Tislelizumab Plus Chemotherapy as First-line Treatment for Lung Cancer in Chinese Patients

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Background: Tislelizumab, an anti-PD-1 antibody, was engineered to minimize binding to FcγR on macrophages to abrogate antibody-dependent phagocytosis, a mechanism of T-cell clearance and potential resistance to anti-PD-1 therapy. In previous reports, tislelizumab was generally well tolerated and had antitumor activity in patients with advanced solid tumors.

Methods: This phase 2 study (BGB-A317-206; NCT03432598) assessed tislelizumab (200 mg Q3W) + platinum (plat)-based chemotherapy (Q3W) as first-line treatment for Chinese patients with advanced lung cancer. All patients received tislelizumab + plat doublet chemotherapy. Nonsquamous (NSQ) NSCLC patients received plat + pemetrexed (PMX) for 4 cycles followed by PMX maintenance. Squamous NSCLC patients received 4-6 cycles of plat + paclitaxel (SQ-A) or plat + gemcitabine (SQ-B); SCLC patients received plat + etoposide. Response rate (RECIST v1.1), progression-free survival (PFS), overall survival (OS), and safety/tolerability were evaluated.

Results: As of 31 Dec 2019, 54 patients (median age 61 yr; 74% male; 72% current/former smokers) received tislelizumab + chemotherapy. Median follow-up ranged from 15.5 (SCLC) to 25.3 mo (SQ-B). Response and survival are shown in the **Table**. Median PFS was 6.9 mo, 7.0 mo, 9.0 mo, and NE for the SCLC, SQ-A, NSQ, and SQ-B cohorts, respectively. Median OS was only reached in the SCLC cohort (15.5 mo; 95% CI: 11.8, NE). The most common grade ≥3 adverse events (AEs) were decreased neutrophil count (n=26) and anemia (n=10). Immune-related AEs were reported in 18 patients. One SQ-A patient experienced myocarditis with a fatal outcome after 1 tislelizumab dose.

Conclusions: In this phase 2 study, tislelizumab plus plat-based chemotherapy, as first-line treatment for advanced lung cancer, demonstrated preliminary antitumor activity including 24-mo OS rates of 51%, 65%, 80%, and 31% for patients in the NSQ, SQ-A, SQ-B, and SCLC cohorts. No new safety signals were identified.

	NSQ (n=16)	SQ-A (n=15)	SQ-B (n=6)	SCLC (n=17)
Median study follow-up, mo	23.0	24.2	25.3	15.5
Confirmed partial response, n	7	12	4	13
Stable disease, n	8	2	1	2
Progressive disease, n	1	0	0	1
Missing, n	0	1	1	1
ORR, % (95% CI)	44 (20, 70)	80 (52, 96)	67 (22, 96)	77 (50, 93)
DCR, % (95% CI)	94 (70, 100)	93 (68, 100)	83 (36, 100)	88 (64, 99)
OS rate at 24 mo, % (95% CI)	51 (23, 74)	65 (35, 84)	80 (20, 97)	31 (10, 55)
Median PFS, mo (95% CI)	9.0 (4.3, 21.4)	7.0 (5.5, 18.6)	NE (4.3, NE)	6.9 (4.9, 10.1)

Abbreviations: CI, confidence interval; DCR, disease control rate; NE, not estimable; ORR, objective response rate.