

Real-World Treatment Trends and Triple Class Exposed Status in Japanese Patients with Newly Diagnosed Multiple Myeloma: A Retrospective Claims Database Study

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Supplementary material

Table S1. Treatment regimens described in the study

Treatment regimen	Drug(s) name
Bor-based	Bortezomib (V)
Dara-based	Daratumumab (D)
DKd-based	Daratumumab (D), carfilzomib (K), dexamethasone (d)
DRd-based	Daratumumab (D), lenalidomide (R), dexamethasone (d)
DVd-based	Daratumumab (D), bortezomib (V), dexamethasone (d)
D-VMP-based	Daratumumab (D), bortezomib (V), melphalan (M), prednisone
EPd-based	Elotuzumab (E), pomalidomide(P), dexamethasone (d)
ERd-based	Elotuzumab (E), lenalidomide (R), dexamethasone (d)
FVd-based	Panobinostat (F), bortezomib (V), dexamethasone (d)
IRd-based	Ixazomib (I), lenalidomide (R), dexamethasone (d)
Ixa-based	Ixazomib (Ixa)
Kd-based	Carfilzomib (K), dexamethasone (d)
KRd-based	Carfilzomib (K), lenalidomide (R), dexamethasone (d)
Len-based	Lenalidomide (Len)
Pd-based	Pomalidomide (P), dexamethasone (d)
PVd-based	Pomalidomide(P), bortezomib (V), dexamethasone (d)
Rd-based	Lenalidomide (R), dexamethasone (d)
RVd-based	Lenalidomide (R), bortezomib (V), dexamethasone (d)
Sar-based	SAR650984 (Sar)
Sd-based	Selinexor (S), dexamethasone (d)
SPd-based	Selinexor (S), pomalidomide (P), dexamethasone (d)
Td-based	Thalidomide (T), dexamethasone (d)
Vd-based	Bortezomib (V), dexamethasone (d)
VMP-based	Bortezomib (V), melphalan (M), prednisone

Table S2. Major medical history of patients whose diagnostic records for comorbidity existed during baseline period

ICD10 code	ICD10 name of disease	Non-transplant group (n=1,152)	Transplant group (n=76)
I10	Essential (primary) hypertension	466 (40.5)	9 (11.8)
I50	Heart failure	251 (21.8)	2 (2.6)
I20	Angina pectoris	168 (14.6)	5 (6.6)
N18	Chronic kidney diseases	137 (11.9)	3 (3.9)
I48	Atrial fibrillation and atrial flutter, unspecified	100 (8.7)	0 (0.0)
Data are presented as n (%), ICD10, International Statistical Classification of Diseases and Related Health Problems, 10 th Revision			

Table S3. Treatment lines

Treatment line	Non-transplant group (n=1,656)	Transplant group (n=128)
(a) Cumulative number and proportion of patients using therapies across different treatment lines		
1 st line	1,656 (100.0)	128 (100.0)
2 nd line	605 (36.5)	76 (59.4)
3 rd line	156 (9.4)	26 (20.3)
4 th line or more	45 (2.7)	9 (7.0)
(b) Number and proportion of patients based on the most recent treatment lines being used		
1 st line	1,051 (63.5)	52 (40.6)
2 nd line	449 (27.1)	50 (39.1)
3 rd line	111 (6.7)	17 (13.3)
4 th line or more	45 (2.7)	9 (7.0)
Data are presented as n (%)		

