International Myeloma Society
21ST ANNUAL Meeting & Exposition
September 25-28, 2024 • Riocentro • Rio de Janeiro, Brazil

IMPACT OF NOVEL THERAPIES ON THE OVERALL SURVIVAL OF PATIENTS WITH MULTIPLE MYELOMA OVER THE PAST TWO DECADES: A REAL-LIFE SINGLE-CENTER STUDY.

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INTRODUCTION AND OBJECTIVES

The gradual introduction of numerous therapeutic advancements over the last two decades in the treatment of patients with multiple myeloma (MM) has contributed to a significant improvement in overall survival (OS), although it remains an incurable disease. This study aims to analyze the evolution of OS in MM patients treated at our hospital from 2000 to the present and the impact following the incorporation of various drugs into induction treatment regimens.

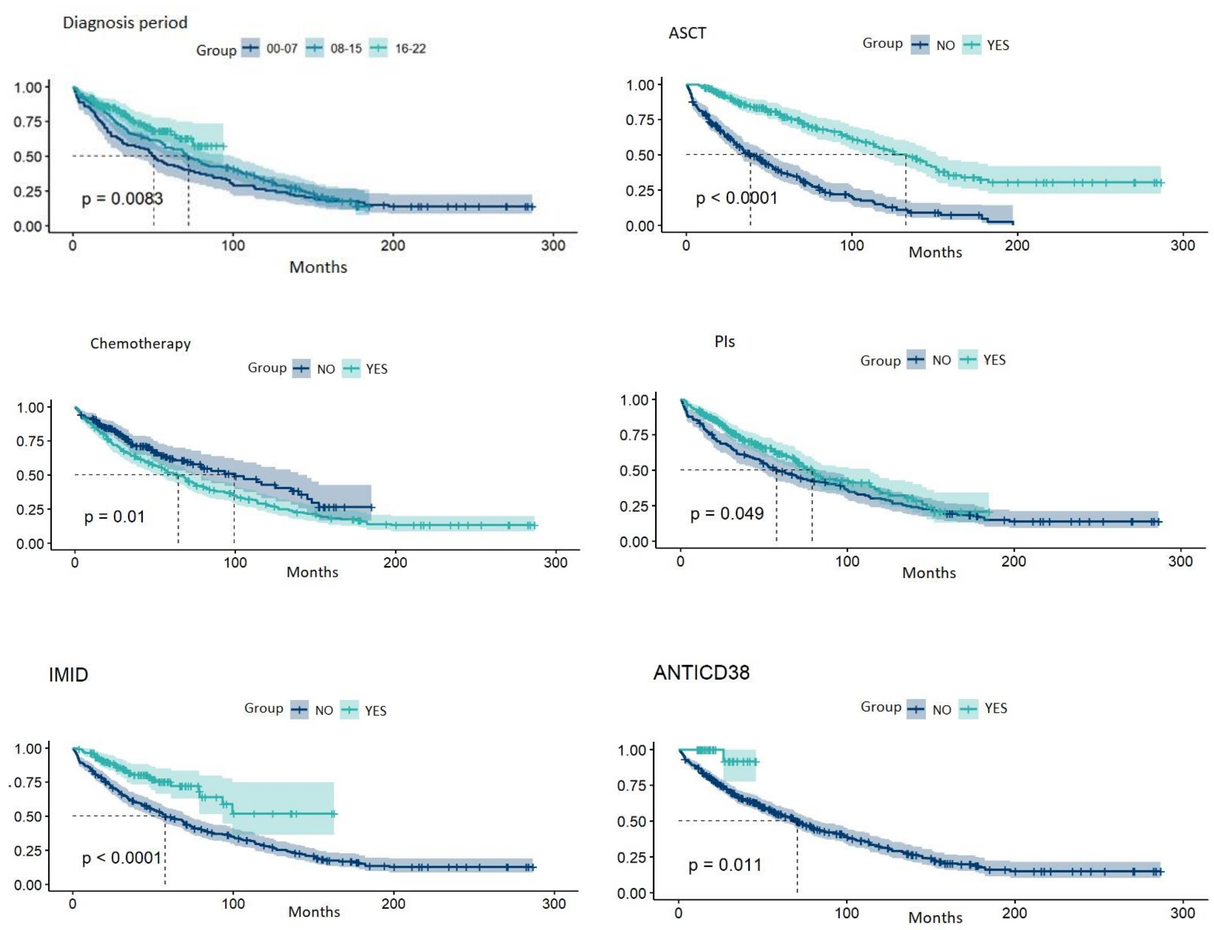
METHODS

We conducted a single-centre, observational, retrospective, real-life study, including all MM patients treated at the University Hospital of Jerez de la Frontera, diagnosed between January 1st, 2000, and December 31th, 2022. Patients were divided into three calendar periods (2000-2007, 2008-2015, 2016-2022).
We analyze the incorporation of proteasome inhibitors (Pis), immunomodulators (IMIDs) and anti-CD38 monoclonal antibodies to the first line of therapy.
The corresponding approval from the ethics committee has been obtained.
For the statistical analysis, the R statistical software (v4.3.3; R Core Team 2021) was used.

RESULTS

420 myeloma patients were included in the study, with a median age of 64 years. Median survival steadily improved from 50.72 months (33.88 – 73.22; 95% CI) in 2000-2007 to 72.46 months (57.5 – 98.2; 95% CI) in 2008-2015, and has not yet been reached in the 2016-2022 cohort (p= 0.008). The improvement in the OS was more dramatic in the transplant-eligible patients, with those undergoing autologous transplantation having a median survival of 132.66 months (113.32 - 150.98; 95% CI) compared to 38.81 months (31.57 - 51.61; 95% CI) in the non-transplanted patients.

If we compare the group of patients who received chemotherapy to those who did not receive it (and therefore received other treatments), the median OS was 64.60 months (52.07 - 75.75; 95% CI) and 99.53 months (72.46 - 139.34; 95% CI), respectively (p=0.011). All incorporated drug families increased that survival. Regarding treatment with proteasome inhibitors (PIs), the median OS in the group that received PIs was 78.84 months (68.84 - 113.32; 95% CI) compared to 57.50 months (47.5 - 83.12; 95% CI) in the group that did not receive PIs (p=0.049). Concerning immunomodulator therapy, the median OS in the group that did not receive IMIDs was 57.5 months (49.14 – 72.46; 95% CI), whereas the median was not reached in the group that did receive IMIDs (p<0.0001). Regarding treatment with monoclonal antibodies, in the group of patients who did not receive anti-CD38, the median OS was 70.55 months (58.68 - 83.12; 95% CI), whereas the median was not reached in the group that did receive them (p=0.011).



Graphical representation of the Kaplan-Meier estimator for overall survival by patient groups: (A) Patients divided by diagnosis period; (B) ASCT; (C) Chemotherapy; (D) PIs; (E) IMIDs; (F) AntiCD38. The dashed lines indicate the median of each group, and the shaded areas correspond to the 95% confidence intervals. The p-value corresponds to the result of the Log-rank test

CONCLUSIONS

In our patient cohort, an increase in OS is observed in each time period and in both groups of patients (transplanted and non-transplanted), although the differences are more pronounced in the group of patients undergoing transplantation. The incorporation of proteasome inhibitors, immunomodulators and anti-CD38 showed significant differences in terms of overall survival, particularly when used in combination.

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MAT-ES-2402799 1.0 10/2024