EE428

Budget Impact of Elranatamab in Patients With Relapsed or Refractory Multiple Myeloma (RRMM) in the United States

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Objectives

Elranatamab is a bispecific antibody indicated for the treatment of adult patients with RRMM who have received ≥4 prior lines of therapy including, a proteasome inhibitor (PI), an immunomodulatory agent (IMiD), and an anti-CD38 monoclonal antibody (mAb). Understanding the budget impact of introducing elranatamab in this population is of key interest to US payers. This research estimated the budget impact of introducing elranatamab in US commercial and Medicare health plan settings

Conclusions

Treatment with elranatamab in patients with RRMM is estimated to result in a minimal to small budget impact over a 3-year period, partly explained by a small eligible patient population

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Background

- MM is an incurable hematologic malignancy characterized by the monoclonal proliferation of plasma cells in the bone marrow.[1] It is the second most common hematologic malignancy in the US[2]
- Most patients with MM eventually experience relapse and/or refractory disease (ie, RRMM).[3,4] Survival decreases with each line of therapy; after 3-4 prior lines, median survival is 9.2 months and 5.6 months after 5 prior lines of usual care[5]
- No standard of care (SOC) currently exists for patients with RRMM who have received multiple prior lines of therapy including a PI, an IMiD and an anti-CD38 mAb (ie, triple-class exposed patients with MM [TCEMM]).[5] The National Comprehensive Cancer Network (NCCN) guidelines recommend chimeric antigen T-cell (CAR-T) therapies (eg, ciltacabtagene autoleucel [cilta-cel], idecabtagene vicleucel [ide-cel]), bispecific antibodies (eg, teclistamab, talquetamab), or selinexor and dexamethasone.[6] In real-world practice, a larger share of patients with RRMM received combinations of agents that include reused PIs or iMiDs, such as carfilzomib, ixazomib, and pomalidomide[7-9]
- Although patients with RRMM represent a relatively small group, the cost per patient is high, and the economic burden of this group is still substantial, particularly among patients with multiple prior treatment lines[10]
- Elranatamab is a novel bispecific antibody that binds B-cell maturation antigen on myeloma cells and CD3 on the surface of T cells. In MagnetisMM-3 (NCT04649359), a phase 2, open-label, multicenter, non-randomized clinical trial, elranatamab demonstrated clinical efficacy in terms of objective response rate, duration of response, and progression-free survival (PFS) in TCE/refractory patients with MM[11]