Table S4. Treatment regimen in each line in non-transplant and transplant groups

Treatment regimen	1 st line	2 nd line	3 rd line	4 th line
(a) Non-transplant group	(n=1,656)	(n=605)	(n=156)	(n=45)
Rd-based	409 (24.7)	133 (22.0)	23 (14.7)	3 (6.7)
Vd-based	394 (23.8)	59 (9.8)	9 (5.8)	1 (2.2)
RVd-based	259 (15.6)	22 (3.6)	1 (0.6)	2 (4.4)
DRd-based	110 (6.6)	52 (8.6)	6 (3.8)	3 (6.7)
Bor-based	65 (3.9)	24 (4.0)	3 (1.9)	1 (2.2)
DVd-based	49 (3.0)	20 (3.3)	2 (1.3)	3 (6.7)
VMP-based	47 (2.8)	4 (0.7)	2 (1.3)	0 (0.0)
Len-based	43 (2.6)	42 (6.9)	12 (7.7)	2 (4.4)
IRd-based	13 (0.8)	16 (2.6)	5 (3.2)	2 (4.4)
D-VMP-based	4 (0.2)	0 (0.0)	0 (0.0)	1 (2.2)
ERd-based	4 (0.2)	4 (0.7)	3 (1.9)	3 (6.7)
KRd-based	4 (0.2)	5 (0.8)	3 (1.9)	0 (0.0)
Dara-based	2 (0.1)	18 (3.0)	6 (3.8)	1 (2.2)
PVd-based	2 (0.1)	3 (0.5)	0 (0.0)	0 (0.0)
DKd-based	1 (0.1)	8 (1.3)	3 (1.9)	1 (2.2)
EPd-based	0 (0.0)	3 (0.5)	3 (1.9)	4 (8.9)
FVd-based	0 (0.0)	0 (0.0)	1 (0.6)	1 (2.2)
Kd-based	0 (0.0)	12 (2.0)	11 (7.1)	2 (4.4)
Pd-based	0 (0.0)	23 (3.8)	11 (7.1)	1 (2.2)
SPd-based	0 (0.0)	9 (1.5)	1 (0.6)	1 (2.2)
Ixa-based	0 (0.0)	15 (2.5)	3 (1.9)	0 (0.0)
Sar-based	0 (0.0)	1 (0.2)	1 (0.6)	0 (0.0)
Sd-based	0 (0.0)	0 (0.0)	1 (0.6)	0 (0.0)
Td-based	0 (0.0)	1 (0.2)	0 (0.0)	0 (0.0)
Other-based	250 (15.1)	131 (21.7)	46 (29.5)	13 (28.9)
(b) Transplant group	(n=107)	(n=55)	(n=15)	(n=7)
RVd-based	53 (49.5)	0 (0.0)	0 (0.0)	0 (0.0)
Vd-based	20 (18.7)	1 (1.8)	1 (6.7)	0 (0.0)
DVd-based	9 (8.4)	2 (3.6)	1 (6.7)	0 (0.0)
DRd-based	4 (3.7)	5 (9.1)	0 (0.0)	0 (0.0)
Rd-based	3 (2.8)	14 (25.5)	1 (6.7)	1 (14.3)
Bor-based	2 (1.9)	1 (1.8)	0 (0.0)	0 (0.0)
KRd-based	1 (0.9)	1 (1.8)	1 (6.7)	0 (0.0)
Len-based	0 (0.0)	9 (16.4)	2 (13.3)	1 (14.3)
Ixa-based	0 (0.0)	5 (9.1)	0 (0.0)	0 (0.0)
ERd-based	0 (0.0)	2 (3.6)	1 (6.7)	0 (0.0)
SPd-based	0 (0.0)	5 (9.1)	0 (0.0)	0 (0.0)
Dara-based	0 (0.0)	1 (1.8)	1 (6.7)	0 (0.0)
Kd-based	0 (0.0)	1 (1.8)	1 (6.7)	0 (0.0)
Pd-based	0 (0.0)	1 (1.8)	1 (6.7)	1 (14.3)
EPd-based	0 (0.0)	0 (0.0)	1 (6.7)	0 (0.0)
IRd-based	0 (0.0)	0 (0.0)	0 (0.0)	1 (14.3)
SKd-based	0 (0.0)	0 (0.0)	0 (0.0)	1 (14.3)
Sd-based	0 (0.0)	0 (0.0)	0 (0.0)	1 (14.3)
Other-based	15 (14.0)	7 (12.7)	4 (26.7)	1 (14.3)
Data are presented as n (%)				

Table S5. TCE patients

Treatment line	Non-transplant group			Transplant group		
	Total	TCE per line [#]	Cumulative TCE ^{\$}	Total	TCE per line [#]	Cumulative TCE ^{\$}
1 st line	1,656	184 (11.1)	184 (11.1)	128	27 (21.1)	27 (21.1)
2 nd line	605	179 (29.6)	312 (18.8)	76	29 (38.2)	49 (38.3)
3 rd line	156	61 (39.1)	337 (20.4)	26	13 (50.0)	52 (40.6)
4 th line	45	27 (60.0)	350 (21.1)	9	6 (66.7)	55 (43.0)
5 th line or more	13	9 (69.2)	351 (21.2)	3	3 (100.0)	56 (43.8)
Data are presented as n (%)						
# Calculated as percentage by using number of patients in corresponding treatment line as denominator.						
\$ Calculated as percentage by using number of patients in the 1st treatment line as denominator.						
TCE, triple class exposed						

Table S6. Treatment regimens leading TCE status in the 1st line for non-transplant group (N=184), (N≥2)

Treatment regimens	N (%)
Vd → DRd	29 (15.8)
D-RVd	19 (10.3)
RVd → DRd	17 (9.2)
Rd → DVd	8 (4.3)
D-VMP/d → DRd	5 (2.7)
RVd → DPd	5 (2.7)
RVd → SPd	5 (2.7)
Rd → D-RVd	4 (2.2)
VMP → DRd	4 (2.2)
Vd → SPd	3 (1.6)
RVd → DVd	3 (1.6)
DVd → DRd	2 (1.1)
DRd → K	2 (1.1)
Rd → DKd	2 (1.1)
RVd → SKd	2 (1.1)
ERd → SPd	2 (1.1)

Figure S1. Treatment regimen used before transplantation in each line in transplant groups

