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Fatigue among lung cancer patients treated with atezolizumab: a systematic review and meta-analysis

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INTRODUCTION & AIM

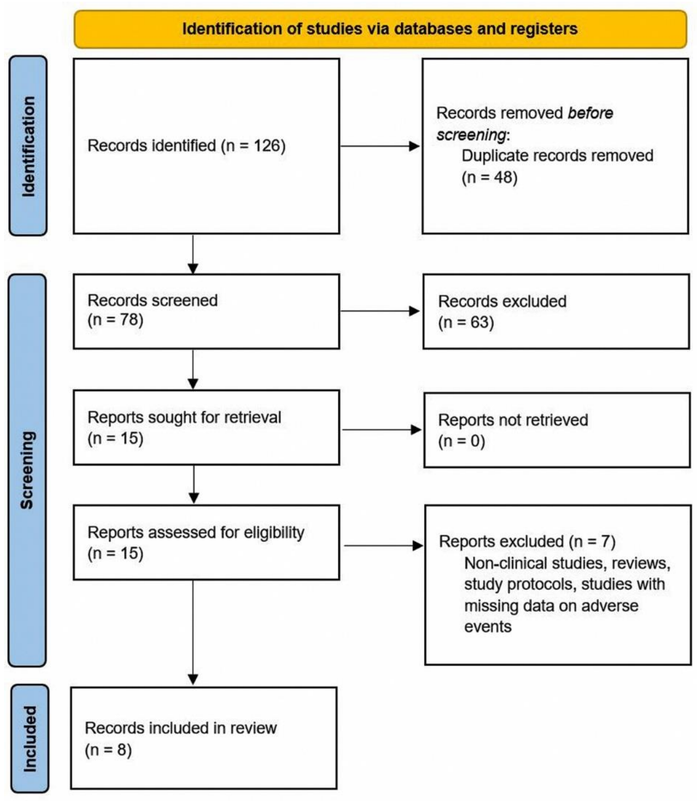
Atezolizumab, a PD-L1-targeting monoclonal antibody, has been increasingly utilized in the treatment of various malignancies, including lung cancer. Despite its clinical benefits, adverse events such as fatigue are commonly reported. Our study aimed to quantify the prevalence of fatigue among lung cancer patients undergoing treatment with atezolizumab.

METHOD

A comprehensive literature search was conducted using Medline (via PubMed), Scopus, Web of Science, and Cochrane Library, using free keywords and MeSH terms related to atezolizumab, fatigue, lung cancer, and adverse events. Clinical studies reporting the epidemiology of fatigue among lung cancer patients treated with atezolizumab were included. Data extraction and quality assessment were independently performed by two reviewers using the JBI extraction and critical appraisal tools. Prevalence rates were pooled using a random-effects model due to expected heterogeneity. This study's reporting adhered to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) 2020 guidelines.

RESULTS & DISCUSSION

Eight clinical trials were identified. All included studies were phase I or II clinical trials, predominantly of non-small-cell lung cancer patients. The prevalence of all-grade fatigue was found to be 25.56% (95%CI: 17.14% – 36.3%; I2 = 83.52, p < 0.01), with grade 3 or higher fatigue reported in 2.55% (95%CI: 1.25% – 5.13%; I2 = 0, p = 0.55) of the patients. Although subgroup pooling was not attainable due to high heterogeneity, the comparative analysis favored a higher prevalence of fatigue among patients with small-cell lung cancer (SCLC).



CONCLUSION

Fatigue is a prevalent adverse event in lung cancer patients treated with atezolizumab, affecting approximately one in every four patients. Reports of severe fatigue warrant careful monitoring and management. Further studies are required to determine the underlying mechanisms and develop effective interventions to prevent or manage this adverse effect properly.

FUTURE WORK / REFERENCES

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Keywords: adverse events; atezolizumab; fatigue; lung cancer; meta-analysis

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