

was 33 & 16 months and OS was not achieved in primary and the recurrent setting respectively. In Comparison CRS with IV group had a DFS & OS of 28 & 42 months whereas CRS with IP group showed 38 & 55 months respectively. Intraperitoneal therapy group had lesser overall recurrence compared to IV arm.

**Conclusions** CRS+IP & CRS+HIPEC group had lesser overall & peritoneal recurrences and better DFS than CRS+IV group. The role of hyperthermia for intraperitoneal chemotherapy in comparison to IP arm needs evaluation with well designed multi-institutional randomised study.

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### THE IMPACT OF USING NEAR-INFRARED ANGIOGRAPHY DURING RECTOSIGMOID RESECTION AND ANASTAMPSIS IN PATIENTS UNDERGOING GYNECOLOGIC CANCER SURGERY

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**Objectives** Reducing anastomotic leak rates after rectosigmoid resection and anastomosis is a priority in patients undergoing gynecologic oncology surgery. Therefore, we investigated the implications of performing near-infrared angiography (NIR) via proctoscopy to assess anastomotic perfusion at the time of rectosigmoid resection and anastomosis.

**Methods** We identified all patients who underwent rectosigmoid resection and anastomosis for a gynecologic malignancy between January 1, 2013 until December 31, 2018. NIR proctoscopy was assessed via the PinPoint Endoscopic Imaging System (NOVADAQ, Canada).

**Results** A total of 410 patients were identified, among which NIR was utilized in 134 (32.7%) patients. There were no statistically significant differences in age, race, BMI, type of malignancy or surgery, histology, FIGO stage, hypertension, diabetes, or pre-operative chemotherapy between NIR and non-NIR groups. All cases of rectosigmoid resection underwent stapled anastomosis. The anastomotic leak rate was 2/134 (1.2%) in the NIR cohort compared to 13/276 (4.7%) non-NIR (p=0.10). Diverting ostomy was performed in 9/134 (6.7%) NIR patients and 53/276 (19%) non-NIR patients (p<0.001). Post-operative abscesses occurred in 4/134 (6.0%) NIR patients and 44/276 (15.9%) non-NIR patients (p=0.004). The NIR cohort had significantly fewer post-operative interventional procedures (12/134, 9.0% NIR vs. 55/276, 20.0% non-NIR, p=0.01) and significantly fewer 30-day readmissions (15/134, 11.2% NIR vs. 60/276, 21.7% non-NIR, p=0.01).

**Conclusions** The use of NIR proctoscopy is a safe tool to assess anastomotic rectal perfusion after rectosigmoid resection and anastomosis with a low anastomotic leak rate of 1.2%. Its potential usefulness should be evaluated within randomized trials in patients undergoing gynecologic cancer surgery.

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### GX-188E, A THERAPEUTIC HPV VACCINE, IN COMBINATION WITH IMIQUIMOD OR IL-7-HYFC FOR TREATMENT OF HPV-16 OR HPV-18 RELATED CIN 3: RESULTS FROM PHASE 2 STUDY

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**Objectives** We conducted a prospective, randomized, phase 2 clinical trial of GX-188E, a therapeutic HPV vaccine in combination with Imiquimod (IMQ) or IL-7-hyFc for HPV-16 or -18 related CIN 3. The primary endpoint was to determine the histopathological regression to <CIN1 assessed at week 20 (W20), and at week 36 (W36). In addition, viral clearance, HPV E6/E7 specific T-cell response and Flt-3L concentration were also assessed.

**Methods** Hypothesis was that combination of GX-188E with IMQ or IL-7-hyFc could result in synergistic improvement of immune-mediated tumor clearance compared to GX-188E alone.

**Results** In total, 51 patients were randomized, and 1 dropout occurred due to pregnancy. Among 25 patients receiving GX-188E plus IMQ, 16 (64%) and 18 patients (72%) at W20 and W36 demonstrated histopathological regression, respectively. HPV clearance was observed in 13 (52%) and 15 patients (60%) at W20 and W36, respectively. On the other hand, in patients receiving GX-188E plus IL-7-hyFc, 4 (16%) and 11 out of 25 patients (44%) showed histopathological regression at W20 and W36, respectively.

The lower efficacy obtained in GX-188E plus IL-7-hyFc may be attributed to insufficient local delivery of IL-7-hyFc via transcytosis across mucosal layer due to its liquid formulation. Considering vaginal fluid may also disturb mucosal delivery pathway, development of appropriate formulation is necessary.

**Conclusions** To better understand the mechanism of systemic and local HPV-specific T cell responses induced by GX-188E, immunological analysis including intracellular cytokine staining PBMC, analysis of tumor infiltrating CD4/CD8 T cells and levels of CD69, CD103, and foxp3 are needed.