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ELEVENTH ANNUAL MEETING

CLINICAL CHARACTERISTICS AND RISK OF PROGRESSION IN PATIENTS WITH MONOCLONAL GAMMOPATHY OF UNCERTAIN SIGNIFICANCE: LONG-TERM EXPERIENCE IN A SINGLE TERTIARY HOSPITAL.

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INTRODUCTION

Monoclonal gammopathy of uncertain significance (MGUS) is a premalignant state with a high prevalence in the population over 50 years and annual risk of progression to multiple myeloma (MM) of 1%. Identification of factors associated to risk of progression is useful to individualize patient follow-up.

AIM

The aim was to **identify** potential **risk factors** at diagnosis in MGUS and to **validate** previously published **progression-risk models.**

METHOD

An observational retrospective study was conducted with MGUS patients diagnosed at University Hospital of Salamanca (1990-2022). **Mayo Clinic** and **MGUS-*like* phenotype** progression-risk models were used.

RESULTS

Nine hundred twenty-fifth patients were included, with a median age of 72 years (28-108). **Bone marrow** aspiration was performed at diagnosis in **431** (46.6%). With a median follow-up of 83 months (2-379), **5.6% progressed** with a median time to progression of 378 months. Forty-three patients progressed to MM, 2 to AL amyloidosis, 1 to light-chain deposition disease and 6 to lymphoproliferative disorder.

Variables significantly associated with increased risk of progression in the univariant analysis are shown in ***Figure 1;*** >5% plasma cells (PC) by morphology and >95% aberrant PC by multiparameter flow cytometry (MFC) were identified as indepedent prognostic factor for progression (HR 3.4 [CI 1.1-10.3], ***p*=0.029**; HR 3.8 [CI 1.2-11.9], ***p*=0.025**)

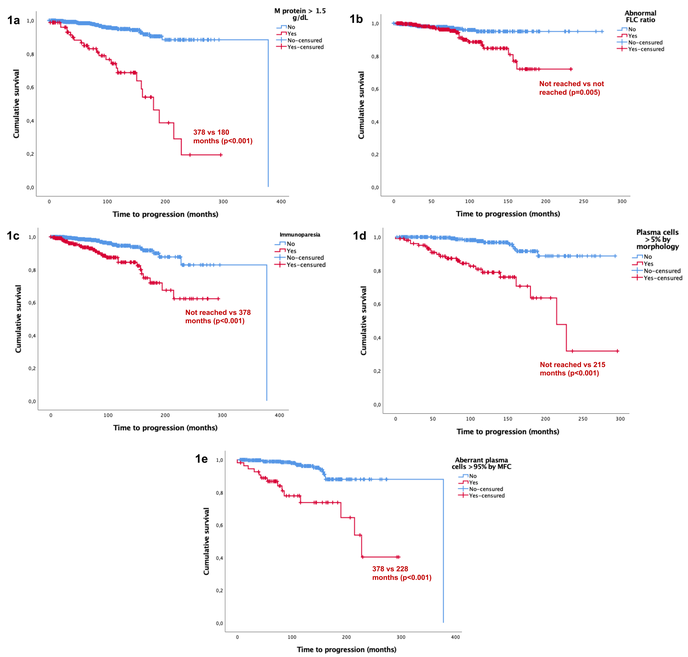


Figure 1a. Impact of serum M protein leves on risk of progression; ***1b***. Impact of FLC ratio on risk of progression; ***1c***. Impact of immunoparesia on risk of progression; ***1d***. Impact of percentage of PC by morphology on risk of progression; ***1e***. Impact of aberrant PC by MFC on risk of progression.

Mayo Clinic model was applied in 668 (72.2%) patients. Considering, low-risk group as reference, risk of progression according to this model is detailed in ***Figure 2***.

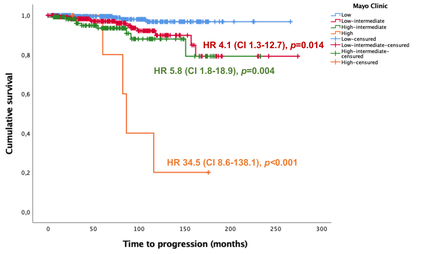


Figure 2. Risk of progression according to Mayo Clinic model

MGUS-*like* model was applied in 431 (46.6%) patients. Risk of progression according to this model is shown in ***Figure 3***.

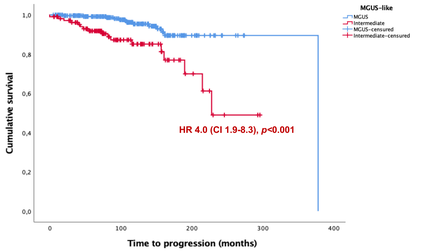


Figure 3. Risk of progression according to MGUS-*like* phenotype model

CONCLUSIONS

1. **Distribution** of MGUS isotypes in our series is **consistent** with other series.
2. The **Mayo Clinic** and the **MGUS-*like*** risk models were validated in our series.
3. Predictors of increased risk of progression were identified as having serum M protein>1.5 g/dL, abnormal FLCr, immunoparesia, >5% PC by morphology and **>95% aPC by MFC**. The latter was the only one identified as an **independent prognostic factor** for **progression**.

REFERENCES

1. Rajkumar SV, Kyle RA, Therneau TM, Melton LJ 3rd, Bradwell AR, Clark RJ, et al. Serum free light chain ratio is an independent risk factor for progression in monoclonal gammopathy of undetermined significance. Blood. 2005 Aug 1;106(3):812-7.
2. Burgos L, Tamariz-Amador LE, Puig N, Cedena MT, Guerrero C, Jelínek T, et al; PETHEMA/GEM Cooperative Group. Definition and Clinical Significance of the Monoclonal Gammopathy of Undetermined Significance-Like Phenotype in Patients With Monoclonal Gammopathies. J Clin Oncol. 2023 Mar 17:JCO2201916.

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