
TGF-beta 1 and urinary excretion of pyridinium crosslinks: two often overlooked risk factors for assessing risk of progression in patients with monoclonal gammopathy of undetermined significance

Haematologica 2008; 93:e38 DOI: 10.3324/haematol.12760

The article by Sackmann et al is highly interesting and provides an excellent analysis of the factors that predict the risk of progression in patients with Monoclonal Gammopathy of Undetermined Significance (MGUS).¹ Two other parameters that may also aid in assessing risk progression and are often forgotten are TGF-beta 1 levels and the urinary excretion of pyridinium crosslinks.

TGF-beta 1 is produced primarily by platelets. Patients with multiple myeloma usually have higher levels of TGF-beta 1 compared to patients with MGUS.² Elevated levels in patients with MGUS indicate increased likelihood of malignant transformation. The second parameter is urinary excretion of pyridinium crosslinks. Bone resorption is more common in patients with multiple myeloma in contrast to patients with MGUS. Detection of pyridinoline (h-PYD) and deoxypyridinoline (d-DPD) in the urine is indicative of bone resorption and thus indicates increased risk for malignant transformation.³

These tests are currently being intensively researched and may play a significant role in assessing the risk of progression in MGUS in the near future.

Shailendra Kapoor

University of Illinois at Chicago, Chicago, IL- 60612, USA

E mail: shailendrakapoor@yahoo.com

References

1. Sackmann F, Pavlovsky MA, Corrado C, Pizzolato M, Alejandro M, Pavlovsky S. Prognostic factors in monoclonal gammopathy of undetermined significance. *Haematologica* 2008;93:153-4.
2. Anagnostopoulos A, Evangelopoulou A, Sotou D, Gika D, Mitsibounas D, Dimopoulos MA. Incidence and evolution of monoclonal gammopathy of undetermined significance (MGUS) in Greece. *Ann Hematol* 2002;81:357-61.
3. Pecherstorfer M, Seibel MJ, Woitge HW, et al. Bone resorption in multiple myeloma and in monoclonal gammopathy of undetermined significance: quantification by urinary pyridinium cross-links of collagen. *Blood* 1997;90:3743-50.

Key words: monoclonal gammopathy of undetermined, significance, multiple myeloma, TGF-beta 1, pyridinoline, deoxypyridinoline