

# Treatment of ovarian carcinosarcoma and the utility of hyperthermic intraperitoneal chemotherapy (HIPEC): two patient cases.

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## Abstract

Ovarian carcinosarcoma, also referred to as malignant mixed Mullerian tumor (MMMT), is a rare and aggressive subtype of ovarian cancer, accounting for less than 5% of all ovarian cancer diagnoses [6]. These tumors are characterized by both epithelial and mesenchymal components, contributing to their complex biology and poor prognosis. Ovarian carcinosarcoma often presents at advanced stages and has a median overall survival of less than two years, underscoring the need for innovating treatment strategies [1]. Despite advancements in the management of more common ovarian cancer subtypes, research on ovarian carcinosarcoma remains limited due to its rarity.

Standard treatment for ovarian carcinosarcoma includes a combination of cytoreductive surgery and platinum-based chemotherapy [11]. However, emerging therapies such as hyperthermic intraperitoneal chemotherapy (HIPEC) have garnered interest for their potential to improve outcomes. HIPEC involves the application of heated chemotherapeutic agents directly into the peritoneal cavity during surgery, aiming to target microscopic residual disease while enhancing drug penetration and cytotoxicity. While studies have demonstrated promising results for HIPEC in epithelial ovarian cancer, data specific to ovarian carcinosarcoma are sparse.

This paper presents a brief summary of the current understanding of ovarian carcinosarcoma, including its pathophysiology, clinical presentation, treatment options, and outcomes. This is the initial data collected in what will be a future formal literature review. Additionally, a case series is described, documenting two patients with ovarian carcinosarcoma who underwent HIPEC in conjugation with traditional cytoreduction and chemotherapy. These patients demonstrated an average progression-free survival time of 37 months, which is notable given the aggressive nature of this disease and the limited progression-free survival typically observed without HIPEC. These findings suggest that HIPEC may hold promise as a treatment modality for this rare malignancy, although further studies are needed to validate its efficacy and determine optimal patient selection criteria.