

## Re: Overexpression of BMI1, a Polycomb Group Repressor Protein, in Bladder Tumors: a Preliminary Report

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Sir,

The polycomb group of transcriptional repressors is associated with tumor progression and metastasis in varying types of malignancies. In Volume 5 Number 2 of the *Urology Journal*, Shafaroudi and colleagues reported that increased urinary BMI1, but not BMI2, is associated with bladder cancer staging.<sup>(1)</sup> The question of whether patients with bladder cancer harbor genetically different features is an important issue, but the clinical relevance may be limited until such time as genetic profiling and individualized molecular treatment enter clinical settings. The 5-year survival after curative surgery for bladder cancer remains 50% to 60%, despite recent refinement of various therapeutic strategies, including surgery, radiotherapy, and chemotherapy.<sup>(2,3)</sup> Therefore, better identification of targeting genes associated with progression of bladder cancer is now mandatory to improve patient survival with this type of refractory cancer. In recent years, several new specific biomarkers have been identified for predicting prognosis of patients with bladder cancer. For example, expression of E-cadherin, beta-catenin, plakoglobin, and vimentin are associated with the clinicopathologic variables of grade and stage.<sup>(4)</sup> Overexpression of *HER-2/neu* is associated with tumor progression and poor prognosis.<sup>(5)</sup> In the present study, BMI1 was mainly stained in the nuclei of tumor cells, whereas no normal cell showed BMI1 staining.<sup>(1)</sup> Overexpression of *BMI1* was roughly associated with advanced pathological stage and higher tumor grade of bladder cancer.<sup>(1)</sup> Although the major limitation of this study is a weakness in the number of patients, the finding

that BMI expression intensity correlates with cancer stage, suggests BMI1 may be a potential molecular target in patients with bladder cancer. Statistical evaluations will reveal whether BMI1 overexpression is associated with an increased probability of bladder cancer-specific survival and recurrence-free survival. We hope that this article leads to additional studies.

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