

## Phase II study of preoperative concurrent chemoradiotherapy (CRT) with irinotecan plus TS-1 in locally advanced rectal cancer

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### Introduction

Neoadjuvant chemoradiation therapy is widely considered a standard treatment for LARC. TS-1 and irinotecan(TI) are potent radiosensitizing agent and a well tolerated regimen. The primary aim was to assess the impact of preoperative radiation therapy combined with TI on the pathologic tumor response.

### Methods and materials

TS-1 70 mg/m<sup>2</sup> bid (Mon ~Fri) and irinotecan 40 mg/m<sup>2</sup> weekly were given concomitantly with pelvic conformal radiotherapy (1.8 Gy daily up to 45 Gy in 5 weeks). Patients (pts) were considered LARC if they had at least a T3/T4 rectal mass (as measured by rectal MRI) or the presence of peri-rectal lymph nodes >1 cm (N+). The pathologic tumor response was defined according to the Mandard Tumor Regression Grade (TRG) scale.

### Results

Between June 2006 and November 2007, 43 pts have been enrolled: 28 males and 15 females, median age 57 years. Stage at diagnosis was: mT4 7 pts, mT3 36 pts; 15 pts were mN- and 28 mN+; 11 pts were CRM+. Tumor location (from anal verge) was: < 5 cm in 25 pts; 5-10 cm in 8 pts; > 10 cm in 2 pts. 41 pts have completed the chemoradiation treatment and 42 pts have been operated (one liver metastasis during CRTx): low anterior resection was performed in 36 pts, total colectomy in 1 pt, and abdominal perineal resection in 5 pts (4/30 pts had the tumor at < 5 cm from the anal verge). MRI tumor (mT) downstaging was observed in 21/43 pts (48.8%); after treatment 20/43 mN+ pts (46.5%) became mN-. TRG-1 (complete pathological response) was observed in 9 pts (20.9%); TRG-2 in 11 pts (25.6%); TRG-3 in 11 pts (25.6%); TRG-4 in 5 pts (11.6%); TRG-5 in 1 pts (2.3%). Overall toxicity (NCI-CTC 2.0) was mild: only three pt experienced G3 diarrhea; one pts had G3 sepsis (rectovesical fistula) and two pts septic shock (intestinal obstruction and necrotizing fasciitis). Haematological toxicity (G3-G4) was observed in five pts (anemia three pt and leukopenia three pts).

### Conclusions

Preoperative concurrent CRT with TS-1 and Irinotecan, especially with treatment-free weekend, is very tolerable and the efficacy is promising with 20.1% of complete or near complete tumor remission.