

## Total Mesorectal Excision (TME) – Twenty Years On

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### Abstract

*Introduction: The results of total mesorectal excision (TME) for rectal cancer were first reported 20 years ago. The superior outcome in the original two papers was attributed to the complete excision of the mesorectum, preference for anterior resection over abdominoperineal resection, application of cytotoxic solutions to eradicate exfoliated tumour cells and specialisation in rectal cancer surgery. A review was conducted to examine the evidence from the literature accumulated over the past 20 years in support of this thesis. Methods: A Medline search of all studies was carried out pertaining to the issues of mesorectal metastases, anterior resection versus abdominoperineal resection, exfoliated tumour cells in rectal cancer and specialisation in rectal cancer surgery. Results: Mesorectal metastases can be found up to 5 cm from the apparent distal edge of a rectal cancer. They occur in pT3 and pT4 tumours. Their presence indicates a poorer prognosis. There is evidence that TME improves outcomes in mid- and low-rectal cancers but its role in upper rectal and rectosigmoid cancers is controversial. It has been difficult to demonstrate the superiority of anterior resection over abdominoperineal resection as comparative studies report similar outcomes. Exfoliated tumour cells have been demonstrated to contribute to anastomotic recurrence and this probability may be reduced by the use of cytotoxic agents to irrigate the rectal stump. Multiple studies have shown that specialisation in rectal cancer surgery result in lower postoperative morbidity and mortality, local and distant recurrence rates and higher rates of sphincter saving resections. Conclusion: The majority of tenets espoused in the original papers on TME have found support in follow-up studies since their publication.*

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*Key words: Rectal cancer surgery, Recurrence, Surgeon, Total mesorectal excision, Tumour implantation*

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