showed that an?tigen presenting cell (APC) and T-cell related genes were upregulated in higher grades of rejection; these included genes related to T-cell infiltration, Th1 polarization, and an?tigen processing and presentation.5 Costimulatory pathways were upregulated in the most severe cases of rejection.In transplant medicine, the CD28-CD80/86 and CD40-CD40 L costimulatory pathways are well characterized, and the tar?geting of these pathways is a clinical reality.