Practice Gaps and Barriers in Optimal Care Among Healthcare Professionals Treating Patients With Myelodysplastic Syndrome (MDS) and Acute Myeloid Leukemia (AML): Results of a Two-Phase Qualitative/Quantitative Study

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Background

Rapid advances in the understanding of the biology of MDS and AML have led to novel therapeutic interventions that have increased the clinical complexity of decision-making in patient care. This study sought to quantify professional practice gaps and barriers to optimal care among healthcare professionals (HCPs) treating patients with MDS and AML at academic medical centers and/or community cancer centers and clinics globally, with the goal of informing the design of evidence-based education interventions aiming at addressing these gaps.

Methods

- A 2-phase study was designed to determine current practice trends and specific challenges faced by HCPs who care for patients with MDS or AML
  - Phase 1: quantitative online survey (February-May 2021) for both US-based and ex-US–based HCPs
  - Phase 2: qualitative telephone interviews (March-May 2021) US-based solely
- Participants were recruited via email and their responses were compared with those of experts, guideline recommendations, and regulatory approvals
- Data shown are from physicians, pharmacists, and advanced practice nurses

Conclusions

Core practice gaps:

- Evaluation and fitness assessment in MDS and AML
  - HCPs indicated a lower maximum age for transplant eligibility compared with experts and were more likely to select intensive chemotherapy for patients with poor performance status
- Therapy selection for higher-risk MDS
  - Experts are primarily using venetoclax/azacitidine off label for higher-risk MDS; a minority of HCPs selected this option except for patients progressing after HMA therapy
- Therapy selection for newly diagnosed AML
  - 50%-60% of respondents concur with expert recommendations for newly diagnosed older patients without targetable mutations, but there is low concordance with the experts for other case scenarios including for patients with poor performance status and *FLT3* mutation
- Therapy selection in relapsed/refractory AML
  - The lack of a standard approach to relapsed/refractory AML is a clear unmet need leaving HCPs challenged to select optimal approaches for their patients
- Therapy for *TP53*-mutated MDS and AML
  - The lack of familiarity with agents in clinical trials, including those directed at *TP53*-mutant disease, may negatively affect clinical trial referral; many HCPs interviewed noted the challenges in selecting therapy for patients with *TP53* mutations
- Clinical trial referral and knowledge of agents in trial
  - Most HCPs were unable to identify the targets of novel agents currently in clinical trials potentially limiting clinical trial referral and the ability to integrate these agents into practice once approved

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Results

Participant Demographics

Clinical Role, n (%)	Qualitative	Quantitative	
	US Based (n = 30)	US Based (n = 263)	Ex-US Based (n = 66)
Physician	22 (73)	131 (50)	59 (89)
Nurse practitioner	3 (10)	49 (19)	2 (3)
Pharmacist	5 (17)	68 (26)	4 (6)
Physician assistant	0	15 (6)	1 (2)
Practice Setting, n (%)*			
Academic	13 (43)	51 (32)	12 (33)
Community/hospital/health system owned	10 (30)	61 (38)	19 (53)
Physician owned	7 (23)	42 (26)	4 (11)
Other	0	8 (5)	1 (3)
No response	NA	101	30

*For quantitative survey, percentages are based on n = 162 US participants and n = 36 ex-US who answered the question.

Table 1. Oldest Age at Which HCPs Would Consider Stem Cell Transplant

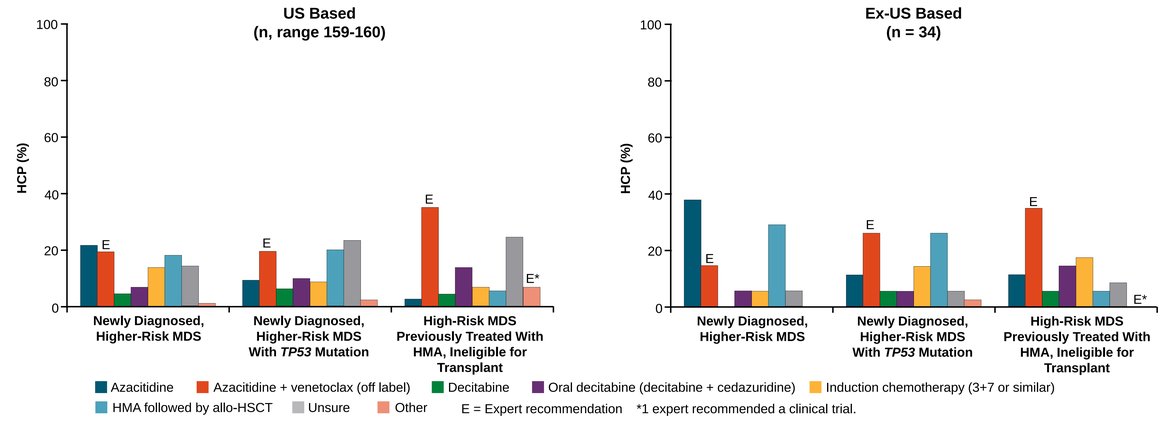
Age at Transplant, %	US (n = 160)	Ex-US (n = 35)
60 yr	6.88	25.71
65 yr	19.38	28.57
70 yr	39.38	34.29
75 yr	24.38	8.57
>75 yr	10.00	2.86

Red box indicates expert recommendation.

Table 2. Ability to Identify Targets of Novel Therapies

Identify Target, %	US (n = 163)			Ex-US (n = 35)		
Agent	Correct	Incorrect	Unsure	Correct	Incorrect	Unsure
Eprenetapopt (APR-246)	31.85	22.93	45.22	26.67	23.33	50.00
Flotetuzumab	21.38	34.59	44.03	38.24	20.58	41.18
IMGN632	15.38	23.08	61.54	9.68	22.58	67.74
Magrolimab	35.44	23.42	41.14	35.48	22.58	41.94
Pevonedistat	21.25	24.38	54.37	12.50	34.37	53.13
Sabatolimab (MBG 453)	17.39	24.85	57.76	12.90	16.13	70.97

Figure 1. Selection of Therapy for Higher-risk MDS



AML

Figure 2. Management of Newly Diagnosed AML

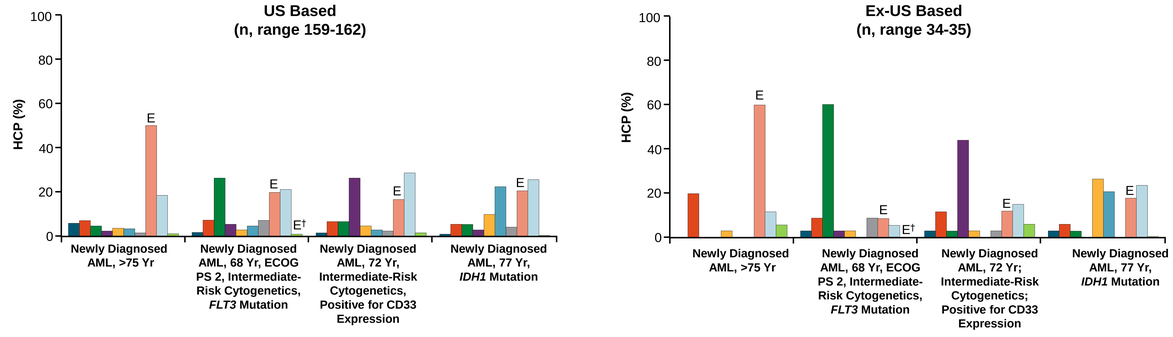


Figure 3. Management of Relapsed/Refractory AML