

## Patterns of practice in the radiation therapy management of rectal cancer: survey of the Interregional Group Piedmont, Valle d'Aosta and Liguria of the "Associazione Italiana di Radioterapia Oncologica (AIRO)"

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### ABSTRACT

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**Aims and background.** To report the survey about the main aspects on the use of radiotherapy for the treatment of rectal cancer in Piedmont and Liguria.

**Methods and study design.** Sixteen centers (11 from Piedmont and 5 from Liguria) received and answered by email a questionnaire data base about clinical and technical aspects of the treatment of rectal cancer. All data were incorporated in a single data base and analyzed.

**Results.** Data regarding 593 patients who received radiotherapy for rectal cancer during the year 2009 were collected and analyzed. Staging consisted in colonoscopy, thoracic and abdominal CT, pelvic MRI and endoscopic ultrasound. PET/CT was employed to complete staging and in the treatment planning in 12/16 centers (75%). Neoadjuvant radiotherapy was employed more frequently than adjuvant radiotherapy (50% vs 36.4%), using typically a total dose of 45 Gy with 1.8 Gy/fraction. Concurrent chemoradiation with 5-fluorouracil or capecitabine was mainly employed in neoadjuvant and adjuvant settings, whereas oxaliplatin alone or in combination with 5-FU or capecitabine and leucovorin was commonly employed as the adjuvant agent. The median interval from neoadjuvant treatment to surgery was 7 weeks after long-course radiotherapy and 8 days after short-course radiotherapy. The pelvic total dose of 45 Gy in the adjuvant setting was the same in all the centers. Doses higher than 45 Gy were employed with a radical intent or in case of positive surgical margins. Hypofractionated regimens (2.5, 3 Gy to a total dose of 35-30 Gy) were used in the palliative setting. No relevant differences were observed in target volume definition and patient setup. Twenty-six patients (4.4%) developed grade 3 acute toxicity. Follow-up was scheduled in a similar way in all the centers.

**Conclusions.** No relevant differences were found among the centers involved in the survey. The approach can help clinicians to address important clinical questions and to improve consistency and homogeneity of treatments.

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**Key words:** management, rectal cancer, survey.

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