

Parameters for Predicting Tumour Response Following Neoadjuvant Chemoradiotherapy for Patients with Rectal Cancer

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Abstract

Introduction: Pathologic response following neoadjuvant chemoradiotherapy (nCRT) can vary from pathologic complete response (pCR), to tumour downstaging or minimum to no response. Our goal was to evaluate the parameters that could predict response to neoadjuvant therapy for patients with rectal cancer.

Method: We performed a retrospective study and reviewed the medical documentation for patients that received treatment for rectal cancer in our surgical department between 2014-2018 and received nCRT.

Results: A total of 98 patients were included in the study. 66 patients were males (67,3%) and 32 were females (32,7%). The mean age was 64,6 (39-87). The 48 months overall survival rate was 81,63% and the 48 months disease-free survival rate was 69,38%. Tumour grading was considered as a statistically significant parameter for evaluating the pathologic response. The tumours most likely to respond to radio-chemotherapy were G1 or G2 grade. T4 tumours compared with lesser T stages were less likely to achieve pathologic complete response. Elevated CEA levels predicted a poor pathologic response to nCRT.

Conclusion: Our study concluded that tumour related factors, biologic and imagistic findings such as tumour stage, lymph node, tumour differentiation grade and CEA levels can be used as parameters for predicting the tumour response following neoadjuvant therapy.

Key words: rectal cancer, neoadjuvant, chemoradiotherapy, predictive parameters, clinical response