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INTRODUCTION

Treatment-related pneumonitis is a potentially severe pulmonary complication with incidence rates varying according to the treated population and therapeutic modality. Clinical presentation ranges from asymptomatic findings to life-threatening respiratory failure requiring invasive mechanical ventilation. It is frequently underrecognized in early stages, often leading to diagnosis in advanced stages. Pneumonitis remains a diagnosis of exclusion, requiring comprehensive clinical and radiologic assessment, investigation of infectious, cardiac conditions, and exacerbations of underlying lung diseases. Management is mainly based on corticosteroids, thus additional immunosuppressive agents may be required.

METHODS

Design:
A retrospective cohort study was conducted on patients managed by a thoracic oncology group for treatment-related pneumonitis at a university hospital in Southern Brazil, from 2024 to 2026.

DISCUSSION AND CONCLUSION

Key Takeaway Message

- Most pneumonitis cases occurred in patients treated with immune checkpoint inhibitors and with a history of tobacco use. Most cases were severe (grade ≥ 3), requiring hospitalization and respiratory support; nevertheless, most patients responded to corticosteroid therapy and achieved favorable outcomes, most often hospital discharge.

Future Direction for Research

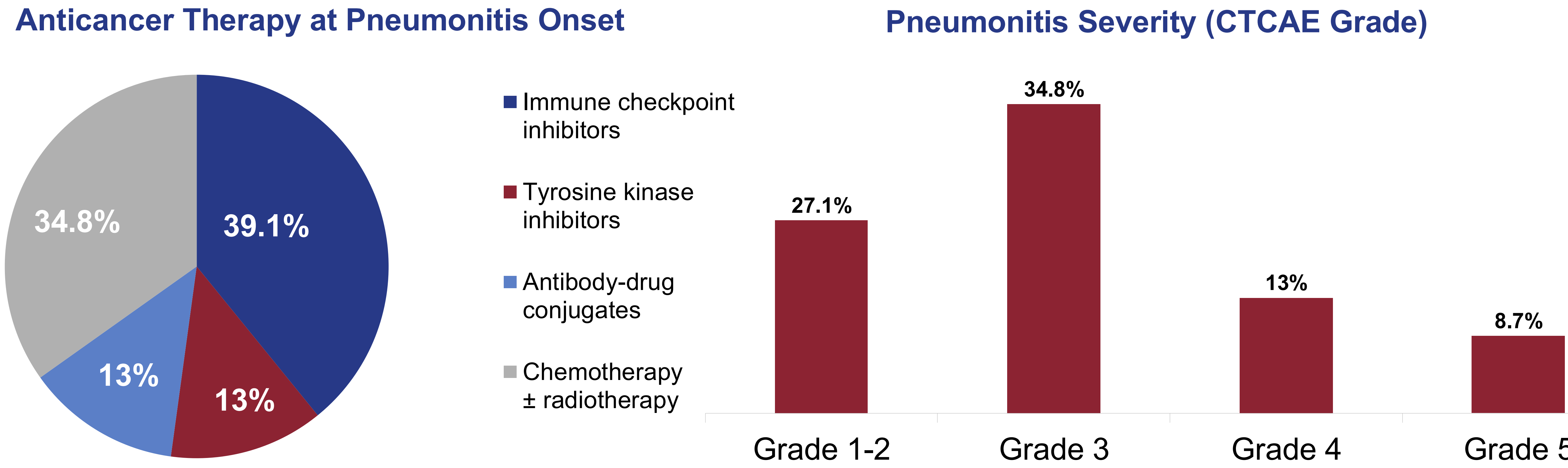
- Given the retrospective design and limited sample size, further studies are warranted to better characterize risk factors, optimal management strategies, and clinical outcomes associated with treatment-related pneumonitis.

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RESULTS

- Cohort**
- A total of 23 patients were included: 47.8% had primary lung malignancies and 52.2% had other tumor types. Median age was 63 years; 56.5% female, 43.5% male.
- Anticancer Therapy**
- 39.1% received immune checkpoint inhibitors, 13% tyrosine kinase inhibitors (TKIs), and 13% antibody-drug conjugates (ADCs); the remainder received chemotherapy with or without radiotherapy.
- Severity (Toxicity Grade)**
- 34.8% grade 3, 13% grade 4, 8.7% grade 5, and 21.7% grade 1-2.
- Respiratory Support**
- 30.4% required low-flow oxygen via nasal cannula, 13.7% required high-flow nasal oxygen (HFNO), and 8.7% required invasive mechanical ventilation; the remainder did not require oxygen therapy.
- Treatment**
- Systemic corticosteroids were administered in 95.7% of cases (31.8% received IV methylprednisolone). Only one patient was steroid-refractory and required infliximab.
- Outcomes**
- Median length of hospital stay was 7.5 days. Hospital discharge was the most frequent outcome; among hospitalized patients, two deaths occurred (in-hospital mortality 15.7%).
- Smoking Status**
- Former smokers predominated (39.1%), followed by never-smokers (34.8%) and current smokers (13.0%).



There are no conflicts of interest for this presentation from any of the authors.