

Table 1. Prognostic risk factors relevant for HSCT eligibility and for outcome after HSCT

Prognostic risk factor	Outcome after	
	Tools to measure risk factors in patients with MDS	Nontransplant interventions, including supportive care
Patient related		HSCT
Age (chronological)	Calendar, IPSS-R ²⁰	Age influences prognostic impact of disease-related factors ¹⁵
Performance status (functional ability)	Karnofsky status $\geq 80\%$	Better survival after HSCT ¹⁵
Frailty (reduced physical fitness)	Specific tools have to be tested in HSCT ¹¹⁷	Fit patients better outcome ^{12,16-18}
Comorbidities	HSCT-specific CI (HCT-CI) ¹⁴	Low CI better outcome ¹³
Disease related		
Percentage of marrow blasts	IPSS(-R), WPSS, WHO ^{20,21}	Only impact if <5% marrow blasts ²²
Cytogenetic risk groups	IPSS(-R), WPSS, CPSS ^{20,21,44}	Only very-poor-risk ²⁹ and monosomal karyotype ³⁰
Severity of cytopenias	IPSS(-R), WPSS ^{41,42}	Only very-poor-risk group of IPSS-R prognostic
Marrow fibrosis	WHO criteria ⁵¹	Severity fibrosis prognostic ⁵²
Transfusions burden	WPSS ^{41,63}	WPSS ⁶⁴
FCM	ELN FCM score ^{25,27}	Not validated yet ²⁷
Molecular mutations	No specific tools yet ³⁴	Mutations in RUNX1, U2AF1, ASXL1, TP53, and others: poor prognosis ³⁴ prognostic ^{23,35}
Disease status (after nontransplant treatment interventions)		
ESA failure	High Epo levels, high transfusion intensity ^{6,68}	No direct impact reported
Lenalidomide failure	Absence of 5q ⁻⁵	No direct impact reported
HMA failure	HMA-therapy-specific risk score ⁷¹	Best available treatment after HMA failure, ⁷⁶ but response status prognostic factor
ICT	MDS-specific risk score ⁴	Best available treatment available after failure of first-line ICT, ⁷⁰ but response status and remission duration prognostic factor ³¹