

Chapter 9

Neoadjuvant Radiotherapy For Rectal Cancer: Short-Course Radiation (SCRT) Vs. Long-Course Chemoradiation (LCCRT)

Sedenay OSKEROĞLU KAPLAN¹

INTRODUCTION

Currently, neoadjuvant therapy has become the standard treatment in locally advanced rectal cancer compared with postoperative modality due to both decreased side effect profile and increased local control and sphincter protection(-Sauer & et al., 2004). Long-course chemoradiotherapy (45–50.4Gy/25–28f) is the preferred treatment for rectal tumors especially in the majority of Eastern European countries and in the United States. Short-course radiotherapy (25Gy/5f), which is more economical and comfortable than long-term treatment, is preferred especially in Northern Europe. Both schedules are administered before surgery and are similar in radiation target volumes, but differ in terms of total radiation dose, fraction size, duration of treatment, concomitant chemotherapy, and timing of surgery. There is a strong evidence base for both SCRT and LCCRT, and it is considerable that the strongest support for either approach is from the countries in which the phase III trials were performed.

In this text it is focused on choosing treatment based on the individual circumstances rather than traditional routine decisions accompanied by evidence supporting the effectiveness of short-course and long-course radiotherapy.

EVIDENCE SUPPORTING THE EFFICACY OF SHORT-COURSE RADIOTHERAPY

The starting point of short-term neoadjuvant radiotherapy is the search for a treatment regimen that can be approved by the surgeons, which can be applied with a minimum delay to surgical treatment in Sweden. For this purpose, high dose per fraction was tested preoperatively with 1 week hypofraction regime (25 Gy/5f). In the pre-TME (total mezorectal exision) era The Swedish rectal can-

¹ Dr. Sedenay OSKEROĞLU KAPLAN Radyasyon Onkolojisi Kliniği Mehmet Akif İnan Eğitim ve Araştırma Hastanesi E-mail: oskarum@gmail.com

CONCLUSION

Selection the right treatment approach for patients with T1-T3 tumors and who are non-metastatic is complex. SCRT could be treatment choice when pCR is not the primary aim. SCRT with delayed surgery or adding consolidation may provide further possibilities. Furthermore, accurate staging before surgery, selection of appropriate neoadjuvant therapy, and sensitivity prediction to preoperative radiotherapy need to be well based.

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