Background

CTLA-4 pathway blockade with ipilimumab (IPI) ± nivolumab (NIVO; anti–PD-1) is an effective treatment for several cancers. A nonfucosylated version of IPI, BMS-986218, was developed to increase the effects of CTLA-4 blockade and enhance intratumoral regulatory T-cell depletion via its increased affinity for Fcγ receptors (FcγR, CD16) on natural killer T cells and macrophages, resulting in enhancement of antibody-dependent cellular cytotoxicity. Preclinical data supported the mechanism of action of BMS-986218 and demonstrated greater antitumor activity in an MC38 tumor model vs IPI.1 Here, we present initial results from the first-in-human phase 1/2a trial of BMS-986218 ± NIVO in previously treated patients with advanced cancer (NCT03110107).

Methods

Patients with ≥1 prior therapy received BMS-986218 2–70 mg intravenously Q4W. Safety, tolerability, pharmacokinetics, and pharmacodynamics were evaluated.

Results

As of December 12, 2019, 65 patients (median age, 61 years [range, 24–85 years]) received BMS-986218 monotherapy. TRAEs occurred in 52% of patients; most were grade 1–2. The most common (≥10%) TRAEs (any grade; grade 3) were pruritus (12%; 0%) and diarrhea (11%; 3%). Eight patients (12%) had grade 3 TRAEs; most resolved with protocol-defined management. No grade 4 TRAEs were reported; 1 patient (12%) had grade 3 TRAEs; most resolved with protocol-defined management. No grade 4 TRAEs were reported; 1 patient (12%) had grade 3 TRAEs; most resolved with protocol-defined management. No grade 4 TRAEs were reported; 1 patient (12%) had grade 3 TRAEs; most resolved with protocol-defined management.

Conclusions

BMS-986218 monotherapy demonstrated an acceptable safety profile and signs of clinical benefit in this heterogeneous patient population with select advanced cancers. Preliminary pharmacodynamic activity was consistent with enhanced effects of CTLA-4 blockade. Data from continuing dose escalation of BMS-986218 ± NIVO along with preclinical results provide support for ongoing monotherapy expansions and for BMS-986218 + NIVO expansions in patients with advanced cancer.

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Trial Registration

NCT03110107

Ethics Approval

This study was approved by the WCG Independent Review Board, approval number 20170464

REFERENCE


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