

LENALIDOMIDE MAINTENANCE POSITIVELY IMPACTS OUTCOMES IN MULTIPLE MYELOMA WITHOUT NEGATIVE IMPACTS IN RELAPSE: AN ANALYSIS OF REAL WORLD DATA FROM THE MYELOMA CANADA RESEARCH NETWORK NATIONAL DATABASE

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EHA Library. Venner C. 06/15/19; 266993; PS1376

Abstract: PS1376

Type: Poster Presentation

Presentation during EHA24: On Saturday, June 15, 2019 from 17:30 - 19:00

Location: Poster area

Background

Randomized trials have demonstrated the positive impact of lenalidomide maintenance (LM) on outcomes following autologous stem cell transplant (ASCT) in multiple myeloma (MM). This finding has led to its wide-spread adoption as a standard of care. However, data examining its effect in the real-world setting is lacking.

Aims

Using the Myeloma Canada Research Network Canadian Multiple Myeloma Database (MCRN CMM-DB) we have examined the impact of LM at a national level.

Methods

We retrospectively reviewed data from patients tracked using the MCRN CMM-DB. This web-based centralized platform characterizes real-world outcomes in patients treated at 13 major Canadian academic institutions and includes comprehensive data on >6000 patients dating back to 2007 with ongoing prospective data collection. This analysis examined patients treated with bortezomib-based induction therapy prior to ASCT. Subjects were included up until January 2016 to ensure at least 2 years of follow-up. The analysis was performed based on intention-to-treat with LM. Overall survival (OS) was defined as time from pre-ASCT induction therapy to death or last follow-up (F/U). Progression-free survival (PFS) was defined as the time from induction therapy to progression, death or last F/U. We also calculated outcomes of relapsing patients in both arms, including 2nd PFS (from second-line therapy to second relapse, death or last F/U) and PFS2 (time from induction therapy to second relapse, death or last F/U). Lastly, given regional variation in LM dosing schedules, we examined outcomes based on a 21/28 days or continuous 28/28 days dosing strategy.

Results

Data from 1,256 patients across 10 Canadian centers was included (723 with LM and 533 without). Median follow-up in the LM group was 49 months and 45 months in the non-LM group. The median OS was not reached in the LM cohort and 98 months in the non-LM group ($p < 0.0001$, figure 1a). The median PFS also favoured patients treated

with LM (58 months versus 35 months respectively, $p < 0.0001$, figure 1b). Response rates were high with 98% achieving \geq PR in the LM group compared to 96% in the non-LM group ($p = 0.06$). In LM patients 94% achieved \geq VGPR compared to 81% in the non-LM group ($p < 0.01$). At the time of analysis, 45% of LM and 63% of non-LM patients have relapsed. Treatment for relapsed disease resulted in a similar median 2nd PFS between LM vs non-LM patients (12 months vs 16 months respectively, $p=0.07$, figure 1c). The median PFS2 remained in favour of LM compared with non-LM (not reached vs 68 months, $p < 0.01$, figure 1d). Median duration of maintenance therapy was 20.5 months (0.0 - 102.48+). Analysis of patients treated with a 28/28 days ($n=356$) versus a 21/28 ($n=257$) days LM dosing schedule showed no difference in estimated 5-year OS (81% and 80% respectively, $p = 0.66$) or 5-year PFS (47% and 52% respectively, $p = 0.75$).

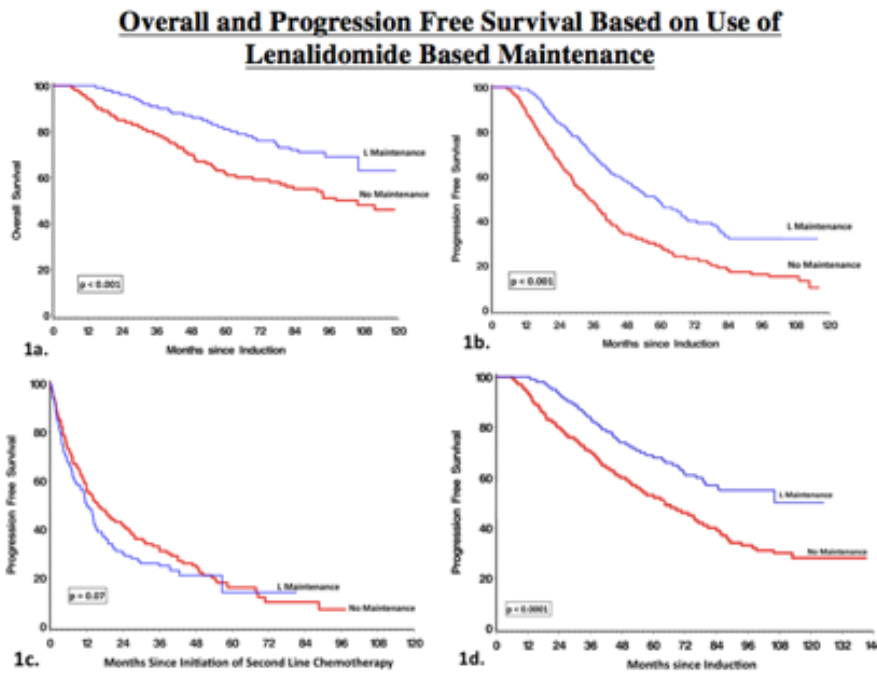


Figure 1. Overall (1a) and progression free (1b) survival is improved with the use of lenalidomide based maintenance at the level of statistical significance. Second progression free survival (1c) and PFS 2 (1d) also demonstrate there is no negative effect of lenalidomide on survival outcomes of second line therapy.

Conclusion

Using the MCRN CMM-DB we present one of the largest real-world cohorts demonstrating the dramatic impact on outcomes using LM following bortezomib-based induction. Notable improvements are seen in PFS, OS and depth of response. The truncated 21/28 day dosing strategy did not negatively impact these endpoints. Importantly, LM did not demonstrate a negative effect on the outcomes with second-line therapy, as the median 2nd PFS was similar and the PFS2 remained in favour of LM. Overall, this large real-world cohort supports the ongoing use of LM in the frontline management of MM.

Session topic: 14. Myeloma and other monoclonal gammopathies - Clinical

Keyword(s): Maintenance, Myeloma, Survival