933 **REAL-WORLD TREATMENT PATTERNS AND CLINICAL OUTCOMES IN PATIENTS WITH METASTATIC NSCLC AFTER RECEIVING FIRST-LINE PEMBROLIZUMAB WITH PEMETREXED/PLATINUM CHEMOTHERAPY IN THE US ONCOLOGY NETWORK**

[1]Jerome Goldschmidt, [2]Srinivas Annavarapu, [2]Divea Venkatasetty, [3]Melissa Santorelli, [3]Thomas Burke*, [4]Nathan Pennell. [1]*The US Oncology Network, Blacksburg, VA, United States*; [2]*Ontada, Irving, TX, United States*; [3]*Merck & Co., Inc., Rahway, NJ, United States*; [4]*Cleveland Clinic, Cleveland, OH, United States*

**Background** Pembrolizumab-pemetrexed-platinum is a standard of care in previously untreated metastatic non-squamous non-small cell lung cancer (NSCLC) based on significantly longer overall survival (OS) compared to pemetrexed-platinum in the Keynote 189 clinical trial.[1] In Keynote 189, 77% of patients received maintenance pemetrexed after induction while real-world studies in the United States (US) using the Flatiron Health database observed only 44-48% of patients received pemetrexed beyond cycle 4.[2-4] This study aimed to further describe treatment patterns and clinical outcomes in metastatic non-squamous NSCLC patients receiving first-line pembrolizumab-platinum-pemetrexed in the US community oncology setting.

**Methods** First-line metastatic non-squamous NSCLC patients without actionable alterations (ECOG 0-2, known PD-L1 expression) starting pembrolizumab-platinum-pemetrexed between May 10, 2017, and August 31, 2020, within The US Oncology Network, were retrospectively identified and described using structured data. Patients who completed the 4-6 induction cycles without disease progression and continued pembrolizumab, with or without maintenance pemetrexed, were further examined using chart review. Continuation pembrolizumab patients were followed until earliest of August 31, 2021, last visit, or date of death. Patient characteristics and treatment patterns were summarized using descriptive statistics. Real-world time on treatment and OS were evaluated using Kaplan-Meier (KM) methods.

**Results** In the induction cohort (figure 1, n=751), 532 patients completed induction (71%) and among them, 50% (266/532) received continuation pembrolizumab with maintenance pemetrexed based on review of the structured data. The median (95% confidence interval [CI]) times on pembrolizumab and pemetrexed treatments were 5.1 (4.6-5.7) months and 4.2 (3.5-4.6) months from start of induction, respectively. In the continuation pembrolizumab cohort (figure 1, n=241), the median (95% CI) OS was 20.3 (13.8-26.2) months from start of continuation pembrolizumab. In the continuation pembrolizumab cohort, 64% received maintenance pemetrexed and 36% received pembrolizumab alone. Patients receiving maintenance pemetrexed were more commonly <75 years of age, male, PD-L1 <1%, and had more metastatic sites than those receiving pembrolizumab alone (table 1). Reasons for pemetrexed discontinuation were most frequently noted as progressive disease (38%) and toxicity (29%) in patients who received maintenance pemetrexed and partial response (68%) and completion of planned therapy (53%) in patients who received pembrolizumab alone.

**Conclusions** Reasons for pemetrexed discontinuation and patient characteristics varied for patients receiving continuation pembrolizumab with maintenance pemetrexed relative to those receiving continuation pembrolizumab alone. More information is needed to understand clinical decision making around pemetrexed discontinuation in the real-world community oncology setting, extension to other clinical settings, and associated impact on clinical outcomes.

## REFERENCES

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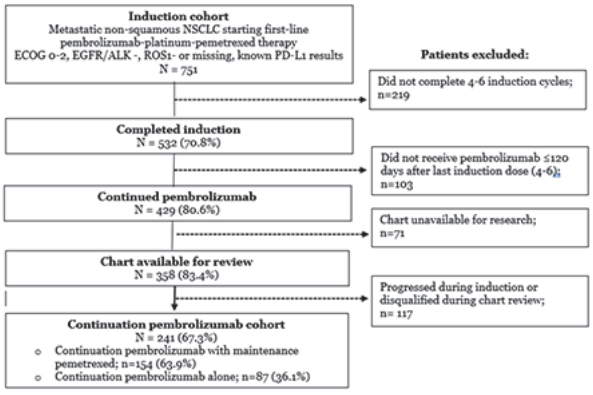
**Ethics Approval** The study was approved by US Oncology, Inc. Institutional Review Board, approval number 21-017E-2021-02-01-01.




**Abstract 933 Figure 1** Construction of study sample

**Abstract 933 Table 1** Characteristics of patients in the continuation pembrolizumab cohort by maintenance pemetrexed exposure

| Variable | Pembrolizumab + maintenance pemetrexed | Pembrolizumab alone |
|---|---|---|
| **Total patient count** | 154 | 87 |
| **Median age at diagnosis (Min, Max)** | 68 (33,85) | 69 (52,88) |
| **Age group, N (%)** | | |
| <75 years | 122 (79.2%) | 58 (66.7%) |
| ≥75 years | 32 (20.8%) | 29 (33.3%) |
| **Gender, N (%)** | | |
| Male | 82 (53.2%) | 39 (44.8%) |
| **Smoking history, N (%)** | | |
| Never smoker | 15 (9.7%) | 12 (13.8%) |
| Current or former smoker | 121 (78.6%) | 65 (74.7%) |
| Not documented | 18 (11.7%) | 10 (11.5%) |
| **Practice location, N (%)** | | |
| Midwest | 40 (26.0%) | 22 (25.3%) |
| Northeast | 13 (8.4%) | 1 (1.1%) |
| South | 45 (29.2%) | 30 (34.5%) |
| West | 56 (36.4%) | 34 (39.1%) |
| **ECOG performance score, N (%)** | | |
| 0-1 | 109 (70.8%) | 66 (75.9%) |
| 2 | 14 (9.1%) | 11 (12.6%) |
| Not documented | 31 (20.1%) | 10 (11.5%) |
| **PD-L1 expression, N (%)** | | |
| Tumor proportion score >=1% | 90 (58.4%) | 63 (72.4%) |
| Tumor proportion score <1% | 62 (40.3%) | 23 (26.4%) |
| Not documented | 2 (1.3%) | 1 (1.2%) |
| **Charlson comorbidity score, N (%)** | | |
| 0 | 84 (54.5%) | 49 (56.3%) |
| 1-2 | 64 (41.6%) | 34 (39.1%) |
| 3+ | 6 (3.9%) | 4 (4.6%) |
| **Count of metastatic site(s) at index, N (%)** | | |
| 1 | 33 (21.4%) | 26 (29.9%) |
| 2 | 66 (42.9%) | 36 (41.4%) |
| 3 | 36 (23.4%) | 18 (20.7%)) |
| 4+ | 19 (12.3%) | 7 (8.0%) |

http://dx.doi.org/10.1136/jitc-2022-SITC2022.0933