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MASTERS IN CLINICAL INVESTIGATION PROGRAM

M.S.C.I. THESIS DEFENSE

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Improved Survival after Administration of Neoadjuvant Chemotherapy in Patients with Clinical Stage I/II Pancreatic Ductal Adenocarcinoma

Pancreatic ductal adenocarcinoma (PDAC) is the third leading cause of US cancer related deaths. As most cases of PDAC are diagnosed at an advanced stage, overall 5-year survival remains poor at 8%. To assess the oncologic benefit of a neoadjuvant chemotherapy (NAC) treatment strategy, patients with biopsy confirmed PDAC and clinical Stage I/II disease were identified retrospectively. The primary study endpoints were 1-year, 2-year, and median overall survival (OS). Kaplan-Meier survival curves were compared using the log-rank test. Over a four year period, 56 patients met inclusion criteria. The median OS for the entire cohort was 18.7 months. A total of 22 (39%) patients were managed with NAC and a potentially curative surgery (NAC+S); 34 (61%) received NAC alone. No difference was observed in 1-year survival (86% vs 68%: p=0.11). However, 2-year survival and median OS were greater in those completing NAC+S compared to NAC alone (2-year OS: 55% vs 21%: p=0.01 ; median OS: 28.8 months vs 17.3 months: p=0.05). Patients managed with NAC who were not candidates for surgical resection after restaging demonstrated a survival advantage compared to previously reported outcomes in historical controls. While patients completing all components of intended therapy had the most favorable oncologic outcomes, modern NAC may contribute a significant oncologic benefit in the overall treatment strategy for patients with Stage I/II PDAC, even if surgery is not ultimately pursued. This study further strengthens the argument for NAC protocols to be incorporated into the management of all stages of PDAC disease.