## 2025 DEBATES AND DIDACTICS in Hematology and Oncology



Where Science Becomes Hope

#### JULY 24 - 27, 2025 · SEA ISLAND, GEORGIA

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## Early vs Delayed Transplantation in Myelofibrosis: DELAYED

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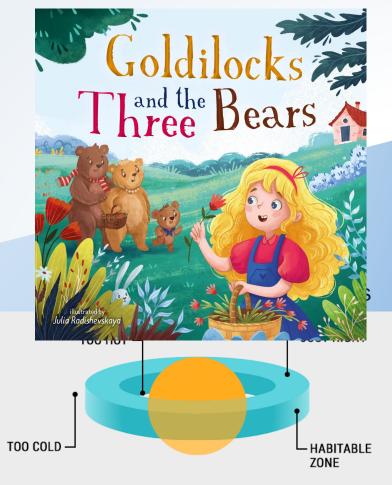
### **Relevant Disclosures**

- Rigel Pharmaceuticals (ad board, honoraria)
- Not a transplanter
- Also not Harry Potter

### Not Too Early, Not Too Late









#### Disease Course





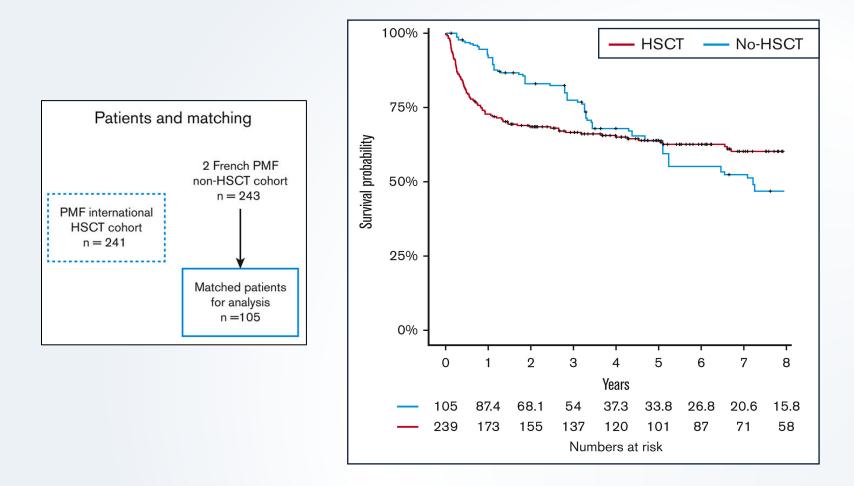


## Allogeneic Stem Cell Transplant in Myelofibrosis: Unique Risks

Condition	Association with Post-Stem Cell Transplant Outcome	
Anemia	Most MF Patients Anemic Not Prognostic	Spleen size <25cm/relapse Spleen size >25cm/relapse Spleen size <25cm/NRM Spleen size > 25cm/NRM
Thrombocytopenia	Cytopenic MF Worse Survival Worse Non-Relapse Mortality	Relapse, <i>P</i> = 0.002 NRM, <i>P</i> = 0.086
Circulating blasts	Increased Relapse Risk in Accelerated Phase MF	
Splenomegaly	Delayed Engraftment Graft Failure Increased Relapse Risk	
Marrow fibrosis	Characteristic of MF Not Prognostic	0.0 [15] 0 500 1000 1500 2000 2500 3000 Days

