**Figure S6 Legend:** (A) Flow cytometry analysis of ICOS-hi CD4 T cells from longitudinal PBMC samples from representative cancer patients (each panel represents one patient) treated with vopratelimab + nivolumab with and without target lesion response. (B) Representative flow cytometry analysis of ICOS-hi CD4 (top) and CD8 (bottom) T cells from pre-dose baseline or on-treatment PBMC samples from a TNBC patient treated with vopratelimab + nivolumab. ICOS-hi and ICOS-lo gates were drawn based on isotype stain and baseline samples, respectively. (C) Frequency of ICOS-hi cells within the CD4 T-cell compartment was measured using flow cytometry of longitudinal PBMC samples from cancer patients treated with vopratelimab with confirmed partial responses by investigator assessment, including a TNBC patient treated with 0.3 mg/kg vopratelimab + nivolumab (blue) up to C48D1, a gastric cancer patient treated with 0.1 mg/kg vopratelimab + nivolumab (pink) up to C47D1, a gastric cancer patient treated with 0.3mg/kg vopratelimab in + nivolumab (green) up to C41D1, and a gastric cancer patient treated with 0.3 mg/kg vopratelimab monotherapy (purple) up to C26D1 (data cut date: July 22, 2020). (D,E) Representative flow cytometry histogram analysis from a companion study in which ICOS-hi CD4 T cells were assessed in PBMC samples from non-small-cell lung cancer patients treated with nivolumab or pembrolizumab alone, respectively. No ICOS-hi emergence was noted. ICOS, inducible co-stimulator; ICOS hi, patients with an emergent CD4 T-cell population with high levels of ICOS; ICOS lo, patients without the emergence of a CD4 T-cell population expressing high levels of ICOS; PD-1, programmed death 1; PD-L1, programmed death ligand 1; PBMCs, peripheral blood mononuclear cells; TNBC, triple negative breast cancer.

**Figure S6. ICOS-hiCD4 T cells are associated with clinical benefit in ICONIC and are not observed in samples from patients responding to PD-1/L1 inhibitor monotherapy**

