2158 Efficacy and Safety of Bosutinib By Age and Charlson Comorbidity Index in Previously Treated Patients with Chronic Myeloid Leukemia: Results from the Phase 4 Byond Study

Program: Oral and Poster Abstracts

Session: 632. Chronic Myeloid Leukemia: Therapy: Poster II

Hematology Disease Topics & Pathways:

Biological, Diseases, CML, Therapies, Myeloid Malignancies, TKI

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Introduction: Bosutinib is approved for use in patients with Philadelphia chromosome-positive (Ph+) chronic myeloid leukemia (CML) resistant or intolerant to prior therapy and in patients with newly diagnosed Ph+ chronic phase (CP) CML.

Methods: In the ongoing BYOND trial (NCT02228382), patients with pretreated CML received bosutinib at a starting dose of 500 mg/day. Here we report efficacy and safety of bosutinib in 156 patients with Ph+ CP CML by i.) age: ≥65 (n=61) vs <65 years (n=95) and ≥75 (n=28) vs <75 years (n=128), and ii.) comorbidities. Charlson Comorbidity Index scores (without the age component; mCCI) were derived from baseline data and patients grouped by mCCI score 2 (n=100), 3 (n=27), and ≥4 (n=29). Data are reported at ≥1 year after the last enrolled patients, and median follow-up time was 30.4 months; approximately 85% of patients had a minimum follow-up of 2 years.

Results: Median duration of treatment was 23 vs 24 months for patients ≥65 vs <65 years as well as for patients ≥75 vs <75 years; respective median dose intensity was 304 vs 343 mg/day and 265 vs 340 mg/day. Cumulative response rates according to age group are shown in the table. Grade 3/4 treatment-emergent adverse event (TEAE) rates were 82% vs 68% for patients ≥65 vs <65 years, and 89% vs 70% for patients ≥75 vs <75 years. Bosutinib was permanently discontinued by 56% vs 36% of patients ≥65 vs <65 years, and 61% vs 40% of patients ≥75 vs <75 years, most commonly due to adverse events (AEs; 33%

vs 20% and 36% vs 23%, respectively). Deaths occurred in 10 vs 0 patients ≥65 vs <65 years, and 4 vs 6 patients ≥75 vs <75 years.

Median treatment duration for patients with mCCI 2, 3, and ≥4 was 24, 24 and 18 months; respective median dose intensity was 344, 299 and 304 mg/day. Cumulative response rates across mCCI are shown in the table. Grade 3/4 TEAE rates were 73%, 70%, and 79% for patients with mCCI 2, 3, and ≥4. Bosutinib was permanently discontinued by 38%, 44% and 62% of patients with mCCI 2, 3, and ≥4, most commonly due to AEs (22%, 26%, and 35%, respectively). Deaths occurred in 4, 3, and 3 patients with mCCI 2, 3, and ≥4.

Conclusions: Bosutinib efficacy was demonstrated across age groups and mCCI scores. Older patients (≥65 or ≥75 years) and those with high comorbidity burden (mCCI ≥4) showed a trend towards higher rates of TEAEs and discontinuations due to AEs and may require more careful monitoring.

Table. Cumulative response rates at any time on treatment

	by age				by comorbidities		
n (%)	**<65 y**	**≥65 y**	**<75 y**	**≥75 y**	**mCCI 2**	**mCCI 3**	**mCCI ≥4**
Cytogenetic response							
All evaluable patients, *n*	91	53	121	23	92	25	27
CCyR	78 (86)	39 (74)	98 (81)	19 (83)	81 (88)	18 (72)	18 (67)
Evaluable patients without baseline CCyR, *n*	32	20	46	6	33	10	9
CCyR	25 (78)	9 (45)	30 (65)	4 (67)	26 (79)	5 (50)	3 (33)
Molecular response							
All evaluable patients, *n*	91	58	122	27	96	27	26
MMR	67 (74)	40 (69)	87 (71)	20 (74)	75 (78)	17 (63)	15 (58)
MR[4]	52 (57)	33 (57)	67 (55)	18 (67)	59 (62)	14 (52)	12 (46)
MR[4.5]	42 (46)	27 (47)	57 (47)	12 (44)	46 (48)	11 (41)	12 (46)
Evaluable patients without baseline MMR, *n*	45	34	66	13	52	13	14
MMR	30 (67)	17 (50)	40 (61)	7 (54)	35 (67)	6 (46)	6 (43)
Evaluable patients without baseline MR[4], *n*	65	47	91	21	71	22	19
MR[4]	32 (49)	23 (49)	42 (46)	13 (62)	37 (52)	11 (50)	7 (37)
Evaluable patients without baseline MR[4.5], *n*	79	52	107	24	86	25	20
MR[4.5]	32 (41)	21 (40)	44 (41)	9 (38)	36 (42)	9 (36)	8 (40)

Evaluable patients had a valid baseline assessment.
CCyR imputed from MMR if no valid cytogenetic assessment was available on a specific date.
CCyR=complete cytogenetic response; MMR=major molecular response; MR=molecular response; y=years

Disclosures: Rosti: *Novartis:* Speakers Bureau; *Pfizer:* Research Funding, Speakers Bureau; *Incyte:* Speakers Bureau; *Bristol-Myers Squibb:* Speakers Bureau. **Brümmendorf:** *Merck:* Consultancy; *Pfizer:* Consultancy, Honoraria, Other: Travel, Accommodation, Expenses, Research Funding; *Novartis:* Consultancy, Honoraria, Other: travel, accommodation, expenses, Patents & Royalties, Research Funding; *Takeda:* Consultancy; *Janssen:* Consultancy. **Gjertsen:** *KinN Therapeutics AS:* Current equity holder in private company; *Alden Cancer Therapy AS:* Current equity holder in private company; *Pfizer Inc:* Consultancy; *BerGenBio AS:* Consultancy, Research

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