

EP07.37: Safety and feasibility of immunotherapy in elderly patients with resectable lung cancers in the surgical setting

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Introduction

- Neoadjuvant, adjuvant, and perioperative immunotherapy have recently been increasingly adopted as standard treatment options for patients with resectable locally advanced lung cancer.
- Evidence from clinical trials in elderly patients remains limited, and real-world data in the surgical setting are also limited.
- In particular, immune-related adverse event (irAE) is a major concern in this population.
- This study aimed to evaluate the safety and feasibility of immunotherapy in the surgical setting for elderly patients in clinical practice.

Methods

- Design: retrospective single-center analysis
- Patients: those who received at least one cycle of neoadjuvant, adjuvant, and perioperative immunotherapy regimens in the surgical setting at our institution from 2022 to 2025.
- Group:
Elderly (≥75 years old, n = 12)
Non-elderly (<75 years old, n = 20)
Ages were adopted at treatment initiation.
- Endpoints:
a) Incidence rate of any grade of irAE
b) Grade ≥3 of irAE,
c) Treatment complete rate
irAE was defined as adverse events suspected to be immune-mediated by treating physicians.

Results

Table 1. Treatment setting and patient characteristics

	Elderly (n = 12)	Non-elderly (n = 20)
Neoadjuvant	1 (8.3%)	3 (15.0%)
Adjuvant	6 (50.0%)	9 (45.0%)
Perioperative	5 (41.7%)	8 (40.0%)
Age (median, range)	77 (76-85)	65 (49-74)
Sex, male	9 (75.0%)	16 (80.0%)
Histology		
➢ Adenocarcinoma	6 (50.0%)	10 (50.0%)
➢ Squamous cell carcinoma	4 (33.3%)	6 (30.0%)
➢ Other	2 (16.7%)	4 (20.0%)
Smoking history	11 (91.7%)	17 (85.0%)
PD-L1 (%)		
➢ <1	0 (0%)	5 (25.0%)
➢ 1-49	4 (33.3%)	3 (15.0%)
➢ 50-	7 (58.3%)	12 (60.0%)
➢ NA	1 (8.3%)	0 (0%)