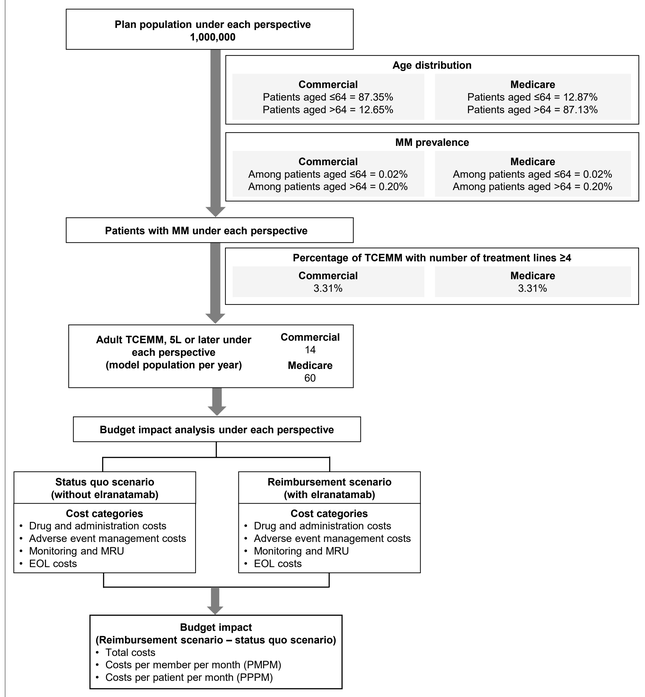
Methods

- A budget impact model (BIM) was developed to estimate the budget impact of treating TCEMM in the fifth line or later in a setting without elranatamab (status quo scenario) and with elranatamab (reimbursement scenario) in hypothetical 1-million-member commercial and Medicare health insurance plans, respectively, over a 3-year period (**Figure 1**)
- The treatments considered in this model included elranatamab, talquetamab, selinexor plus dexamethasone, ide-cel, cilta-cel, and teclistamab. Since there is currently no SOC for TCEMM in the US, a physician choice of treatment (PCT) basket was derived from a real-world US study.[8,12] The market shares for the 2 scenarios were estimated based on market research and clinician opinions (**Table 1**)
- Epidemiology data were obtained from the SEER database[13] and a large US real-world study.[14] Key clinical inputs included time to treatment discontinuation (TTD), PFS, overall survival, grade 3/4 adverse events (AEs), and all-grade cytokine release syndrome and immune effector cell–associated neurotoxicity syndrome (ICANS). Cost associated with drug acquisition (primary and subsequent treatments), administration, monitoring (biochemistry and complete blood count), medical resources use (eg, hospitalization, physician visits), and AEs were incorporated. Model inputs were sourced from clinical trial data,[15-20] US government databases,[21,22] and published literature
- Total budget impact, per member per month (PMPM), and per treated patient per month (PPPM) in 1-million hypothetical population of commercial and Medicare health insurance plans were assessed. One-way sensitivity analyses (OWSA) assessed uncertainty around model parameters

Eligible population

- The eligible populations from commercial and Medicare perspectives in a hypothetical plan of 1 million members were estimated to be 14 and 60 patients per year, respectively (**Figure 1**)

Figure 1. Budget impact model structure and eligible population estimates



5L=fifth line; EOL=end of life; MM=multiple myeloma; MRU=medical resource use; TCEMM=triple-class exposed patients with multiple myeloma

Table 1. Market shares of primary treatments

	Status quo scenario (without elranatamab)			Reimbursement scenario (with elranatamab)		
	Year 1	Year 2	Year 3	Year 1	Year 2	Year 3
Elranatamab	0%	0%	0%	6%	12%	18%
Talquetamab	10%	12%	15%	9%	12%	14%
Selinexor + dexamethasone	19%	18%	17%	19%	17%	15%
Ide-cel	5%	5%	5%	5%	5%	5%
Cilta-cel	5%	5%	5%	5%	5%	5%
Teclistamab	18%	23%	27%	17%	21%	26%
PCT	43%	37%	31%	39%	28%	17%

cilta-cel=ciltacabtagene autoleucel; ide-cel=idecabtagene vicleucel; PCT=physician choice of treatment

Results

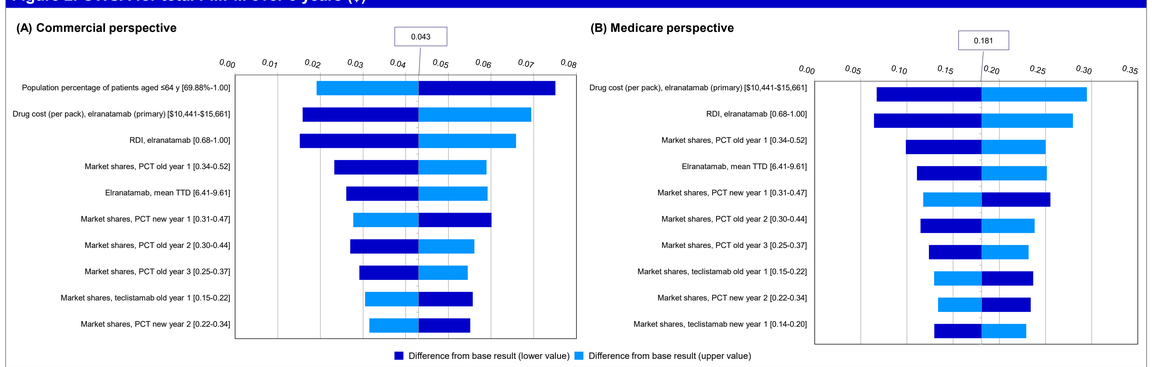
- From a commercial perspective, the addition of elranatamab was associated with a cost increase of $46,926 in year 1 to $288,018 in year 3, resulting in a total cost increase of $514,104, PMPM cost of $0.043, and PPPM cost equal to $3027 over 3 years (**Table 2**)
- Similar trends in the total cost per year were found in the analyses from a Medicare perspective, resulting in a total cost increase of $2,183,722, PMPM of $0.181, and PPPM cost equal to $3027 (**Table 2**)
- From both commercial and Medicare perspectives, primary drug costs accounted for the largest share of total costs followed by subsequent treatment costs and AE management costs. Adding elranatamab increased primary drug costs, while reducing subsequent treatment costs (**Table 2**)
- From both commercial and Medicare perspectives, OWSA identified the main drivers of the budget impact to be the drug cost per pack of elranatamab, the relative dose intensity of elranatamab, the market shares of PCT, and the mean treatment duration of elranatamab (**Figure 2**). For the commercial perspective, the population percentage aged ≤64 years was found to be an additional main driver of the budget (**Figure 2A**)

