McMullen and colleagues1 have examined the practice patterns of a cohort of Ontario surgeons in their preoperative assessment of rectal cancer. In so doing, they raised important questions about the lack of evidence-based guidelines upon which surgeons could logically and reliably make decisions. They have also implied that variations in educational experience as well as location of practice drive decision-making.

In 2000 there were 6165 new diagnoses of rectal cancer and 1401 rectal cancer deaths in Canada.2 Significant variations of outcomes based on practice location in Ontario have been described, again attributed to perceived issues of access to care, knowledge base, attitudes or training.

The 3 factors contributing to staging of rectal cancer are colon status, presence/absence of distant metastases and local extent of disease. What specific questions about preoperative staging can be answered with scientific evidence; what actions are reasonable in the absence of clear evidence; and on what criteria should these decisions be based? The criteria I use, arbitrary as they may be, include:

1. Has the test under consideration some validity (sensitivity, specificity)?
2. Will the treatment plan be altered by the information obtained?  
3. Where choices exist with no clinical evidence of superiority, how can costs be minimized?

**The colon**: Evidence suggests that at diagnosis, up to 30% of rectal cancers have synchronous colonic polyps and 4%, a synchronous cancer. Presence of a large cluster of adenomas or a second cancer would almost certainly alter plans for surgery and radiation. It would be difficult, for example, to support preoperative radiation of a rectal cancer while another in the transverse colon was left untreated.

**Recommendation**: Preoperative colonoscopy; if unavailable (or if a high-quality contrast enema has already been radiographed), barium enema is a reasonable substitute.

**Distant metastases**: The most common sites of rectal cancer metastases are liver and lung. The more distant the primary cancer, the greater the likelihood of lung metastases; based on the systemic versus portal route of spread. There is little evidence of the superiority of ultrasound over computed tomography (CT) in screening for liver metastases, but in Canada ultrasound is generally more accessible.

**Recommendation**: Chest radiography is cheap and accessible; local access to ultrasound or CT of the liver/abdomen varies. About carcinoembryonic antigen (CEA), more has been written with less benefit to patients than I care to think about. Preoperative CEA might affect postoperative case management but will have little effect on preoperative planning.

**Local extent of disease**: This most controversial area is where I may be accused of being “dinosaur-like” in approach. Locally advanced rectal cancer, as evidenced by transrectal ultrasound (TRUS), magnetic resonance imaging (MRI), CT or a well-educated index finger, is more difficult to remove and cure than small, mobile, less-advanced disease. The decision to use preoperative neoadjuvant chemoradiation is based on this diagnosis of “advanced local disease.” McMullen and coauthors’ attest that evidence for superiority of

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any investigative technique (radiologic “digital” v. surgeon “digital”) is lacking. I generally rely on my finger, corroborated by TRUS unless MRI or CT has already been done. This preference is entirely logistical, as locally I have easier access to TRUS than to CT or MRI.

**Recommendation:** Determine by available means if the tumour is a big, fixed mass that would be best treated with neoadjuvant therapy.

**Caveat:** With our evidence base so scant, consider participating in trials that may teach us more about appropriate staging.

**References**
