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ABSTRACTS BOOK

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Initial absolute basophil, eosinophil and monocyte counts as potential predictive markers in locally advanced rectal cancer

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Standard treatment for locally advanced rectal cancer (LARC) is neoadjuvant chemoradiotherapy (nCRT) followed by surgery. Complete clinical (cCR) or pathologic response is registered in up to 30% of patients, using standard fractionation and total dose (TD) of 45-50.4 Gy. The aim of this study was to evaluate the hematological predictors of response to nCRT. We prospectively included 75 patients with LARC between June 2020 and January 2022. All patients were treated with long-course CRT. RT was delivered using a new approach, volumetric modulated arc therapy-simultaneous integrated boost with TD of 54 Gy. Concomitant chemotherapy (5FU, Leucovorine) was given during first and fifth week of RT. Patients were assessed for tumor response in the 8th week after CRT completion with pelvic MRI scan and rigid proctoscopy. For patients with a cCR and initially distant located tumor no immediate radical surgery was suggested. The pathohistological response after surgery was assessed according to classification by Mandard. Responders were defined as patients with cCR and TRG1 and TRG2 postoperative categories. Non-responders were patients classified as TRG3-5. We analyzed initial hematological parameters. A cCR group without operative treatment included 12 patients, and the responders group comprised 35 patients (46.64%). When we compared responders and non-responders according to initial hematological parameters, it was found that higher level of initial basophil, eosinophil and monocyte counts were associated with unfavorable response ($p = 0.003, 0.01, \text{ and } 0.005$ respectively). According to the cut-off values obtained by ROC analysis (0.055, 0.155, 0.57 respectively), a statistically significant difference in the response was confirmed. Baseline basophil, eosinophil and monocyte counts were found to be promising predictive factors associated with response to treatment, which can be routinely determined by automatic, low-cost and minimally invasive methods.

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