

Supplementary Table S1. Hematologic response criteria

Response category	Criteria
Complete	Normalization of the FLC levels and ratio, negative serum and urine immunofixation
Very good partial	Reduction in the dFLC to < 40 mg/L
Partial	A greater than 50% reduction in the dFLC
No response (Stable disease)	Less than a PR
Progression	From CR, any detectable monoclonal protein or abnormal FLC ratio (light chain must double) From PR, 50% increase in serum M protein to > 0.5 g/dL or 50% increase in urine M protein to > 200 mg/d (a visible peak must be present) Serum-FLC increase of 50% to > 100 mg/L

Abbreviations: CR, complete response; dFLC, the difference between involved FLC and uninvolved FLC; FLC, free light chain; PR, partial response.

Supplementary Table S2. Treatment patterns by diagnosis era

	Era 1 (2007-2012)	Era 2 (2013-)
	N = 28	N = 45
First-line systemic treatment	N = 27	N = 45
Melphalan-based	19 (70.4%)	4 (8.9%)
Chemotherapy	2 (7.4%)	1 (2.2%)
IMiD/PI-based	5 (18.5%)	34 (75.6%)
Steroid only	1 (3.7%)	6 (13.3%)
HTPL	0 (0.0%)	12 (26.7%)
ASCT	3 (10.7%)	10 (22.2%)

Abbreviations: ASCT, autologous stem cell transplantation; HTPL, heart transplantation; IMiD, immunomodulatory drug; PI, proteasome inhibitor.

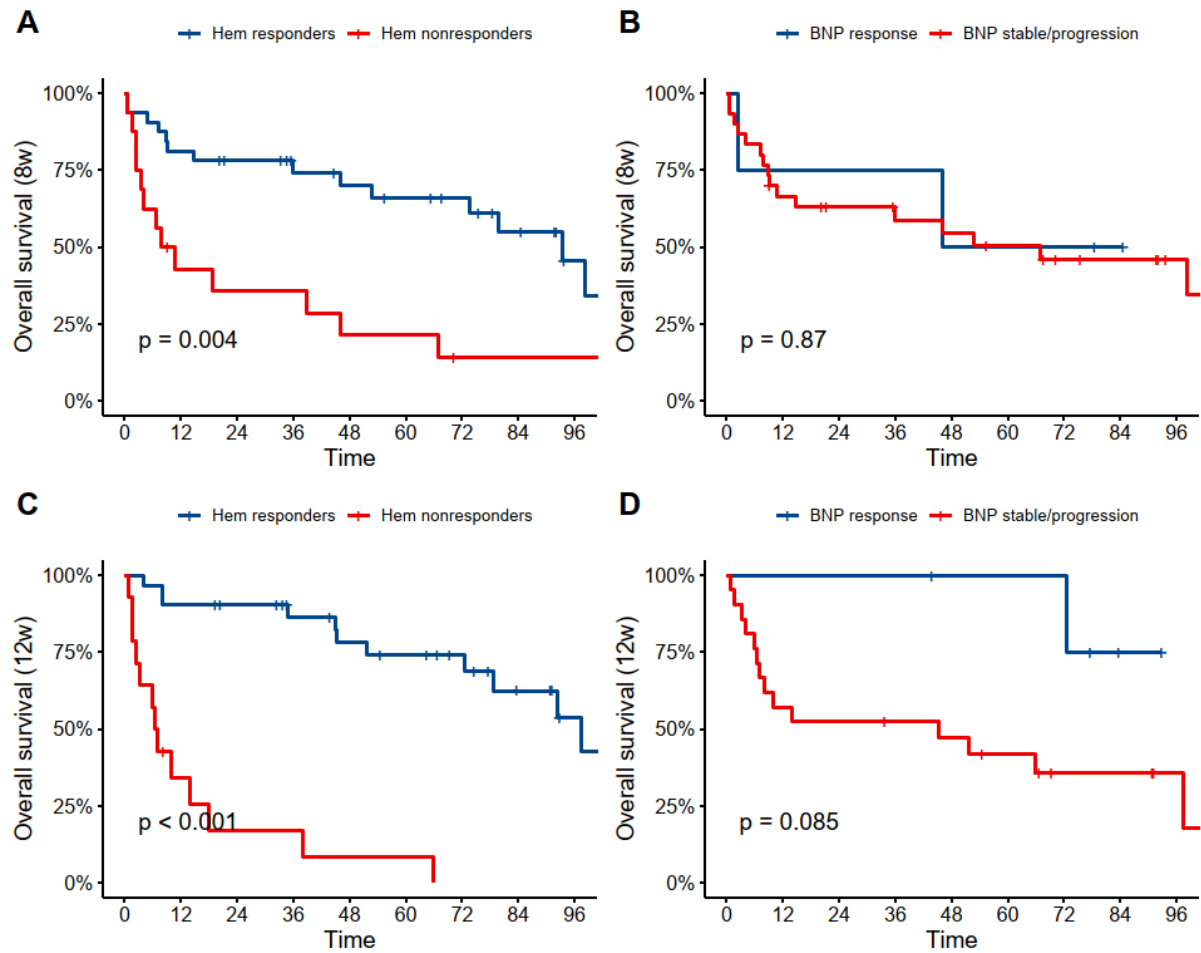
Supplementary Table S3. Supporting data for subgroup analyses for overall survival by HTPL status (data visually shown in Figure 2)

