Pre-existing Autoimmune Disease and Immune Checkpoint Inhibitors

Managing a patient with pre-existing autoimmune diseases (PAD) on or about to start immune checkpoint inhibitors (ICI) therapy is challenging and management decisions should be made on a case-by-case basis with collaborative consultation between patient, oncologist, rheumatologist and other specialists. Major considerations in these patients are discussed below.

Are ICIs effective in patients with PAD?

Several retrospective studies have shown that patients with pre-existing autoimmune disease have similar efficacy to patients without pre-existing autoimmune disease with objective response rates ranging from 20-40%.

Are ICIs safe in patients with PAD?

Patients with PAD were generally excluded from clinical trials of ICIs because of the potential for increased toxicity. While tumor response rates appear to be similar to patients without PAD, the incidence of adverse events in patients with PAD may be higher than patients without PAD. Approximately two thirds of patients with PAD will experience an immune related adverse event (irAE) including half of patients with PAD having a flare of their underlying autoimmune disease and roughly a third developing a de novo irAE. One in 5 will discontinue ICIs permanently because of adverse events.

Do immunosuppressives interfere with the antitumor effect of ICIs in patients with PAD?

Although no prospective data exist, retrospective data generally suggest that immunosuppressive therapy (including steroids) started after onset of irAEs does not appear to decrease ICI efficacy. However, studies have suggested that patients on immunosuppression (including steroids) at the time of ICI initiation may have worse tumor outcomes than patients started on immunosuppression after the onset of irAE, including flare of their PAD.

Do immunosuppressives have an effect on the development of irAE in patients with PAD?

The occurrence of adverse events does not appear to be different between patients with active versus inactive PAD at the time of ICI initiation. There may be fewer adverse events in patients on therapy for their PAD at the time of immune checkpoint inhibitor initiation.