Impact of sphincter invasion on T stage definition in rectal cancer

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Accepted: 6 August 2015 / Published online: 18 August 2015
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Dear Editor:

Uniform stage is the strongest predictor of survival for patients with rectal cancer. Accurate staging is paramount for appropriate patient management and clinical research comparison. Historically, tumor staging is based on local tumor characteristics (T), lymph nodes involvement (N), and presence of distant metastasis (M). In the seventh edition of the American Joint Committee on Cancer (AJCC) staging, T4 was subdivided into T4a (tumor penetrates to the surface of the visceral peritoneum) and T4b (tumor directly invades or is adherent to other organs or structures) [1]. These changes were supported by SEER rectal cancer outcomes data that showed a 10 % improvement in 5-year overall survival in patients with T4a lesion compared with T4b [2].

Based on this revised definition, T4b includes a heterogeneous group of lesions. In fact, TNM system staging has grouped patients having sphincter involvement into the stage T4b despite a clinical difference compared with tumor penetration of other structures, such as bladder, prostate, uterus, or bowel. Thus, should a rectal tumor that invades internal sphincter be considered similar to a lesion that involves other organs? Considering the new treatment approaches based on the poor prognosis condition of locally advanced rectal cancer,

these patients should receive induction chemotherapy before neo-adjuvant chemoradiotherapy, with associated benefits and risks [3]. But does the sphincter invasion assured the same prognostic significance of other structure invasion as bladder or bowel? May be patients with sphincter invasion have a better prognosis than patients with invasion of other structures. Recommendations for subclassifying T4b into different prognostic groups, based on which organs or structures are invaded, should be performed in further studies, to reduce the over-treatment risk in this setting of patients.

References

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