

## **The Effect of Neoadjuvant Radiotherapy on the Pathological Response in Patients with Rectal Cancer**

Angela Blajin, Daniel Alin Cristian, Andrei Popa, Vlad Filimon, George Halcu, Magdalena Bratu, Traean Burcos  
Department of Surgery, Coltea Clinical Hospital Bucharest, Romania

### **Abstract**

*Objective:* The aim of this retrospective study was to describe the long-term outcomes and the survival rate in patients who underwent neoadjuvant therapy for rectal cancer.

*Methods:* This is a retrospective study undertaken in a surgery department of an oncological clinical hospital. The study evaluated the data of all patients treated for rectal cancer between January 2014 and December 2018.

*Results:* Of 126 patients, thirteen patients with mean age of 58.3 years had a pathological complete response and were treated with neoadjuvant chemoradiotherapy. Ten patients (76.9%) underwent treatment with 45 Gy. One patient was treated with 51 Gy, one with 49.3 Gy, and 12 patients were treated daily with 1.8 Gy. One patient underwent a short course of 5 days with 5 Gy. Patients diagnosed and treated in 2016 had a survival rate of 54 to 57 months, in 2017 – 42 to 48 months and in 2018 – 29 to 34 months. For two patients with final pCR, the adjuvant treatment was given and the wait and watch policy was applied. Both patients were females, aged 51 and 66 years (mean age 58.5 years).

*Conclusion:* The frequency of pCR was similar to that in other published studies. The survival rate in our cohort was high, death occurring in two cases, one being the oldest patient in the study. We concluded that the long-term oncological control is excellent in patients who receive neoadjuvant treatment leading to improved OS, improved quality of life, and decreasing the recurrence rates.

**Key words:** rectal cancer, neoadjuvant chemoradiotherapy, survival rate