Tislelizumab Combined With Chemotherapy as First-Line Treatment in Chinese Patients (Pts) With Advanced Lung Cancer

Jie Wang[1], Jun Zhao[2], Zhijie Wang[1], Zhiyong Ma[3], Jiuwei Cui[4], Yongqian Shu[5], Zhe Liu[6], Ying Cheng[7], Shiang J. Leaw[8], Jian Li[8], Fan Xia[8]

[1]National Cancer Center/Cancer Hospital, Chinese Academy of Medical Sciences & Peking Union Medical College, Beijing, China; [2]Key Laboratory of Carcinogenesis and Translational Research (Ministry of Education, Beijing), Department of Thoracic Medical Oncology, Peking University Cancer Hospital & and Institute, Beijing, China; [3]The Affiliated Cancer Hospital of Zhengzhou University/Henan Cancer Hospital, Zhengzhou, China; [4]The First Hospital of Jilin University, Changchun, China; [5]Jiangsu Province Hospital, Nanjing, China; [6]Beijing Chest Hospital, Capital Medical University, Beijing, China; [7]Jilin Cancer Hospital, Changchun, China; [8]BeiGene (Beijing) Co., Ltd., Beijing, China

Objective Immune checkpoint inhibitors have shown antitumor activity in pts with NSCLC as monotherapy and in combination with chemotherapy. Tislelizumab is a humanized IgG4 monoclonal antibody to PD-1 specifically engineered to minimize FcϒR binding on macrophages, possibly minimizing negative interactions with other immune cells. In a phase 1 study (NCT02407990), tislelizumab was generally well tolerated and showed antitumor activity; 200 mg IV Q3W was established as the recommended dose.

Method This phase 2 study (NCT03432598) with safety run-in and dose-expansion phases assessed tislelizumab with platinum (plt)-based chemotherapy as first-line treatment for Chinese pts with lung cancer. All pts received tislelizumab at 200 mg Q3W + plt doublet (4–6 cycles) until disease progression. Nonsquamous (nsq) NSCLC pts received pemetrexed (PMX) + plt Q3W (4 cycles) followed by PMX maintenance; squamous (sq) NSCLC pts received *A*) paclitaxel (PXL) + plt or *B*) gemcitabine + plt Q3W, and SCLC pts received etoposide + plt Q3W. Tumor response (RECIST v1.1) and safety/tolerability were evaluated.

Result As of 21 Feb 2018, 48 pts (median age, 62 yr [range 36–75]; 71% male; 71% current/ former smokers) received tislelizumab (median 3 cycles [range 1–7]); 44 pts remain on treatment. A total of 34 pts had ≥1 post-baseline assessment; and across all cohorts partial responses (PR) were observed (**Table**). The most frequent AEs were chemotherapy-related hematologic toxicities. Commonly reported grade ≥3 treatment-related AEs (TRAEs) were neutropenia (21%) and anemia (12.5%); grade ≥3 immune-related AEs were pyrexia (6%) and rash (6%). One sq-NSCLC pt (*A*) experienced fatal myocarditis/myositis following 1 cycle of PXL/plt + tislelizumab 200 mg Q3W; all other TRAEs were resolved by drug interruption (n=15), discontinuation (n=4), or appropriate treatment.

	nsq-NSCLC (n=9)	**sq-NSCLC [*A*] (n=12)**	**sq-NSCLC [*B*] (n=5)**	**SCLC (n=8)**	**Total (N=34)**
PR (all)	4	9	4	5	22
PR with confirmation	1	4	4	4	13
Presented as No. of pts with ⩾1 post-baseline assessment/cohort					

Conclusion Tislelizumab, in combination with plt doublets, demonstrated preliminary antitumor activity and was generally well tolerated in pts with advanced lung cancer.