

# Dialysis-dependent renal failure at diagnosis continues to be associated with very poor outcome in multiple myeloma – response to Murphy *et al*

The study by Murphy *et al* supports the observation made by several groups regarding the benefit of the novel agents in both young and elderly patients affected by multiple myeloma (MM) (Kumar *et al*, 2008; Ludwig *et al*, 2008; Turesson *et al*, 2010; Pozzi *et al*, 2013). Their single institution data collected over 18 years in 262 patients shows an improvement in overall survival (OS) starting from 1995 with an OS not yet reached in the period 2007–2012, after the introduction of bortezomib in their clinical practice. However the study clearly highlights renal insufficiency as a very poor prognostic factor, with a median OS shorter than 1 year in patients requiring dialysis.

In the past few years many attempts have been made to classify and stratify patients based on various refined biological characteristics, however, as clearly stated here, the clinical presentation, particularly organ damage, still represents a negative prognostic factor that not even modern medicine has been able to overcome. The introduction of the International Staging System Criteria (ISS) (Greipp *et al*, 2005) only indirectly takes renal function into account, while the Durie and Salmon Criteria differentiates stage 'A' and 'B' MM based on kidney damage (Durie & Salmon, 1975). However Durie-Salmon 'B' stage is based on a creatinine cut-off point of 177  $\mu\text{mol/l}$  and it is unable to better differentiate between moderate and severe impairment of renal damage requiring dialysis. It is also unable to predict the response to the treatment and reversibility of the organ damage, between possibly transitory kidney impairment due to dehydration, hyperuricaemia and hypercalcaemia, and cast nephropathy.

In this subset of MM patients it would be beneficial to introduce further parameters in the staging system (i.e. glomerular filtrate; type of light chain) in order to better stratify the risks and prevent treatment-related toxicity. For this reason, ad hoc clinical trials for this group of patients are strongly needed (Haynes *et al*, 2012).

Finally, the Murphy study highlights the selection of patients enrolled in clinical trials and the necessity to evaluate the survival in the population of every day clinical practice, together with the need to develop high resolution analysis from data collected by cancer registers.

Moreover, early diagnosis, compared with late or misdiagnosis, especially for light chains MM, is mandatory to prevent severe organ damage.

**Samantha Pozzi**

**Alessia Bari**

**Stefano Sacchi**

*Programme of Innovative Therapy in Oncology and Haematology, Department of Diagnostic, Clinical and Public Health Medicine, University of Modena and Reggio Emilia, Modena, Italy*  
E-mail: samantha.pozzi@unimore.it

**Keywords:** multiple myeloma, kidney, renal insufficiency, survival, therapeutics

First published online 6 March 2014

doi: 10.1111/bjh.12816

## References

- Durie, B.G.M. & Salmon, S.E. (1975) A clinical staging system for multiple myeloma. *Cancer*, **36**, 842–854.
- Greipp, P.R., San Miguel, J., Durie, B.G., Crowley, J.J., Barlogie, B., Bladé, J., Boccadoro, M., Child, J.A., Avet-Loiseau, H., Kyle, R.A., Lahuerta, J.J., Ludwig, H., Morgan, G., Powles, R., Shimizu, K., Shustik, C., Sonneveld, P., Tosi, P., Turesson, I. & Westin, J. (2005) International staging system for multiple myeloma. *Journal of Clinical Oncology*, **23**, 3412–3420. Erratum in: *J Clin Oncol*, **23**, 6281.
- Haynes, R., Leung, N., Kyle, R. & Winearls, C.G. (2012) Myeloma kidney: improving clinical outcomes? *Advances in Chronic Kidney Disease*, **19**, 342–351.
- Kumar, S.K., Rajkumar, S.V., Dispenzieri, A., Lacy, M.Q., Hayman, S.R., Buadi, F.K., Zeldenrust, S.R., Dingli, D., Russell, S.J., Lust, J.A., Greipp, P.R., Kyle, R.A. & Gertz, M.A. (2008) Improved survival in multiple myeloma & the impact of novel therapies. *Blood*, **111**, 2516–2520.
- Ludwig, H., Durie, B.M.G., Bolejack, V., Turesson, I., Kyle, R.A., Blade, J., Fonseca, R., Dimopoulos, M., Shimizu, K., San Miguel, J., Westin, J., Harousseau, J.L., Beksac, M., Boccadoro, M., Palumbo, A., Barlogie, B., Shustik, C., Cavo, M., Greipp, P.R., Joshua, D., Attal, M., Sonneveld, P. & Crowley, J. (2008) Myeloma in patients younger than age 50 years presents with more favorable features and shows better survival: an analysis of 10 549 patients from the International Myeloma Working Group. *Blood*, **111**, 4039–4047.
- Pozzi, S., Marcheselli, L., Bari, A., Liardo, E.V., Marcheselli, R., Luminari, S., Quaresima, M., Cirilli, C., Ferri, P., Federico, M. & Sacchi, S. (2013) Survival of multiple myeloma patients in the era of novel therapies confirms the improvement in patients younger than 75 years: a population-based analysis. *British Journal of Haematology*, **163**, 40–46.
- Turesson, I., Velez, R., Kristinsson, S.Y. & Landgren, O. (2010) Patterns of improved survival in patients with multiple myeloma in the twenty-first century: a population-based study. *Journal of Clinical Oncology*, **10**, 830–834.