



Western Surgical Association 2020 Annual Meeting

Monday, November 9, 2020
4:00pm – 6:15pm Pacific Time
– Virtual Meeting --

www.westernsurg.org | wsa@lp-etc.com | 913.402.7102

P 7. PREOPERATIVE CHEMOTHERAPY IS ASSOCIATED WITH WORSE OVERALL SURVIVAL IN OPERABLE COLON CANCER

Presenter: Avo Artinyan MD, MS | Adventist Health, Glendale

A Artinyan, Y Nasser, R Zhu, I Stettler, W Shen, F Alemi, J Cohen, N Seiser

Background: The FOxTROT trial suggested that preoperative chemotherapy may provide a survival benefit in patients with operable colon cancer. We examined the benefit of preoperative chemotherapy in patients with resected, non-metastatic colon cancer using a large nationwide cohort. We hypothesized that preoperative chemotherapy would provide a small survival benefit over postoperative chemotherapy.

Methods: The NCDB database (2004-2016) was queried for all patients with non-metastatic colon adenocarcinoma, treated with radical resection and chemotherapy in whom clinical stage was known. Treatment groups were categorized into preoperative vs. post-operative chemotherapy. Demographic, clinical and pathologic factors were compared between treatment groups. Because pretreatment EUS or MRI are not routinely performed for colon cancer, patients were broadly categorized into those with clinical localized disease (stages 1-2) and those with clinical nodal disease (stage 3). Overall survival was compared using the Kaplan Meier method stratified by clinical nodal status, and multivariate Cox-regression analysis controlling for confounding factors including age, comorbidity, clinical stage, and regional nodes examined.

Results: 49,255 patients were identified. The mean age of the population was 62.6+/- 12.5 years. 24,738 patients (50.2%) had clinical nodal disease. 1509 patients (3.1%) received preoperative chemotherapy, while the remainder (96.9%) received postoperative chemotherapy. Patients receiving preoperative chemotherapy were younger (60.4+/- 0.31 vs. 62.7+/- 0.06 yrs, preop vs. postop, respectively), more likely to be male (61% vs. 50%), had less comorbidity (80% vs. 74% Charlson-Deyo 0), lower grade disease (83% vs. 75% Grade 1-2), less clinical stage 3 disease (42% vs. 51%), less pathologic stage 3 disease (37% vs 76%) and lower mean lymph node harvest (17.8+/- 0.11 vs. 20.8+/- 0.04) (all p-values < 0.05). On Kaplan Meier analysis, preoperative chemotherapy was associated with significantly worse overall survival (median OS 100 vs. 136 months, preop vs postop, respectively, p<0.05). On stratified analysis, this difference was most pronounced in patients with clinical node negative disease. On multivariate analysis, preoperative chemotherapy was a significant independent predictor of worse overall survival (HR 1.5, p<0.001).



Western Surgical Association 2020 Annual Meeting

Monday, November 9, 2020
4:00pm – 6:15pm Pacific Time
-- Virtual Meeting --

www.westernsurg.org | wsa@p-etc.com | 913.402.7102

Conclusion: Preoperative chemotherapy is associated with worse survival compared to postoperative chemotherapy in patients with operable colon cancer, particularly in clinical node negative disease. This finding may be secondary to delayed surgery in the preoperative therapy group or may be due to more high-risk disease that cannot be accounted for by traditional risk factors. Prospective trials are necessary to evaluate the true benefit of preoperative chemotherapy in operable colon cancer.