Results: From July 2018 to October 2020, 44 patients were accrued and completed the 2 stages of the study. They all met the inclusion criteria and were consented. 40 patients completed at least 1 treatment cycle and TME and entered the current analysis with a median follow-up period of 13.2 (range from 3.6 to 31.9) months. 1 of the 44 patients had disease progression shortly after finishing chemotherapy, so surgery was aborted, 2 patients voluntarily withdrew from the study directly before surgery after completing all their treatment cycles and 1 patient died after the 4th cycle of chemo-immunotherapy. The study population consisted of 26 (65%) males and 14 (35%) females with median age of 58.5 (31.0, 74.0) years. The primary endpoint results revealed that 15/40 patients (37.5%) achieved pCR (tumor regression grade (TRG) =0) as compared to the historical control group with pCR of 16% (p=0.025). In addition, 12/40 (30%) had a near complete response with TRG =1 (< 10% viable cells in tumor bed). In total, 27/40 patients (67.5%) had major pathologic response rate (mpRR) (TRG 0 and 1). As for safety, 43 out of 242 (17.7%) adverse events were serious adverse events (SAEs). Of the total SAEs, 25/43 (58.1%), 5/43 (11.6%) and 1/43 (2.3%) had a toxicity grade of 3,4 and 5, respectively. In addition, none of the 31 reported grade 3-5 SAEs were related to avelumab; 11 (35%) were related to TME (including 6 anastomosis leaks), 3 (10%) to post-ileostomy closure, and 17 (55%) were miscellaneous. In terms of SAE outcomes, only 1 (3%) treatment-unrelated SAE resulted in death (cardiopulmonary arrest) while 27 (87%) resolved without sequalae and 3 (10%) are still ongoing.

Conclusions: Based on this analysis, the primary endpoint was successfully met with significant improvement in pCR (37.5%, p=0.025) and mpRR rates in the setting of an acceptable safety profile. 3-year disease-free survival and overall survival will be reported later in the final study manuscript.

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SO-30 Efficacy and safety of neoadjuvant short-course radiation followed by mFOLFOX-6 plus avelumab for locally-advanced rectal adenocarcinoma: Averectal study

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Background: Total neoadjuvant therapy (TNT) for locally advanced rectal cancer is becoming an accepted approach over the last few years with increasing pathologic complete response (pCR) and compliance with chemotherapy in comparison with the current standard of care i.e., fluoropyrimidine-based chemoradiation followed by surgery and adjuvant chemotherapy. Sequential use of anti—PD-1/PD-L1 antibody after radiation therapy has demonstrated a synergistic effect in in vivo models leading to a decrease in size of irradiated and non-irradiated secondary tumors outside the radiation field (abscopal effect).

Trial design: Open-label, single-arm, multicenter, 2-stage phase II study.

Methods: This is an investigator-initiated, open-label, single-arm, multicenter, phase II study, adopting Simon's two-stage aiming at evaluating the pCR rate and safety of using short-course radiation therapy (25 Grays in 5 fractions), followed by 6 cycles of mFOLFOX-6 (oxaliplatin, 5-FU and leucovorin) plus avelumab, then total mesorectal excision (TME) 3-4 weeks after last dose in patients with locally-advanced, potentially resectable rectal adenocarcinoma.