

## AB059. 188. The effect of extending the interval between the end of long-course chemoradiation and total mesorectal excision on pathological, surgical and oncologic outcomes in patients with rectal cancer: a systematic review and meta-analysis

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**Background:** The current standard of care in locally advanced rectal cancer is preoperative, long-course (5-fluorouracil-based) chemoradiation (CRT) followed by total mesorectal excision (TME). Surgery is traditionally performed approximately 6 weeks post-neoadjuvant CRT.

**Methods:** The study was performed according to preferred reporting items for systematic reviews and meta-analyses preferred reporting items for systematic reviews and meta-analyses (PRISMA) guidelines. PubMed/MEDLINE, EMBASE, Scopus and Cochrane Library (CENTRAL) were systematically searched for randomised controlled

trials and observational studies reporting oncological results that compared the classic interval from the end of CRT to TME with intervals longer than 6–8 weeks, in patients with operable rectal cancer. The primary endpoint, reported as odds ratios (OR), was the rate of pathologic complete response (pCR). Secondary endpoints were recurrence-free survival (RFS), local and distant recurrence rates, R0 resection rates, sphincter preservation, and anastomotic and surgical site complications. A meta-analysis was performed using the Mantel-Haenszel method.

**Results:** Twenty-two trials, including two randomized controlled trials (RCTs), with 17,364 patients were identified. The longer interval was associated with increased odds of pCR [OR 1.64, 95% confidence interval (CI): 1.33–1.77,  $P < 0.00001$ ]. There was no difference in R0 resection rates, sphincter preservation, and complication rates between the two groups. The increase in the rate of pCR translated to reduced distant recurrence (OR 0.72, 95% CI: 0.54–0.97,  $P = 0.03$ ) and overall RFS (OR 0.76, 95% CI: 0.58–0.98,  $P = 0.04$ ), but not locoregional recurrence (LRR) (OR 0.83, 95% CI: 0.45–1.51).

**Conclusions:** A longer waiting interval from the end of preoperative CRT to TME increases pCR rates and improves RFS, with no compromise in surgical morbidity. This survival benefit is not due to reduced LRR. The relationship between pCR and survival may be more complex than first thought.

**Keywords:** Chemotherapy; radiation; rectal cancer; mesorectal excision; pathologic complete response; survival

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