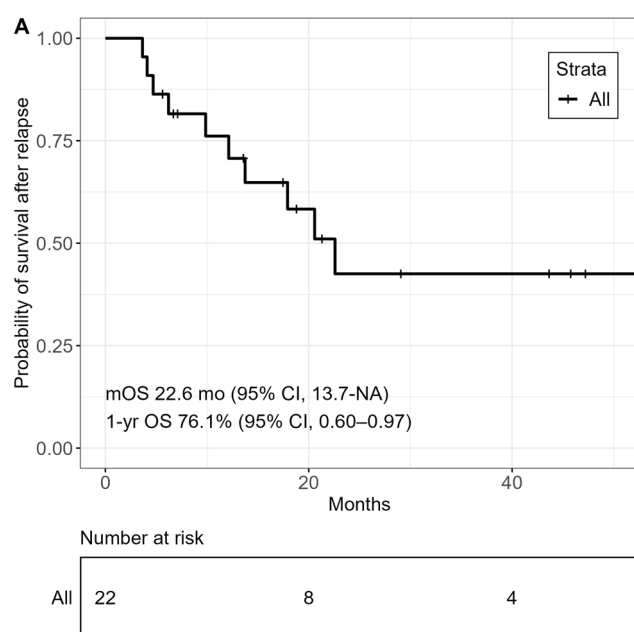


**Supplementary Figure S1. Cumulative Incidence for Relapse and Non-relapse mortality, overall cohort**  
 (A) Cumulative incidence for relapse. (B) Cumulative incidence for non-relapse mortality.



**Supplementary Figure S2. Kaplan-Meier curve of overall survival from first relapse after allo-HSCT.**

**Supplementary Table S1.** Number of therapy regimens and best response after relapse post allo-HSCT.

	2013-2018 (n=12)	2019-2022 (n=10)	All patients (n=22)
Median therapy regimens after relapse post allo-HSCT	6 (0-9)	4 (2-4)	4 (0-9)
Best response to subsequent treatment			
SCR	3 (25%)	3 (30%)	6 (27%)
CR	2 (17%)	1 (10%)	3 (14%)
VGPR	1 (8%)	1 (10%)	2 (9%)
PR	1 (8%)	1 (10%)	2 (9%)
< PR	4 (33%)	4 (40%)	8 (36%)
No subsequent treatment lines applied	1 (8%)	0 (0%)	1 (5%)

Allo-HSCT=allogeneic stem cell transplantation, CR=complete remission, LOT=line of therapy, PR=partial remission, SCR=stringent complete remission, VGPR=very good partial remission.

**Supplementary Table S2.** Therapies administered for relapse after allo-HSCT.

	Relapsed patients (n=22)
<b>Proteasome inhibitor</b>	17 (77%)
Bortezomib	3 (14%)
Carfilzomib	17 (77%)
Ixazomib	9 (41%)
<b>IMiD</b>	18 (82%)
Lenalidomide	8 (36%)
Pomalidomide	15 (68%)
<b>Monoclonal antibody</b>	17 (77%)
Daratumumab	11 (50%)
Isatuximab	4 (18%)
Elotuzumab	9 (41%)
<b>Chemotherapy</b>	9 (41%)
D-PACE	6 (27%)
DCEP	2 (9%)
Bendamustine	2 (9%)
Cyclophosphamide	1 (5%)
Venetoclax	5 (23%)
Selinexor	1 (5%)
Interferon	2 (9%)
Belantamab mafodotin	5 (23%)
Teclistamab	7 (32%)
Talquetamab	1 (5%)
Radiation therapy	5 (23%)
2 <sup>nd</sup> allo-HSCT	1 (5%)

Allo-HSCT=allogeneic stem cell transplantation, IMiD=immunomodulatory drug, D-PACE=dexamethasone/ cisplatin/ doxorubicin/ cyclophosphamide/ etoposide, DCEP=dexamethasone/ cyclophosphamide/ etoposide/ cisplatin.