

Clinical Program Highlight

CYTOREDUCTIVE SURGERY AND HYPERTHERMIC INTRAPERITONEAL CHEMOTHERAPY (HIPEC)



Harveshp Mogal, MD
Associate Professor
Division of General
Surgery; Section Chief,
Complex Abdominal
Surgery

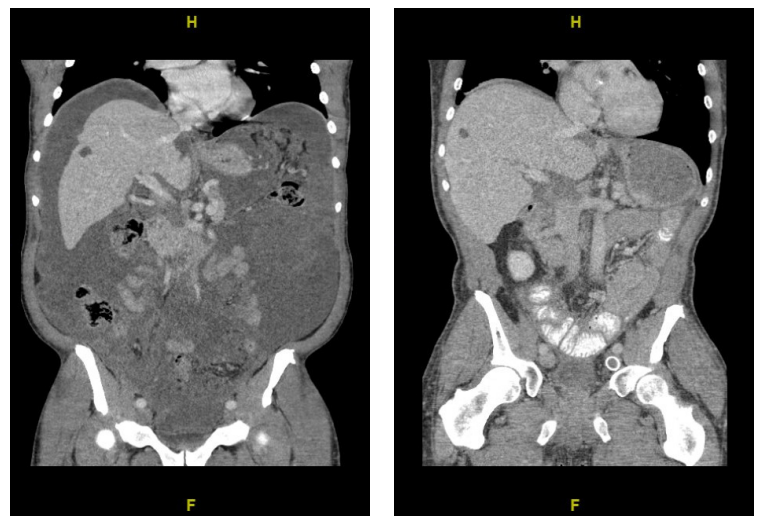
Patients with peritoneal cancer (also called peritoneal carcinomatosis), often present with advanced disease, and prognosis remains poor with most patients succumbing to their disease. These patients have little recourse to treatment options which focus mainly on systemic treatment to obtain disease control. Consequently, treatment of these patients has historically been approached with significant skepticism and therapeutic nihilism. In the last three decades, cytoreductive surgery (CRS) and hyperthermic intraperitoneal chemotherapy (HIPEC) has emerged as

a novel treatment modality, which in well-selected patients can provide significant improvement in cancer survival, quality of life and, in some instances, cure. The procedure consists of two parts: cytoreduction and HIPEC. During cytoreduction, tumors along the peritoneum are removed via peritoneal stripping or resection, including potential multi-visceral resection, to achieve complete removal of all macroscopic disease. This is followed by HIPEC, the circulation of heated chemotherapy within the abdomen via a closed-circuit pump. HIPEC utilizes the plasma-peritoneal barrier to achieve high concentrations of chemotherapy within the abdomen with minimal systemic absorption, a strategy that ensures maximal efficacy with minimal systemic side effects. Hyperthermia not only achieves direct cellular cytotoxicity, but also potentiates the action of chemotherapeutic agents during intraperitoneal perfusion. This combined multimodal treatment has been utilized in patients with appendiceal tumors (including mucinous neoplasms/pseudomyxoma peritonei and appendiceal adenocarcinoma), colorectal, gastric, ovarian (including primary peritoneal and fallopian tube) cancer and peritoneal mesothelioma, with median survival between 40 months to 10 years depending on pathologic subtype.

Over the past decade, advancements in perioperative management and surgical techniques have led to significant improvement in postoperative outcomes after CRS/HIPEC. Multidisciplinary consultation, clinical expertise and institution experience are the key drivers of good surgical and oncologic outcomes. The HIPEC program at UW in partnership with the [Seattle Cancer Care Alliance](#), promises to be the [WWAMI](#) region's premier academic HIPEC program. The program will strive to provide

patient-centered, personalized care that is comprehensive, compassionate and evidence-based, with a focus on clinical excellence, education and research. The program is headed by surgical oncologist Dr. [Harveshp Mogal](#), Associate Professor of Surgery and Chief of the Section of Complex Abdominal Oncology, who brings significant expertise in CRS/HIPEC. Patients are evaluated within a multidisciplinary HIPEC clinic managed in conjunction with Dr. [Stacey Cohen](#), Associate Professor in the Division of Medical Oncology, as well as multiple ancillary providers including a dietician, physical therapist, surgical oncology nurse, advanced practice provider and wound/ostomy care nurse. In close collaboration with gynecologic oncology and led by Dr. [Heidi Gray](#), Professor and Chief of Gynecologic Oncology, and Dr. [Barbara Goff](#), Professor and Chair of Gynecology and Obstetrics, patients with advanced epithelial ovarian cancer will receive consultation and management if deemed appropriate candidates for CRS/HIPEC. Through the development of standardized pathways for perioperative care, pathologic reporting and postoperative surveillance, the UW HIPEC program will facilitate consistency in patient management while also ensuring flexibility to meet individual patient needs. Participation in clinical and translational research will provide access to novel treatments and opportunities to improve oncologic outcomes. Provider and patient-focused educational events will foster engagement with community partners and spread awareness regarding the program's role as a leader in the management of advanced peritoneal disease.

The creation of the UW HIPEC program is a crucial step in advancing UW's mission of improving the health of our patients by providing outstanding, multidisciplinary clinical care and being recognized as a national leader in advanced abdominal cancers.



CT scan showing before (left) and after (right) CRS/HIPEC in a patient with mucinous carcinoma peritonei from appendiceal cancer.