

## **Oral Presentation 2 - Title: Application of Pressurized Intraperitoneal Aerosolised Chemotherapy in a tertiary academic center- a first real-world US case series**

**Author(s):** David Restle, MD Eleni Avramidou, Claire Parker, BS, Dunphy Mallory, Sherif Abdel-Misih, MD, Georgios Georgakis, MD

**Faculty Mentor(s):** Dr. Georgakis, Dr. Abdel-Misih

**Background:** Pressurized Intraperitoneal Aerosol Chemotherapy (PIPAC) is an innovative, minimally invasive approach to deliver chemotherapy directly into the peritoneal cavity, enhancing drug penetration while minimizing systemic toxicity. Emerging evidence highlights PIPAC's potential to improve outcomes in patients with advanced-stage malignancies, offering a new avenue where traditional systemic therapies have limited efficacy. Although there are clinical trials conducted at this moment in the US, to date there is no real-world data from US institutions.

**Methods/Research Design.** *A retrospective review of the first 22 procedures from 9/22/2023 to 10/11/2024 in 15 patients. One patient received 3 PIPACs, five received 2, and the rest one each. Five were females. Patient median age was 64 years (37-84), histology was appendiceal (9), Mesothelioma (2), stomach, biliary, gastric and colon. Six patients had previous surgery, whereas two of them had previous HIPEC. The median Karnofsky Performance Status was 90 (100-70), and the median PCI score was 26 (12-39). Indication in all patients was palliative treatment. Eleven patients (73.3%) had ascites. All of the patients were currently, or previously and could not currently tolerate, chemotherapy, and 4 patients were on FOLFOX-Bevacizumab, which did not stop for the procedure. Of the 22 procedures, 2 were performed with Doxorubicin (2.1mg/m<sup>2</sup>) and Cisplatin (10.5mg/m<sup>2</sup>) for the mesothelioma patients, whereas the rest were performed with Oxaliplatin 120mg/m<sup>2</sup>.*

**Results (or Preliminary Results, as applicable for a project in progress):** Twenty-two PIPAC procedures were performed in total. The median duration of each procedure was 112 min (86-163). There were no Grade 2 or above adverse effects at the index admission. Lab values were collected and no abnormalities were observed. Particularly for the patients with mesothelioma treated with cisplatin, renal protection with sodium thiosulfate was applied, and there was no adverse effect in the renal function. All patients tolerated diet on POD#1, and the median hospital stay was 33.6 hours (9.6-106.6). Two patients reported readmission to their local hospital due to bowel obstruction within 30 days, and one was readmitted for failure to thrive due to progression of disease. From the patients with ascites, there was symptomatic improvement of the ascites. From the patients who had repeat PIPAC, improvement was observed in the volume of ascites (patient with mesothelioma) and in the patient who had 3 procedures, there was observed biologic regression of the tumor.

**Conclusion (or Preliminary Conclusion, as applicable for a project in progress):** Our data in this first real-world case series in the US are indicative that PIPAC has a role in the treatment of peritoneal surface disease. More experience from more centers is warranted, in order to be able to perform clinical trials that will give this modality the opportunity to show its efficacy and potential.