

Immune related adverse events in endometrial cancer: A biomarker for treatment efficacy?

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Topic: Endometrial

Objectives

Immunotherapy (IO), either as single agent or in combination (ex: pembrolizumab +/- lenvatinib), is a critical tool in the treatment of advanced/metastatic endometrial cancer (EC). In other tumor types, the incidence of immune related adverse events (irAEs) correlates with improved outcomes, however this has never been fully explored in endometrial cancer (EC); we sought to explore the real world incidence of irAEs and treatment efficacy of IO in EC.

Methods

Following IRB approval, we reviewed all patients with EC receiving IO in our institution. Clinico-demographic data were abstracted from medical records. irAEs were defined according to CTCAE v5.0, and treatment response defined by RECIST v1.1. Data were analyzed using Chi square, Fisher's exact, and t-tests, with Kaplan-Meier estimate for survival analysis.

Results

64 patients were included in analysis. 46 (72%) received pembrolizumab with lenvatinib (len/pem) and 18 (28%) received pembrolizumab monotherapy (pembro). Baseline characteristics were similar between groups. irAEs were observed in 83% of len/pem compared to 50% receiving pembro. The most frequent irAE was hypothyroidism (n = 43, 66%), followed by hyperthyroidism (11%), and dermatitis (7%). Grade 3+ irAE led to hospitalization or discontinuation in 11% and 9%, respectively. IrAEs were similar between groups other than hypothyroidism (83 vs 28%, OR 12.35 [3.4 - 44.5], $p < .0001$). The median time from treatment start to onset of irAE was 58 vs 112 days (len/pem vs pembro, $p = .419$). In comparing patients with irAEs and those without irAEs, there was no significant difference in the duration of treatment (8.5 vs 5 cycles, $p = 0.11$). Objective response rate was similar, but clinical benefit (ORR + SD) was significantly higher in those with irAEs (68 vs 41%, OR 3.14 [1.0 - 9.9], $p = .0495$). 2 year PFS was significantly higher among patients with irAEs (HR 0.48 [0.24 - 0.93], $p = .045$).

Conclusions

In EC patients on IO, irAEs overall have similar frequency in len/pem compared to pembro alone, however hypothyroidism is significantly more prevalent with len/pem. Clinical benefit and PFS were significantly higher among patients with irAEs, suggesting irAEs could be a clinical finding correlating with treatment response, underscoring the importance of toxicity management when clinical benefit is seen.

Abstract Table or Graph



Progression Free Survival (2yr)

