

## **ABSTRACT**

Endometrial carcinosarcoma (ECS) is a rare and aggressive mixed-type epithelial and mesenchymal tumor. This study focused on the histological appearance, loss of DNA mismatch repair (MMR) protein expression, and aberrant p53 expression in the epithelial component, and overall prognosis of 57 cases with ECS. Histologically, 21 and 36 cases exhibited low-grade (endometrioid grade 1 and grade 2) and high-grade (others) epithelial components, respectively. In a Kaplan–Meier analysis, patients with a high-grade epithelial component exhibited worse progression free survival (PFS), compared to those with a low-grade component. Although the former group also exhibited worse overall survival, the difference was not significant. Thirty-six cases exhibited aberrant p53 expression. Of these, 5 cases exhibited focally aberrant p53 expression in carcinomatous components with diffuse aberrant p53 expression in mesenchymal components. Aberrant expression of p53 did not show significant association with prognosis. Six patients with MMR-deficiency exhibited relatively better PFS. In conclusion, a low-grade epithelial component is a superior predictor of the PFS of ECS, compared to MMR protein and p53 expression status. In some cases of ECS, *TP53* mutation may be a late event associated with histogenesis of the sarcomatous component.

**KEYWORDS**

endometrial carcinosarcoma, p53, MMR deficiency, prognosis, tumorigenesis