

Morphological and Immunohistochemical Criteria of Tissue Response to Radiotherapy in Rectal Cancer

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Abstract

Aim: Given the context that rectal tumours respond to a certain degree to radiotherapy, a necessity arises for estimating a tumour's capacity to react to radiation from the very moment of diagnostic biopsy.

Material and Methods: We have histologically and immunohistochemically analysed tissues coming from 52 patients with rectal adenocarcinomas.

Results: Of the studied parameters, the ones presenting significant variation under radiotherapy in terms of statistics ($p < 0.05$) were: colloid type ($p = 0.001$), EGFR in the tumour ($p = 0.00045$), EGFR in the normal epithelium ($p = 0.0017$), VEGF in the tumour ($p = 0.0132$) and VEGF in the tumour stroma ($p = 0.030$).

Conclusions: Our study follows the same trends as the medical literature we have consulted regarding the variation of EGFR and VEGF with radiotherapy, and the distinct note of our study relies in the observation that normal stroma in case of rectal tumors also reacts to radiotherapy, sometimes more aggressively than the tumor itself, especially in which concerns the nerve and muscle fibers.

Key words: rectal cancer, radiotherapy, EGFR, VEGF

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