CLINICAL OUTCOMES OF IMMUNOTHERAPY CONTINUED BEYOND RADIOGRAPHIC PROGRESSION IN OLDER ADULTS WITH ADVANCED NON-SMALL CELL LUNG CANCER

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Background While the clinical outcomes of immune checkpoint inhibitor (ICI) use in older adults with advanced-stage non-small cell lung cancer (NSCLC) have been described, the role of ICI use continued beyond disease progression (BDP) remains to be well defined for this population. This retrospective single-center study explored the clinical outcomes of continuing ICIs BDP among older adult patients with advanced NSCLC.

Methods Using MD Anderson's Gemini Lung Cancer database, we retrospectively reviewed the clinical outcomes of older adults (≥ 70 years) diagnosed with advanced-stage NSCLC treated with anti-PD-(L)1 monotherapy from March 2015 through April 2019 to correlate clinicopathologic features with clinical outcomes. Clinical therapy responses were evaluated by Response Evaluation Criteria in Solid Tumors, version 1.1 (RECIST v1.1). Toxicities were assessed using Common Terminology Criteria for Adverse Events (CTCAE), version 5. Patients treated BDP were defined as individuals receiving ICIs for ≥ 8 weeks prior to documentation of progression who subsequently remained on ICIs for ≥ 6 weeks.

Results Of the 159 older adults meeting the inclusion criteria, 33 (21%) received ICIs BDP (64% male, median age 74.9 years (70.1–82.0) at the start of ICI treatment, 3 received first-line ICI therapy). Most patients were former (85%) or current (6%) smokers. 79% had adenocarcinoma histology. The median duration of immunotherapy continued BDP was 7.1 months (95% CI: 3.0–8.2). After a follow-up of 30.1 months, the median overall survival (mOS) was 31.5 months (95% CI: 16.5–not reached). Eight (24%) received local consolidative radiotherapy with a median duration of ICI BDP of 8.2 months (95% CI: 1.9–13.3). Twenty-five (76%) did not receive local consolidative therapy and achieved a median duration of ICI BDP of 4.1 months (95% CI: 2.3–7.8). Six (18%) exhibited pseudo-progression (i.e. delayed response to immunotherapy with decreased tumor burden on subsequent radiologic studies), with 4 achieving "stable disease" as best response and 2 achieving a partial response. The median duration of immunotherapy continued beyond pseudo-progression was 11.7 months (95% CI: 7.1–35.7), and the mOS was 26.2 months (95% CI: 16.5–40.0). Patients treated with ICI BDP most commonly experienced fatigue (18%), pneumonitis (12%), rash (9%), and hypothyroidism (9%). Three patients (9%) experienced grade 3 or higher toxicities (one grade 3 arthralgias and two grade 3 pneumonitis).

Conclusions ICI-use BDP in older adults with advanced NSCLC may benefit a subset of patients. Additionally, local consolidative therapy with radiation may offer prolonged duration of ICI treatment.

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Ethics Approval This study was approved and conducted in accordance with the institutional review board at the University of Texas MD Anderson Cancer Center; approval number (PA13-0589).

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