

# Capsule Summary

## Real World Evidence with First Line Pembrolizumab Monotherapy for Advanced NSCLC with PD-L1 Expression $\geq 50\%$

- Lung Cancer is the third most common cancer in the United States. It remains the leading cause of death in men and women.
- Immune checkpoint inhibitors have revolutionized cancer management. These drugs are a part of immunotherapy which ensures the destruction of the cancer cells by the immune system of our body.
- Pembrolizumab, Nivolumab, Atezolizumab, Durvalumab, Cemiplimab, and Avelumab are the drugs from this class that has been approved by the US FDA for the treatment of different cancers. These drugs target a pathway called the PD-1 (Programmed cell death protein 1)/PD-L1 (Programmed death-ligand 1).
- The PD-1 inhibitor pembrolizumab (Brand name- Keytruda) especially received wide media coverage as it helped cure former US president Jimmy Carter who was suffering from metastatic melanoma (skin cancer) which had spread to his liver and brain.
- In 2019, the PD-1 inhibitor Pembrolizumab was approved by the US FDA as a first-line monotherapy for the treatment of Non-Small Cell Lung Cancer (NSCLC). The PD-1/PD-L1 inhibitors class of drugs has revolutionized cancer management and has emerged as a major class of drugs for the treatment of different cancers
- A study was recently published that evaluated the real-world time on treatment (rwToT), overall and by KRAS mutation status, with first-line pembrolizumab monotherapy for advanced non-small cell lung cancer (NSCLC) in real-world oncology practice in the US.

### The summary of the study is as follows:

**Methodology:** Using de-identified electronic medical record data, the researchers studied patients with ECOG performance status (PS) of 0–2 who initiated pembrolizumab (1 November 2016 to 31 March 2020) for advanced NSCLC with programmed death-ligand 1 (PD-L1) expression  $\geq 50\%$  and without EGFR/ALK/ROS1 genomic alterations. The data cutoff was 31 March 2021, and the median study follow-up was 34 months.

### Results:

- The Kaplan–Meier median rwToT with first-line pembrolizumab monotherapy was 7.4 months (95% CI, 6.3–8.1) for 807 patients with PS 0–1
- The above results were consistent with the Key Note trial where the median treatment duration was 7.9 months.
- The median rwToT for 237 patients with PS 2 was 2.1 months (95% CI, 1.4–2.8).
- Median rwToT in patients with KRAS-mutated and KRAS wild-type nonsquamous NSCLC and PS 0–1 was 7.6 months and 7.0 months, respectively

### Conclusion:

Study findings suggested that there was the long-term benefit of first-line pembrolizumab monotherapy for advanced NSCLC with PD-L1 expression  $\geq 50\%$  in real-world settings in the US, particularly for patients with good performance status at the start of therapy, irrespective of KRAS status

The complete article can be found at  
<https://www.mdpi.com/2072-6694/14/4/1041/htm>

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