Background: KRAS G12C NSCLC is an orphan disease. There is a considerable debate whether treatment approaches should be tailored in advanced KRAS G12C-mutated NSCLC. We report on a large real-world outcomes analysis of 1L KRAS G12C-mutated NSCLC with a clinical decision support tool, Tempus xT assay, to guide personalized treatment.

Methods: This was a retrospective real-world study of >1500 consecutive patients with stage IIB-IV NSCLC who had KRAS G12C-mutated NSCLC and were treated in the US and Europe between 2016-2022. Tempus xT assay was used to select for KRAS G12C-mutated NSCLC stratiﬁed by PD-L1 status.

Results: Median OS of TPS <50 and treated with CT + P was 11.97 ± 1.57 months, compared to 16.81 ± 2.50 months for TPS >50 (HR 2.14, p=0.03). Median OS for CT + P + P was 24.59 ± 2.35 months, compared to 16.97 ± 2.50 months for either CT or P (HR 2.52, p=0.02). Subgroup analyses were performed using Cox model stratified by median OS (Outcomes Analysis).

Conclusions: Tempus xT assay is a clinical decision support tool to guide personalized treatment of patients with KRAS G12C-mutated NSCLC.

Abstract # 9136

Presented at ASCO 2023

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