

**Title:** Examining the Impact of Tislelizumab Added to Platinum Doublet Chemotherapy on Health-Related Quality of Life in Patients with Non-Squamous NSCLC

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### **Background:**

Platinum plus pemetrexed chemotherapy is one of the most widely accepted treatment options for patients with non-squamous non-small cell lung cancer (nSQ-NSCLC) without *EGFR* mutations or *ALK* rearrangements. This study is based on the clinical trial (NCT03663205) assessing the effects of the addition of tislelizumab to platinum doublet chemotherapy on the health-related quality of life (HRQoL) of patients with nSQ-NSCLC.

### **Methods:**

Patients in this open-label, multicenter Phase 3 study were randomized to two arms: tislelizumab + platinum-pemetrexed (Arm T+PP) or platinum-pemetrexed alone (Arm PP). HRQoL was measured using EORTC-QLQ-C30 global health status (GHS/qol) and QLQ-LC13. Mean score changes from baseline to week 12 (cycle 5, combination therapy stage) and week 18 (cycle 7, maintenance stage) were compared between the two arms.

### **Results:**

A total of 334 nSQ-NSCLC patients were randomized (Arm T+PP: n=223; Arm PP; n=111). Patients were 74% male with a median age of 61 years (range 25 - 75). Baseline characteristics were comparable across the two treatment arms and were representative of the target patient population. GHS/QoL improved in Arm T+PP at cycle 5 [mean change (standard deviation) = 0.7(23.06)] and cycle 7 [2.8(19.57)] and declined in Arm PP at both timepoints [cycle 5: -3.8(15.53); cycle 7: -3.4(18.71)]. Furthermore, patients in Arm T+PP experienced larger reductions in coughing, chest pain, dyspnea, and arm/shoulder pain symptoms; whereas, Arm PP experienced numerically higher reductions in "pain in other parts". Other symptoms remained similar between the two groups. (Table 1).

### **Conclusion:**

The addition of tislelizumab to platinum-based chemotherapy was associated with improvements in nSQ-NSCLC patients' HRQoL, especially in general health status and most importantly in disease specific symptoms of coughing, chest pain, and dyspnea.

Table 1. Mean Change from Baseline for the subscales of the QLQ-LC13.

<b>QLQ-LC13 Subscale</b>	<b>Cycle</b>	<b>Arm T+PP mean change (SD)</b>	<b>Arm PP mean change (SD)</b>
Alopecia	Cycle 5	5.7 (20.72)	5.5 (20.80)
	Cycle 7	6.2 (20.94)	5.6 (19.15)
Coughing	Cycle 5	-13.4 (29.10)	-5.5 (22.92)
	Cycle 7	-16.2 (27.24)	-5.6 (25.70)
Chest Pain	Cycle 5	-5.7 (22.78)	-3.2 (20.16)
	Cycle 7	-6.9 (22.62)	-2.5 (20.32)
Dysphagia	Cycle 5	0.2 (11.05)	0.5 (8.77)
	Cycle 7	-1.1 (11.85)	0.0 (9.16)
Dyspnea	Cycle 5	-1.5 (16.42)	2.0 (11.32)
	Cycle 7	-2.1 (16.32)	4.1 (13.53)
Hemoptysis	Cycle 5	-3.1 (13.05)	-4.1 (12.35)
	Cycle 7	-4.0 (12.76)	-3.7 (13.99)
Pain in Arm or Shoulder	Cycle 5	-7.3 (23.46)	-3.2 (19.38)
	Cycle 7	-8.2 (27.29)	-2.5 (24.10)
Pain in Other Parts	Cycle 5	-3.3 (24.55)	-5.0 (21.28)
	Cycle 7	-5.6 (26.31)	-7.4 (21.15)
Peripheral Neuropathy	Cycle 5	-1.5 (13.80)	2.3 (13.98)
	Cycle 7	-0.2 (15.20)	3.1 (14.86)
Sore Mouth	Cycle 5	0.8 (13.86)	3.2 (13.79)
	Cycle 7	2.0 (16.03)	5.6 (14.11)