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Background: Strategies for locally advanced rectal cancer LARC usually consisted of neoadjuvant concomitant chemoradiotherapy (CRT) followed by adjuvant chemotherapy, or short-course radiotherapy (SCRT). TNT is a novel approach for LARC, with several randomized clinical trials exploring its role and paving the way for implementing this treatment strategy. Nevertheless, the COVID-19 pandemic represented a challenge for a timely diagnosis, implementation and follow-up of new treatment strategies in these pts.

Methods: Records of all the pts diagnosed with LARC and stage IV rectal cancer evaluated in the Oncology department of Vall d’Hebron University Hospital between Jan 1st, 2017 and Dec 31th 2021 were included. The period 2017-19 was considered pre-pandemic (PP) and 2020-2021 during-pandemic (DP). Patients with LARC receiving neoadjuvant and/or adjuvant treatment were analyzed, including those treated with SCRT, CRT, and TNT. Data regarding demographics, diagnosis and staging, preoperative treatment received, surgical outcomes, including treatment response, and pathological stage were collected.

Results: 390 patients were included (31.28% female, 68.71% Male, median age 69). LARC pts characteristics included 123 (31.54%) either cT4 or cN2, 59 low rectal cancers, 4 with signet ring cells. Neoadjuvant treatment was done in 160 pts (CRT and 59 pts (TNT). pCR was achieved in 20% and 22% for CRT, and TNT respectively (p0.041). Early CRT with 6.25% pCR. An increased ratio of stage IV pts compared to LARC was evident during the pandemic (stage IV 26.38% 2017-2019, 37.14% 2020-2021, p=0.044). The proportion of high risk LARC increased during pandemic (34.89% PP vs 39.04% DP, p=0.041). No difference was found in terms of pCR amongst the PP and DP patients (25.3% vs 27%, p=0.83) nor different strategies (TNT: 26.47% PP and 26.6% PD, p=0.98 and CRT 23.89% PP and 27.7% PD, p=0.82).

Conclusions: Efficacy of LARC neoadjuvant treatment measured by pCR was maintained in pts before and during COVID-19 pandemic despite an increasing proportion of new LARC high-risk pts. Evaluation of TNT impact in LARC outcomes was challenging because of pandemic confounding role. Real-world data in a post-pandemic setting is essential to evaluate outcome trends in LARC pts; an increase in high-risk LARC and metastatic pts should be expected.

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