MEDICAL POLICY STATEMENT
North Carolina Marketplace

Policy Name & Number	Date Effective
Hyperthermic Intraperitoneal Chemotherapy-NC MP-MM-1374	01/01/2024
Policy Type	
MEDICAL	

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A. Subject

Hyperthermic Intraperitoneal Chemotherapy

B. Background

Patients with digestive system or ovary cancer have an increased risk of developing peritoneal metastases (PM). Hyperthermic intraperitoneal chemotherapy (HIPEC) is part of a multimodal treatment plan for PM. It is employed within the peritoneal cavity following cytoreductive surgery (CRS) of the abdominal cavity through a traditional open or laparoscopic approach. The hyperthermic agents are heated to 40 42 degrees Celsius. Hyperthermia is selectively lethal for malignant cells and the effects of heat can be synergistic with those of other anticancer treatments such as chemotherapy. This infusion facilitates the spread of the chemotherapeutic solution throughout the entire peritoneal cavity, avoiding compartmentalized spread that would be likely following post-operative adhesion formation.

Cytotoxic drugs most frequently used in HIPEC include mitomycin, doxorubicin, cisplatin, oxaliplatin and paclitaxel These drugs are combined with a carrier of isotonic saline solutions or dextrose-based peritoneal dialysis solutions. Approximately 3 to 5 liters are infused into the peritoneum during the procedure.

The extent of tumor load is estimated through imaging methods, usually by computed tomography (CT) and magnetic resonance imaging (MRI) or preoperative laparoscopy. To describe peritoneal carcinomatosis with a universally accepted reference standard, the Peritoneal Cancer Index (PCI) was introduced initially for carcinomatosis of colorectal cancer and mesothelioma. PCI is calculated as the sum of scores in 13 abdominal regions. Each region receives a score of 0-3 based on the largest tumor size. Scores range from 0 to 39, with higher scores indicating more widespread and/or larger tumors in the peritoneal cavity. In colorectal cancer, PCI is the most important prognostic factor, showing a linear relationship with overall survival. A consensus on a cutoff value for treatment has not been clearly established. However, surgery is not recommended for patients who have colorectal carcinomatosis with a PCI higher than 20. In ovarian cancer, assessment of PCI is not a standard of care in clinical practice or in surgical studies. However, van Driel et al (2018) conducted a Phase III study to investigate whether the addition of HIPEC to interval CRS would improve outcomes among patients who were receiving neoadjuvant chemotherapy for stage III epithelial ovarian cancer. The median recurrence free survival was 10.7 months in the surgery group and 14.2 months in the surgery plus-HIPEC group. Seventy-six patients (62%) in the surgery group and 61 patients (50%) in the surgery-plus-HIPEC group had died at a median follow-up of 4.7 years (hazard ratio, 0.67; 95% CI, 0.48 to 0.94; P=0.02). The median overall survival was 33.9 months in the surgery group and 45.7 months in the surgery-plus-HIPEC group.

HIPEC is completed with an open or closed abdominal technique. The open abdominal technique occurs at the end of CRS and peritoneal catheters are placed through the abdominal wall. The skin edges are suspended through use of a self-retaining retractor to maintain the open space in the abdominal cavity. The temperature probes are

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