



## Laparoscopic Hyperthermic Intraperitoneal Chemotherapy is Safe for Patients with Peritoneal Metastases from Gastric Cancer and May Lead to Gastrectomy

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Dear editor,

We read with great interest the recently published article “Laparoscopic Hyperthermic Intraperitoneal Chemotherapy Is Safe for Patients With Peritoneal Metastases From Gastric Cancer and May Lead to Gastrectomy” by Newhook, et al.<sup>1</sup>

We congratulate the authors on the results for their cohort of patients treated with laparoscopic hyperthermic intraperitoneal chemotherapy (HIPEC). However, a careful reading of the manuscript shows several conceptual flaws that do not entirely support the conclusion of the study.

The patients enrolled in this study experienced gastric peritoneal metastasis (GPM) with microscopic (cytology-positive) or low-volume macroscopic disease (radiologically occult peritoneal metastasis [PM]). However, the authors fail to describe clearly the extension of PM, and most particularly the Peritoneal Cancer Index (PCI), known to be critical for assessment of the therapeutic approach needed. Chia et al.<sup>2</sup> reported the possibility of a cure (i.e., a disease-free interval longer than 5 years) for patients with GPM who undergo cytoreductive surgery (CRS) and HIPEC, especially when the PCI score is below 7 and CRS is macroscopically complete (CC0). In addition, laparoscopy for PM detection or staging often is criticized for its high rate of risk for non-access to the peritoneal cavity and

underestimation of the tumor burden by the PCI score, even when flexible endoscopy is used to avoid any surgical difficulty due to adhesion.<sup>3,4</sup>

The authors emphasize the importance of neoadjuvant HIPEC for localized GPM. However, strong fundamental and clinical evidence supports the practice of HIPEC after surgery for microscopic or macroscopic PM. Takebayashi et al.<sup>5</sup> have shown that negative peritoneal washing becomes positive for 60% of patients after curative gastrectomy is performed for localized gastric cancer and is associated with poorer peritoneal recurrence-free survival.

The use of adjuvant HIPEC eliminates free cancer cells that can be released into the peritoneal cavity during gastrectomy in advanced gastric cancer and prevents PM recurrences, as shown in the GASTRICHIP phase 3 study.<sup>6</sup> A study of 280 patients has shown that the adjunction of HIPEC after CRS for GPM is associated with increased overall survival (20 vs 6% at 3 years) without additional morbidity.<sup>7</sup>

Finally, the authors recommend repeated laparoscopic HIPEC for select patients with GPM before curative surgery or treatment for them in palliative settings. Pressurized intraperitoneal aerosol chemotherapy (PIPAC) is a new treatment method that allows intraabdominal drug delivery by laparoscopy and confers better distribution and tissue penetration than systemic administration or intraabdominal lavage. As a reliable technique, PIPAC allows surgery for patients with unresectable PM or improvement in overall survival with quality of life maintained in a palliating setting.<sup>8</sup> A randomized phase 2 study will evaluate this technique combined with systemic chemotherapy, specifically for unresectable gastric PM.<sup>9</sup>

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