Figure 1. Incidence rate of irAE

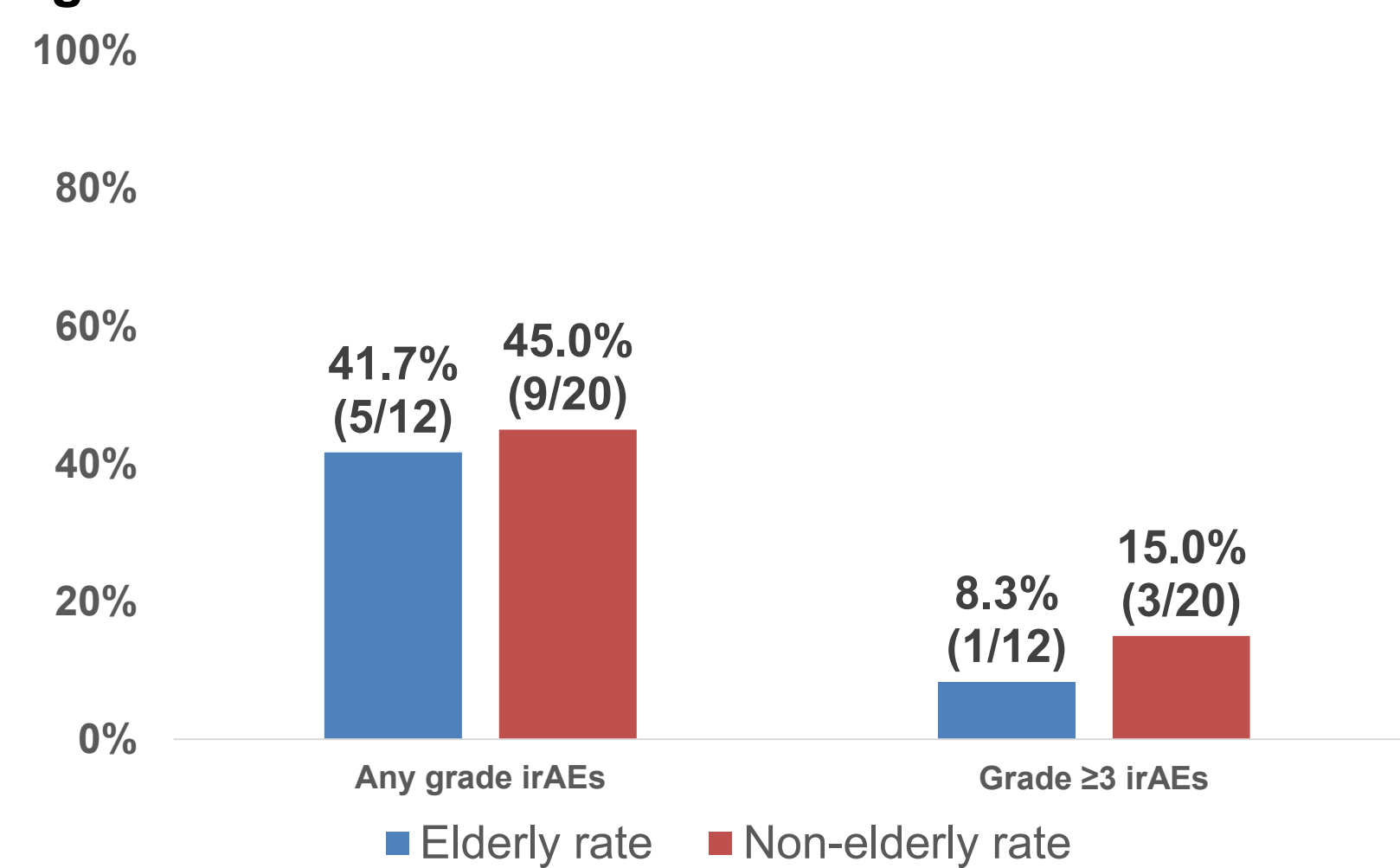


Figure 2. Treatment course

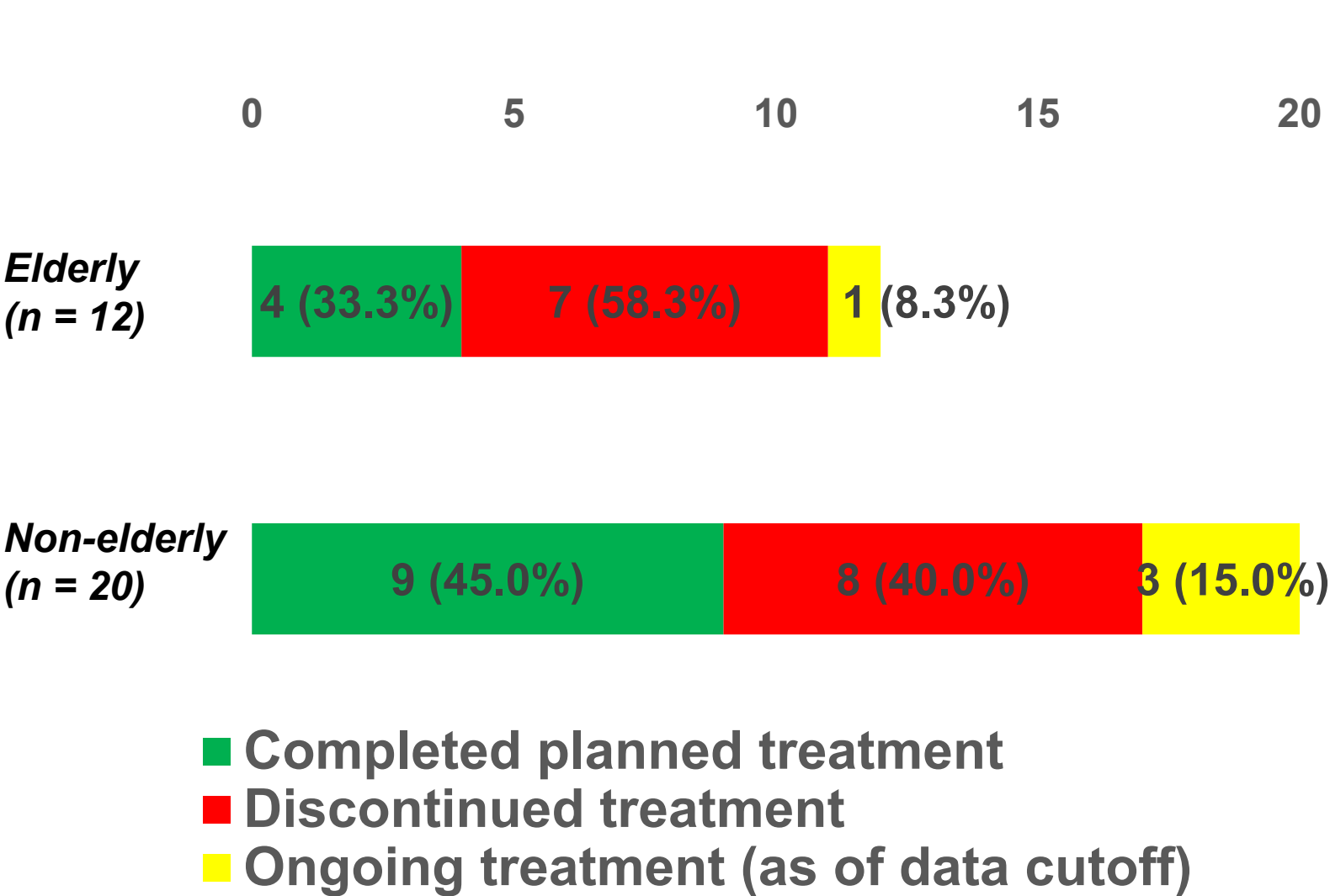


Table 2. Reasons of treatment discontinuation

	Elderly (n = 7)	Non-elderly (n = 8)
➢ Adverse events	3 (42.9%)	5 (62.5%)
➢ Progression of disease	1 (14.3%)	2 (25.0%)
➢ Decline of performance status	1 (14.3%)	0 (0%)
➢ Patient refusal	2 (28.6%)	1 (12.5%)

Discussion

- The incidence rate of any grade or ≥grade 3 irAE and treatment discontinuation rate of the elderly group were comparable with that of the non-elderly group.
- IPSOS trial showed the safety and efficacy of immunotherapy compared to chemotherapy for Stage IV non-small-cell lung cancer ineligible for treatment with a platinum-containing regimen including elderly population¹. Immunotherapy was associated with fewer grade 3-4 treatment-related adverse events and treatment-related deaths.
- Real-world data showed that chemo-immunotherapy for advanced stage lung cancer increased the incidence of ≥ grade 3 irAEs compared with immunotherapy alone².
- Immunotherapy regimen in the surgical setting contain a part of platinum-based chemotherapy. In case of elderly patients, switch to immunotherapy alone may be important according to their conditions.
- This study may have been affected by treatment-selection and management biases, as clinicians might have avoided pursuing full completion of immunotherapy in elderly patients when tolerability was a concern.

Reference

1. Lee SM, et al. Lancet. 2023 5;402:451-463
2. Tsukita Y, et al. JAMA Oncol. 2024 1;10:439-447.

Artificial Intelligence (AI) Use Disclaimer
ChatGPT was used for language refinement.

Conclusions

The incidence and severity of irAE, as well as treatment discontinuation, were comparable between elderly and non-elderly patients in the surgical setting. Neoadjuvant, adjuvant, and perioperative immunotherapy may be feasible in carefully selected elderly patients.