

Examining Longitudinal Practice Patterns in the Use of ANTI-PD-1 and ANTI-PD-L1 Inhibitors As First-LINE Therapy in NON-SMALL Cell LUNG Cancer Patients in the US

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OBJECTIVES : Immune checkpoint inhibitors targeting the programmed cell death protein-1 (PD-1) and programmed death-ligand 1 (PD-L1) axis (collectively referred to as PD(L)1i) have demonstrated unprecedented clinical activity in patients with non-small cell lung cancer (NSCLC). This US-based real-world study examined changes in the landscape of first-line therapies for NSCLC since the introduction of PD(L)1i.

METHODS : NSCLC patients initiating first-line treatment were identified in the IBM MarketScan® database (5/1/2017-1/31/2020). Patients were assigned to one of four cohorts based on first-line therapy: PD(L)1i monotherapy, chemotherapy only, PD(L)1i + chemotherapy, or targeted therapy for patients with actionable driver mutations.

RESULTS : A total of 4,425 NSCLC patients starting first-line treatment during the study timeframe were identified: PD(L)1i monotherapy = 606 (13.7%), chemotherapy only = 1,903 (43.0%), PD(L)1i + chemotherapy = 1,353 (30.6%), targeted therapy = 563 (12.7%), with average age 62 years (SD= 10.26) and 50% male. PD(L)1i monotherapy was highest in 2017 (26.4%) and declined every 6 months to a low of 15.8% in the second half of 2019. A similar decline in utilization was observed for chemotherapy only (34.5% in 2017; 12.8% in the second half of 2019). These declines were alongside an increase in the use of PD(L)1i in combination with chemotherapy from 12.6% in 2017 to 24.2% in the second half of 2019. In 2017, 18%, 63%, and 19% received PD(L)1i monotherapy, chemotherapy only, and PD(L)1i + chemotherapy, respectively, compared to the second half of 2019 when 14% ,36%, and 49% received PD(L)1i monotherapy, chemotherapy only, and PD(L)1i + chemotherapy, respectively.

CONCLUSIONS : Since the approval of PD(L)1i for NSCLC, their use has significantly increased for first-line treatment, especially in combination with chemotherapy. However, a substantial fraction of patients still received chemotherapy without immunotherapy despite guideline recommendations. More research is needed to better understand these changes in practice patterns.
