

## The effect of preoperative chemoradiotherapy on lymph nodes harvested in laparoscopic TME for rectal cancer

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**Background:** Adequate lymph node resection in rectal cancer is important for staging and local control. This study aims to verify the effect of neoadjuvant chemoradiation, as well as some clinicopathological features, on the yield of lymph nodes in rectal carcinoma.

**Material and methods:** Data on consecutive patients who had laparoscopic total mesorectal excision for rectal adenocarcinoma at a single cancer center between July 2005 and July 2010 were reviewed. No patient had any prior pelvic surgery or radiotherapy. Patients had neoadjuvant chemoradiotherapy if they were stage II or III.

**Results:** A total of 79 patients were included. The mean age was 67.1 years (range 36-84). Twenty-six patients (33%) received neoadjuvant therapy before resection. The mean number of lymph nodes removed was 14.4 (range 3-39) per specimen. There was less lymph node yield in patients who received neoadjuvant therapy (11.6 vs. 15.6,  $p$  0.05). Only 46% of patients who had preoperative therapy had 12 lymph nodes or more in the specimen as opposed to 64% of those who had surgery upfront ( $p$ : 0.03). Other factors associated with lower lymph node yield included stage ( $p$  0.03) and grade ( $p$  0.007) of the tumour. Age, sex, site, type of operation, surgeons and pathologists did not affect the number of lymph nodes removed.

**Conclusion:** In laparoscopic surgery preoperative chemoradiotherapy for rectal cancer results in reduction in lymph node yield. Early cancer and low-grade also associated with retrieval of fewer lymph nodes.