

PGCR 1:1, 2006 (Abstract 701)

Rectal Cancer: Who Can Be Spared Adjuvant Radiation? Is It Worth the Exercise?

Leonard L Gunderson MD, MS

Mayo Clinic Arizona

Mayo Clinic Cancer Center

Scottsdale, Arizona

At the present time, most clinicians concur that a majority of patients with low-risk lesions (T1-2N0) are best managed with surgical resection alone. Such patients are usually not referred for adjuvant treatment unless surgical resection margins are compromised or local excision is used as the method of surgery.

More controversy exists for patients with intermediate-risk lesions (T1-2N1, T3N0). All such patients have previously been candidates for adjuvant rectal cancer trials in North America and were included in the mandate for combined chemoradiation in the 1990 National Institutes of Health (NIH) consensus statement. In rectal cancer pooled analyses of five phase III North American trials, both overall survival (OS) and disease-free survival (DFS) were dependent on TN stage (N sub-stage within T-stage), NT stage (T sub-stage within N-stage) and treatment method. Patients with a single high-risk factor (T1-2N1, T3N0) have better OS, DFS and disease control than patients with both high risk factors.

Use of tri-modality treatment (surgery plus radiation and chemotherapy; S+RT+CT) for all T3N0 and T1-2N1 patients may be excessive. The challenge, however, is deciding which intermediate-risk patients can be spared adjuvant radiation as a component of treatment, and whether it is worth the exercise, since preoperative radiation reduced local relapse rates even when combined with total mesorectal excision (TME) in phase III Dutch trials.

References

1. Gunderson LL, Sargent DJ, Tepper JE, et al: Impact of T and N substage on survival and disease relapse in adjuvant rectal cancer: A pooled analysis. *Int J Radiat Oncol Biol Phys* 54:386-396, 2002.
2. Gunderson LL, Sargent DJ, Tepper JE et al: Impact of T and N stage and treatment on survival and relapse in adjuvant rectal cancer: A pooled analysis. *J Clin Oncol* 22:1785-1796, 2004.
3. Willett CG, Badizadegan K, Ancukiewicz M, et al: Prognostic factors in stage T3N0 rectal cancer: Do all patients require postoperative pelvic irradiation and chemotherapy? *Dis Colon Rectum* 42:167-173, 1999.
4. Kapiteijn E, Marijnen CAM, Nagtegaal ID, et al: Preoperative radiotherapy combined with total mesorectal excision for resectable rectal cancer. *N Engl J Med* 345:638-646, 2001.
5. Nagtegaal ID, Marijnen CAM, Kranenbarg EKM, et al: Circumferential margin involvement is still an important predictor of local recurrence in rectal carcinoma: Not one millimeter but two millimeters is the limit. *Am J Surg Pathol* 26:350-357, 2002.
6. Gunderson LL, Callister M, Marschke R, et al: Stratifying risks for patients with localized rectal cancer: Do all stage II patients require adjuvant radiation or chemoradiation? *Current Colorectal Cancer Reports* 2:151-159, 2006.