

## **Prognostic effect of comorbidity in elderly patients with multiple myeloma**

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**BACKGROUND:** Consideration of comorbidity and frailty represents a significant part of the treatment of elderly multiple myeloma (MM) patients. The aim of study was to analyze the effect of the Charlson Comorbidity Index (CCI) on the prognosis of disease.

**PATIENTS AND METHODS:** The study included 34 newly diagnosed MM patients older than 60 years of age, and treated in our department from January 2004 to December 2011. According to the CCI, 21 of 34 patients (61, 7%) had at least 1 comorbidity, and most of them (22 of 34 patients: 64, 7%) had an age-adjusted CCI (aaCCI) score of 3 to 6. Patients were treated with immunomodulatory and Bortezomib based combinations, or with conventional chemotherapy. Kaplan-Meier method and Multiple regression were used to assess survival and associated factors.

**RESULTS:** The median survival of all the patients was 48 months (95% CI for the median: 23-84) with a five year overall survival (OS) of 33, 8%. High scores of aaCCI correlated with age 70 years ( $r = 0,758$ , 95% CI for  $r$ : 0, 5651 to 0, 8727,  $P = 0, 0001$ ). The patients with a aaCCI score of 0 to 3 had significantly longer OS ( log rank : 6.3209;  $P = 0.011$ ). Patients with poor performans status (PS 1) and age 70 years had significantly shorter OS (log rank: 7, 1431 and  $p = 0,007$ , log rank: 7, 5314 and  $P = 0,006$  respectively).

Multiple regression selected aaCCI 3 ( $P = 0,014$ ) and PS 1 ( $P = 0,036$ ) as factors associated with a worse overall survival.

**CONCLUSION:** Comorbidity assessment with CCI proved to be a powerful prognostic factor for survival of elderly MM patients. It might be useful to identify true vulnerable patients, and to select them for adapted therapy in clinical practice.