Variable	Number of patients	Median OS (95% CI), months	Median time from diagnosis to HTPL (95% CI), months
Male, HTPL	7	NR (3.84-NE)	4.17 (0.66-7.69)
Male, no HTPL	35	4.5 (2.07-21.82)	
Female, HTPL	5	37.34 (16.56-NE)	3.52 (1.31-NE)
Female, no HTPL	26	24.61 (4.53-68.93)	
ECOG 0-1, HTPL	6	54.64 (16.56-NE)	3.71 (1.31-NE)
ECOG 0-1, no HTPL	36	21.82 (6.11-75.47)	
ECOG ≥ 2 , HTPL	6	NR (3.84-NE)	2.83 (0.66-NE)
ECOG ≥ 2 , no HTPL	25	4.34 (2.04-44.98)	
Lambda, HTPL	7	NR (16.56-NE)	3.52 (0.89-7.69)
Lambda, no HTPL	42	17.45 (4.5-81.54)	
Kappa, HTPL	5	NR (3.84-NE)	3.91 (0.66-NE)
Kappa, no HTPL	19	4.34 (0.92-24.61)	
BMPC <20%, HTPL	9	NR (54.64-NE)	4.17 (0.89-7.69)
BMPC <20%, no HTPL	53	13.08 (3.75-49.51)	
BMPC $\geq 20\%$, HTPL	3	16.56 (3.84-NE)	1.77 (0.66-NE)
BMPC $\geq 20\%$, no HTPL	7	4.34 (1.38-9.40)	
Without MM, HTPL	5	NR (3.84-NE)	5.16 (0.66-NE)
Without MM, no HTPL	25	13.08 (2.07-81.54)	
With MM, HTPL	7	54.64 (16.56-NE)	1.77 (0.89-4.17)
With MM, no HTPL	36	10.38 (3.75-49.51)	
Without extracardiac, HTPL	5	NR (20.04-NE)	3.91 (0.89-NE)
Without extracardiac, no HTPL	16	49.51 (4.50-NE)	
With extracardiac, HTPL	7	54.64 (3.84-NE)	3.52 (0.66-7.69)
With extracardiac, no HTPL	45	9.4 (2.53-24.61)	
Mayo 2004 European stage 1-2, HTPL	4	NR (54.64-NE)	4.39 (1.31-NE)
Mayo 2004 European stage 1-2, no HTPL	17	9.89 (2.07-NE)	
Mayo 2004 European stage 3a, HTPL	3	NR (16.56-NE)	5.16 (3.52-NE)
Mayo 2004 European stage 3a, no HTPL	12	43.63 (1.71-100.11)	
Mayo 2004 European stage 3b, HTPL	5	NR (3.84-NE)	1.48 (0.66-NE)
Mayo 2004 European stage 3b, no HTPL	21	4.34 (0.89-13.08)	
dFLC <180, HTPL	3	NR (20.04-NE)	4.17 (1.77-NE)
dFLC <180, no HTPL	12	8.16 (0.69-NE)	
dFLC ≥ 180 , HTPL	9	NR (3.84-NE)	3.52 (0.66-5.16)
dFLC ≥ 180 , no HTPL	48	11.79 (3.75-44.98)	
LVEF >50, HTPL	5	NR (16.56-NE)	3.91 (1.31-NE)
LVEF >50, no HTPL	35	24.61 (6.11-68.93)	
LVEF ≤ 50 , HTPL	7	54.64 (3.84-NE)	1.77 (0.66-4.86)
LVEF ≤ 50 , no HTPL	25	2.99 (1.71-13.08)	
Urine protein <3.5 g/d, HTPL	10	NR (20.04-NE)	4.04 (0.89-5.16)
Urine protein <3.5 g/d, no HTPL	41	9.89 (2.99-47.84)	
Urine protein ≥ 3.5 g/d, HTPL	2	10.2 (3.84-NE)	2.09 (0.66-NE)
Urine protein ≥ 3.5 g/d, no HTPL	9	24.61 (1.38-NE)	

BMPC, bone marrow plasma cell; CI, confidence interval; dFLC, the difference between involved and uninvolved free light chain; ECOG, Eastern Cooperative Oncology Group; HTPL, heart transplantation; LVEF, left ventricular ejection fraction; MM, multiple myeloma; NE, not estimated; NR, not reached.

Supplementary Figure S1. Survival outcomes from landmark points.

Overall survival: (A) hematologic response at week 8, (B) BNP response at week 8, (C) hematologic response at week 12, (D) BNP response at week 12



BNP, brain natriuretic peptide