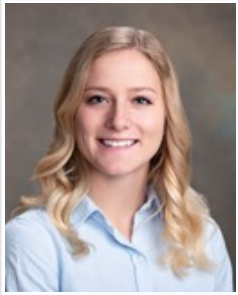


# Robotic Assisted Cytoreductive Surgery (CRS) and Hyperthermic Intraperitoneal Chemotherapy (HIPEC) in the treatment of patients with Peritoneal Carcinomatosis is Safe and Feasible in a Tertiary Rural Care Center



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**Research area:** Surgical Oncology

**Background:** Peritoneal carcinomatosis (PC) is a cancerous spread from any organ to the lining of the peritoneal cavity. This disease was traditionally considered terminal, but is currently treated with cytoreductive surgery and hyperthermic intraperitoneal chemotherapy (CRS/HIPEC). The surgery is predominantly performed via long abdominal incision and requires a prolonged post-operative stay. The robotic assisted surgical technique may benefit a selected subset of patients with minimal PC by potentially reducing post-operative stay. An adequately trained surgical team is a prerequisite. This study aims to assess initial experiences, safety, and feasibility trends with the robotic assisted CRS/HIPEC at a tertiary rural health system.

**Methods:** Clinical data were abstracted from medical records of all patients undergoing CRS/HIPEC from 2008 to present at the Marshfield Clinic Health System (MCHS) and used to populate a prospectively maintained HIPAA compliant database. Patients undergoing both open and robotic procedures had demographic and surgical characteristics descriptively summarized.

**Results:** 8 robotic and 34 open surgeries were conducted on patients with PC at MCHS. The median age of patients was similar in the two cohorts and the majority (66%) were female. Median surgery time was 508 and 575 minutes for open and robotic surgery, respectively. Median blood loss was 400 mL for open and 100 mL for robotic surgery. Median ICU stay for open and robotic surgeries was 2 and 0 days, respectively. Median hospital stay for open and robotic surgeries was 9 and 7 days, respectively. The grade three and higher complication rate in both cohorts was 29% and 25%, respectively. No deaths occurred in either cohort.

**Conclusions:** These preliminary results demonstrate robotic assisted CRS/HIPEC as a safe and feasible procedure for a tertiary rural care center with properly trained surgical teams. The study needs further validation with increased cohort size and replication at other centers.