Table 2. Budget impact associated with the introduction of elranatamab

	Commercial				Medicare			
	Year 1	Year 2	Year 3	Total	Year 1	Year 2	Year 3	Total
Market without elranatamab (status quo scenario), $								
Primary drug and administration	3,297,100	3,712,185	4,110,641	**11,119,926**	14,004,847	15,767,976	17,460,465	**47,233,288**
Hospitalization during step-up dosing	145,871	182,978	220,342	**549,191**	619,608	777,220	935,929	**2,332,757**
AE costs for primary treatment	436,037	466,376	496,923	**1,399,336**	1,852,121	1,980,992	2,110,743	**5,943,856**
Monitoring and other MRU[a]	71,231	79,112	87,578	**237,921**	302,561	336,038	371,998	**1,010,597**
Subsequent treatment drug & administration	928,914	977,422	1,298,230	**3,204,566**	3,945,678	4,151,725	5,514,396	**13,611,799**
End-of-life costs	139,752	124,407	161,248	**425,407**	593,614	528,436	684,921	**1,806,971**
Total	**5,018,905**	**5,542,480**	**6,374,962**	**16,936,347**	**21,318,429**	**23,542,387**	**27,078,452**	**71,939,268**
Market with elranatamab (reimbursement scenario), $								
Primary drug & administration	3,392,495	4,009,277	4,612,696	**12,014,468**	14,410,052	17,029,911	19,593,009	**51,032,972**
Hospitalization during step-up dosing	151,507	204,743	258,350	**614,600**	643,544	869,672	1,097,376	**2,610,592**
AE costs for primary treatment	454,678	510,225	566,155	**1,531,058**	1,931,300	2,167,244	2,404,815	**6,503,359**
Monitoring and other MRU[a]	71,280	79,947	90,294	**241,521**	302,772	339,587	383,537	**1,025,896**
Subsequent treatment drug and administration	865,135	815,660	1,013,483	**2,694,278**	3,674,772	3,464,618	4,304,899	**11,444,289**
End-of-life costs	130,736	101,788	122,000	**354,524**	555,316	432,357	518,210	**1,505,883**
Total	**5,065,831**	**5,721,640**	**6,662,978**	**17,450,449**	**21,517,756**	**24,303,389**	**28,301,845**	**74,122,990**
Incremental budget impact, $								
Total incremental cost per year	46,926	179,160	288,018	**514,104**	199,327	761,001	1,223,394	**2,183,722**
PMPM	0.004	0.015	0.024	**0.043**	0.017	0.063	0.101	**0.181**
PPPM	278	1,056	1,693	**3,027**	278	1,056	1,693	**3,027**

[a] Other MRU includes inpatient/outpatient visits, physician office visits, 1-time leukapheresis (only for CAR-T therapies) (ie, the remaining MRU except hospitalization during step-up dosing).
AE=adverse event; CAR-T=chimeric antigen T-cell; MRU=medical resource utilization; PMPM=per member per month; PPPM=per treated patient per month

Figure 2. OWSA for total PMPM over 3 years ($)



"New year" represents the year in the market with elranatamab (reimbursement scenario); "old year" represents the year in the market without elranatamab (status quo scenario).
OWSA=one-way sensitivity analysis; PCT=physician choice of treatment; PMPM=per member per month; RDI=relative dose intensity; TTD= time to treatment discontinuation

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