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Diagnosis and treatment of multiple myeloma in Germany – Analysis of a nationwide, multi-institutional survey

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Introduction / Methods

Introduction:

With this update of a nationwide, multi-institutional survey we analysed whether treatment reality outside clinical trials reflects current advances in the management of multiple myeloma (MM).

Methods:

University hospitals (UH), non-university hospitals (NUH) and office-based practitioners (OBP) were contacted in 2011 and 2015 to provide clinical data from MM patients treated for newly diagnosed or relapsed disease during the first half of the respective year. Data were extracted from patient records and entered into an online database. We identified 478 (2011) and 515 (2015) that were treated at NUH (2011: 40% / 2015: 43%), UH (2011: 20% / 2015: 11%) and OBP (2011: 40% / 2015: 47%). (multiple answers in case of a mutual treatment).

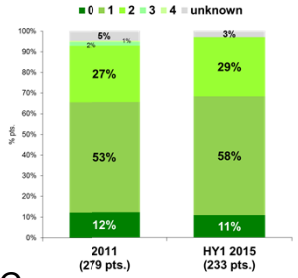
Patient Characteristics

	Current Front line		Current relapse / refractory	
Year	2011	2015 HY1	2011	2015 HY1
Patients	279	233	146	282
Gender				
Female	164 (59%)	90 (39%)	63 (43%)	109 (39%)
Male	115 (41%)	143 (61%)	83 (57%)	173 (61%)
Age	70 / 68,6	72 / 70,6	73 / 70,8	73 / 70,4
	(42 – 89)	(38 - 85)	(44 – 87)	(31 - 89)
	NA = 11 pts.	NA = 0 pat.	NA = 5 pts.	NA = 0 pat.
Reason for therapy				
M-protein level	NA	NA	86 (58%)	230 (82%)
Osteolysis	NA	NA	55 (38%)	139 (49%)
Fractures	NA	NA	16 (11%)	31 (11%)
Anemia, leuco, thrombo.	NA	NA	66 (45%)	58 (21%)
Hypercalcemia	NA	NA	10 (7%)	17 (6%)
Renal worsening	NA	NA	26 (18%)	54 (19%)
other	NA	NA	10 (7%)	10 (4%)
ISS				
I	40 (14%)	19 (8%)	22 (15%)	28 (10%)
II	74 (27%)	53 (23%)	39 (28%)	45 (16%)
III	93 (33%)	108 (46%)	47 (32%)	116 (41%)
Unknown / not used	72 (26%)	53 (23%)	38 (26%)	93 (33%)
Candidate for SCT	113 (41%)	85 (36%)	17 (12%)	44 (16%)
CRAB				
Used	143 (51%)	66 (28%)	70 (48%)	108 (38%)
C	32 (12%)	15 (6%)	16 (11%)	23 (8%)
R	56 (20%)	16 (7%)	29 (20%)	39 (14%)
A	88 (32%)	47 (20%)	50 (34%)	80 (28%)
B	126 (45%)	56 (24%)	59 (40%)	100 (35%)
Patients in trials	8,6%	0,8%	8,5%	2%

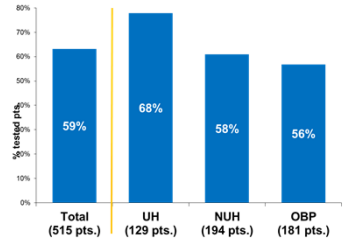
Results

Median age at primary diagnosis increased from 69 (2011; n=478) to 71 years (2015; n=515). Patients were diagnosed less frequently with concomitant diseases (2011: 61% / 2015: 51%) and no changes in performance status were observed (ECOG 0-1 2011: 66% / 2015: 68%, Figure A). Cytogenetic analysis for risk assessment slightly increased from 2011 (53%) to 2015 (59%), with different acceptance among health care providers (UH: 68% / NUH: 58% / OPB: 56%, Figure B). Factors associated with less frequent testing in frontline setting were age above 70 years or ineligibility for autologous stem cell transplantation (ASCT; p=0.001, respectively). Number of patients ≥ 65 years increased from 2011 (27%) to 2015 (57%) among candidates for ASCT (Figure C). Bortezomib-based therapies were used in 92% of transplant-eligible and 66% of transplant-ineligible patients in 2015 (Figure D, detailed overview of applied bortezomib regimen on the right side of the panel). Treatment of relapsed disease changed from 2011 to 2015. In 2011, patients in first relapse (RR1) were treated with bortezomib in 45% and lenalidomide in 27%. This ratio reversed in 2015, since 28% of patients in first relapse received bortezomib and 54% lenalidomide (Figure E). After approval of pomalidomide for relapsed MM, 11% of patients in second relapse (RR2) received the respective agent in 2015. Usage of lenalidomide for second relapse decreased from 2011 (36%) to 2015 (23%, Figure E).

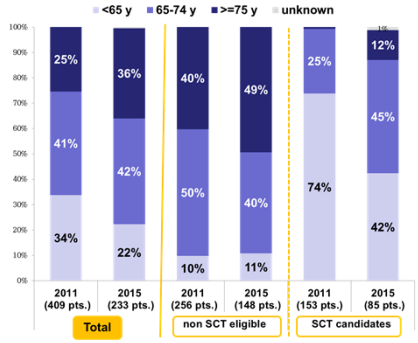
A ECOG



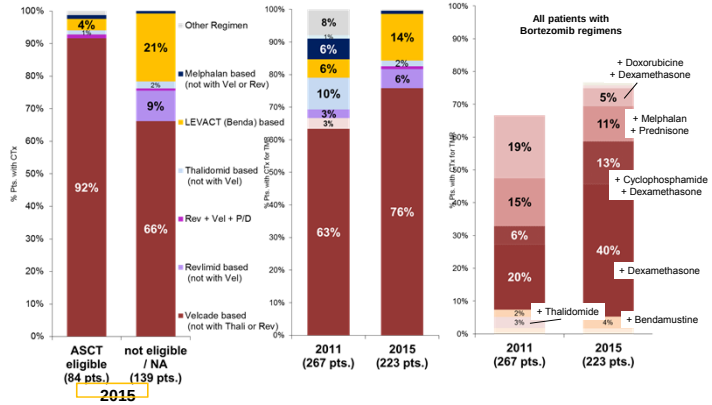
B Genetic analysis



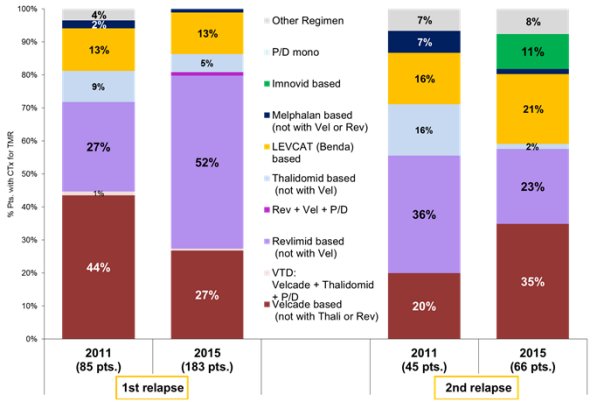
C



D



E



Conclusion

In an aging MM population, we observe increasing acceptance of ASCT above 65 years, most likely due to preserved performance status and less comorbidities. Bortezomib-based induction therapies are standard of care for front-line therapy in Germany, especially in transplant-eligible patients. Lenalidomide is mainly used in first and second relapse, while with pomalidomide, the first second generation novel agent entered MM treatment in 2015.