

Safety and Efficacy in Patients With Long-Term Exposure (LTE) to Tislelizumab, an Investigational Anti-PD-1 Antibody, in a First-in-Human Phase 1 Study

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Background Tislelizumab, an investigational humanized IgG4 monoclonal antibody with high affinity and binding specificity for PD-1, was engineered to minimize binding to FcγR on macrophages in order to abrogate antibody-dependent phagocytosis, a mechanism of T-cell clearance and potential resistance to anti-PD-1 therapy. Previous reports from early phase studies suggested tislelizumab was generally well tolerated and had antitumor activity in patients (pts) with advanced solid tumors. Clinical effects of tislelizumab LTE (>12 mo) in pts enrolled in the first-in-human study (NCT02407990) are presented here.

Methods Patients with advanced solid tumors received IV tislelizumab 0.5, 2, 5, or 10 mg/kg Q2W, 2 or 5 mg/kg administered Q2W or Q3W, or 200 mg IV Q3W. Antitumor activity was assessed by RECIST v1.1 criteria; PD-L1 expression was retrospectively assessed with the VENTANA™ PD-L1 (SP263) assay.

Results As of 27 Oct 2018, 65 (median age 64 yr) of 451 pts (14%) received tislelizumab for >12 mo. Most (71%) pts received ≥1 prior anticancer treatment (median 1; range: 0-5), 51% had prior radiotherapy, and 75% had prior surgery. Tislelizumab LTE was most common in NSCLC (n=9), HCC (n=8), and bladder and ovarian (n=5 each) cancers. Across the LTE cohort, ORR was 68%. Four LTE pts achieved a confirmed CR; all 4 pts were PD-L1+ (≥1% expression on tumor cells). PR and SD were observed in both PD-L1+ and PD-L1- tumors; patients who were PD-L1+ had an ORR of 72%, while pts who were PD-L1- had an ORR of 61%. The median time to CR/PR (2.8 mo) and duration of CR/PR (21.1 mo) were longer in pts with LTE than pts who responded but did not remain on treatment (n=16) for >12 mo (2.1 and 6.3 mo, respectively). Rash and hypothyroidism were the only treatment-related AEs (TRAEs) reported in ≥15% of pts. Most TRAEs were of mild or moderate severity; arthritis, diarrhea, fatigue, granuloma, increased alanine aminotransferase, hyperglycemia, lichenoid keratosis, and papular rash (n=1 each) were the only grade ≥3 TRAEs reported with tislelizumab LTE.

Conclusion Tislelizumab was generally well tolerated for >12 mo and elicited durable responses in pts with a variety of tumor types regardless of PD-L1 status.