**Comparison of progression free survival (PFS) of patients with lung cancer treated with immuno-oncology (IO) drugs under real-world-conditions in oncological practices with published data of appropriate pivotal studies.**

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**Introduction**: IO therapies are one the most important innovation in the treament of patients with lung cancer in the last 30 years. At time-point of approval data availability was mostly limited to patients treated in pivotal studies. But patients with lung cancer treated under real-world conditions can differ in several individual parameters (e.g. age, performance status, concomittant diseases) and also in requirements of therapy guidance from patients treated in pivotal studies, so that the data from pivotal studies could not transfer to all patients under real world conditions automatically. To evaluate the actual efficacy of therapies under real-world conditions, PFS of IO therapies from patients with lung cancer in oncological practices were compared with data of appropriate pivotal studies. **Methods**: From 01/2017 – 04/2021 longitudinal data of patients treated with Pembrolizumab (n=235) in 1°line NSCLC, Nivolumab (n=107) in 2°line NSCLC and Atezolizumab (n=49) in 1°line SCLC were collected by n = 25 oncological practices within a continiously running data project of the “Stiftung Deutsche Onkologie”. For evaluation of efficacies data and curves for PFS of these patients were compared with data and curves of the pivotal studies for the IO drugs in the related indications. **Results:** The follow-up times for IO under real-world conditions in oncological practices were 10 – 24 months (mo). For Pembrolizumab+CTX in 1°line N-PECA (n=108 pat., FU 14 mo.) median PFS in oncological practices was 10,0 mo. (compared to 9,0 mo. in Keynote-0189), for Pembrolizumab+CTX in 1°line PECA (n=18 pat., FU 10 mo.) median PFS was 7,6 mo. (8,0 mo. in Keynote-0407), for Pembrolizumab alone in 1°line NSCLC with PD-L1 ≥50% (n=109 pat., FU 20 mo.) median PFS was 12,1 mo. (10,3 mo. in Keynote-024), for Nivolumab in 2°line NSCLC (n=107 pat., FU 24 mo.) median PFS was 4,8 mo. (3,5 mo. in CheckMate-017) and for Atezolizumab+CTX in 1°line SCLC ED (n=49 pat., FU 13 mo.) median PFS was 6,8 mo. (5,2 mo. in IMPower-133).

**Conclusions:** Despite the lower number of patients, but with mostly comparable follow-up times we found at least comparable or sometimes better PFS values for patients treated with IO in lung cancer under real-world conditions. Although patients are mostly older (in average + 5-7 years at start of therapy) compared to patients in the related pivotal studies, IO therapies are running very well in oncological practices.