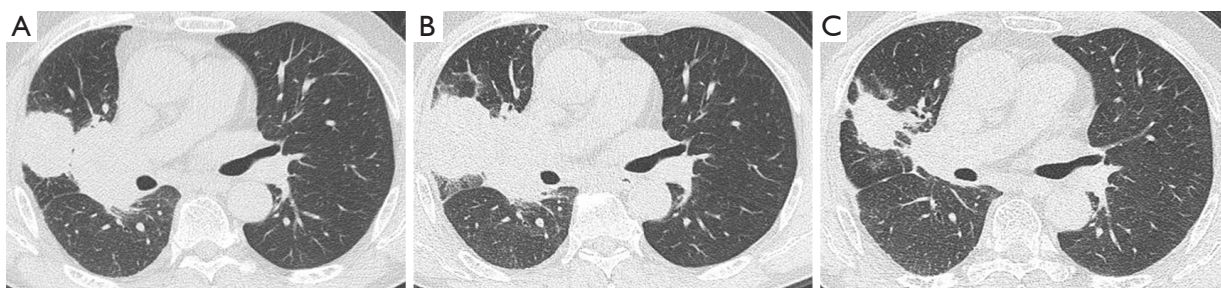


**Figure S1** Chest CT scans following two cycles and four cycles of nivolumab and ipilimumab treatment. Chest CT scans were performed at baseline (A), after two cycles of nivolumab and ipilimumab treatment (B), after four cycles of nivolumab and ipilimumab treatment (C). Image (A) shows the primary lesion in the left lower lung. Image (B) shows that the lesion in the left lower lung increased in size after two cycles of nivolumab and ipilimumab treatment. Image (C) shows that the lesion in the left lower lung reduced in size after four cycles of nivolumab and ipilimumab treatment. CT, computed tomography.



**Figure S2** Chest CT scans following four and eight cycles of nivolumab and ipilimumab treatment. Chest CT scans were performed at baseline (A), after four cycles of nivolumab and ipilimumab treatment (B), after eight cycles of nivolumab and ipilimumab treatment (C). Image (A) shows the primary lesion in the right upper lung. Image (B) shows that the lesion in the right upper lung increased in size after four cycles of nivolumab and ipilimumab treatment. Image (C) shows that the lesion in the right upper lung reduced in size after eight cycles of nivolumab and ipilimumab treatment. CT, computed tomography.

**Figure S3** Proposed diagnostic-therapeutic algorithm for PsP. This flowchart illustrates the proposed diagnostic-therapeutic algorithm for managing pseudoprogression (PsP) in lung cancer patients treated with immune checkpoint inhibitors (ICIs). It outlines the stepwise approach, including initial assessment using iRECIST, biomarker analysis, imaging studies, and multidisciplinary team (MDT) evaluation. The algorithm guides decision-making on whether to continue immunotherapy, perform a biopsy, or provide symptomatic support based on specific clinical criteria. TDT\*: tumor doubling time; Conflicting multimodal results\*\*: imaging progression (CT/MRI) conflicts with biomarker improvement (IL-8↓, ctDNA↓) or functional imaging inactivity (PET-CT SUV <2.5); New lesions on MRI/CT lack metabolic activity on PET-CT; Dynamic trends (e.g., IL-8/ctDNA↑) contradict imaging stability. iRECIST: immune-related response evaluation criteria in solid tumors; ECOG: Eastern Cooperative Oncology Group (performance status); CBC: complete blood count; CRP: C-reactive protein; IL-8: interleukin-8; ctDNA: circulating tumor DNA; CT: Computed Tomography; PET-CT: positron emission tomography-computed tomography; MRI: magnetic resonance imaging; iCPD: immune-confirmed progressive disease.



















