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Quality of life in cancer patients treated with immune checkpoint inhibitors: A meta-analysis

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Background

Immune checkpoint inhibitors (ICIs) have transformed treatment of a variety of different cancer types. Published patient-reported quality of life (QOL) data have been largely limited to phase III trials. The size and heterogeneity of this literature can make patient education about ICIs difficult. The aim of this meta-analysis was to quantitatively summarize change QOL in patients receiving ICI for cancer.

Methods

Two meta-analyses were conducted on publications of PD-1/PD-L1 and/or CTLA-4 inhibitors that provided mean-level QOL using the EORTC QLQ-C30 and/or EQ-5D. One meta-analysis examined change in QOL in patients treated with ICIs from pre-treatment to follow-up approximately 12-24 weeks later. The second meta-analysis compared QOL at follow-up in ICI versus non-ICI regimens in randomized trials. Moderator analyses examined ICI regimen, comparator regimen, disease site, age, gender, follow-up period, and risk of bias.

Results

Of 20,323 publications identified, 26 met inclusion criteria. The first meta-analysis, encompassing 26 studies and 6,965 patients, indicated QOL did not change over time in patients treated with ICIs ($P > .05$). Significant moderators included ICI regimen, cancer type, sex, and risk of bias (P values $< .05$). In the second meta-analysis of 16 studies and 6,536 patients (ICI $n=3,588$, non-ICI $n=2,948$), better QOL was observed in ICI versus non-ICI regimens ($P < .05$). Significant moderators included ICI regimen, cancer type, age, and risk of bias (P values $< .05$).

Conclusions

This study is among the first to quantitatively summarize QOL in patients treated with ICIs. Findings suggest ICI recipients report overall stable QOL and better QOL than patients treated with non-ICI regimens. Results confirm that despite immune-related toxicities, ICIs are generally well-tolerated.

Legal entity responsible for the study

The authors.

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Disclosure

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