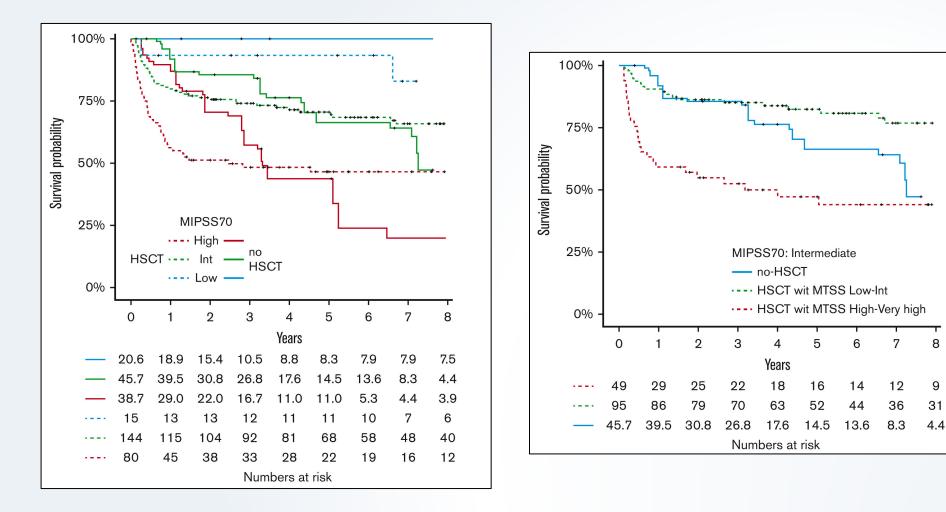
Kröger N, Wolschke C, Gagelmann N. *Blood* 2023. DOI: <u>10.1182/blood.2023021218</u>; Jungius et al. *Front Oncol.* 2023. DOI: <u>10.3389/fonc.2023.1205387</u>; Luther et al. *Bone Marrow Transplant.* 2023. DOI: <u>10.1038/s41409-023-01968-8</u>; Alchalby H, et al. *Bone Marrow Transplant.* 2016. DOI: <u>10.1038/bmt.2016.98</u>; Hernández-Boluda JC, et al. *Leukemia.* 2021. DOI: 10.1038/s41375-020-0815-z.

# Transplant is the Only Curative Therapy in Myelofibrosis – At a Cost



Luque Paz et al. Blood Adv 2025. DOI: 10.1182/bloodadvances.2024014368

### Lower Risk Myelofibrosis More Likely to Be Harmed by Early Bone Marrow Transplantation



MIPPS70 = mutation-enhanced international prognostic score system MTSS = myelofibrosis transplant scoring system

Luque Paz et al. Blood Adv 2025. DOI: 10.1182/bloodadvances.2024014368

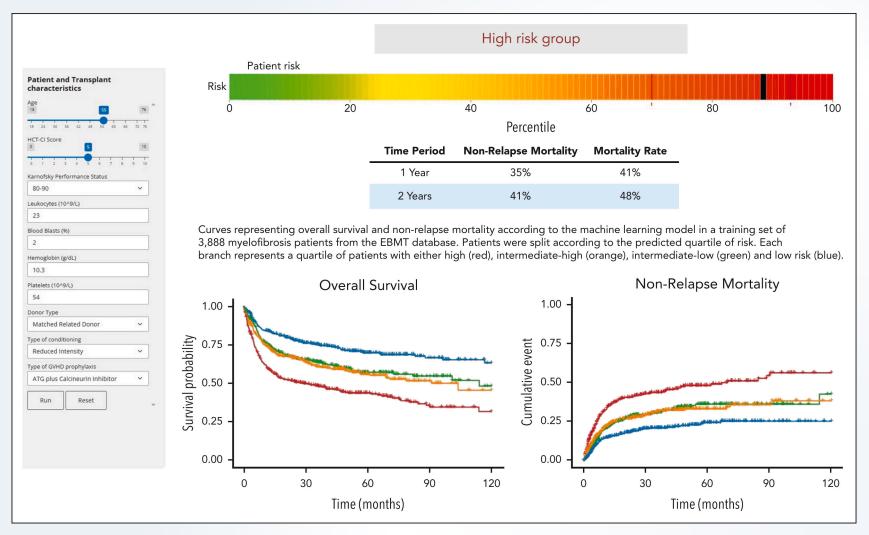
# MF Transplant Recommendations by EBMT/ELN International Working Group

Summary	Current MF Patient Selection for Allo-HCT	
Patient Risk	Higher Risk Primary MF: DIPSS Intermediate-2 or High Risk MIPSS70+ High Risk and MTSS Low or Intermediate Risk	
	Higher Risk Secondary MF: sMF Prognostic Model Score Intermediate-2 or High Risk	
	Primary MF and DIPSS intermediate-1 or MIPSS70+ intermediate with low MTSS, accounting for patient preferences	
Age	Patients >70 on Individual Basis	
Timing	DIPSS Intermediate-2 and High-risk $\rightarrow$ Immediate DIPSS Low-risk or Intermediate-1-risk $\rightarrow$ Delayed	
ret Haematel 2024 Jan:11(1):e62 e74 doi: 10.10	DIPSS = dynamic international prognostic sco	

Kröger N, et al. Lancet Haematol. 2024 Jan;11(1):e62-e74. doi: 10.1016/S2352-3026(23)00305-8.

DIPSS = dynamic international prognostic scoring system

# Estimating Transplant Risk in Myelofibrosis with Machine Learning

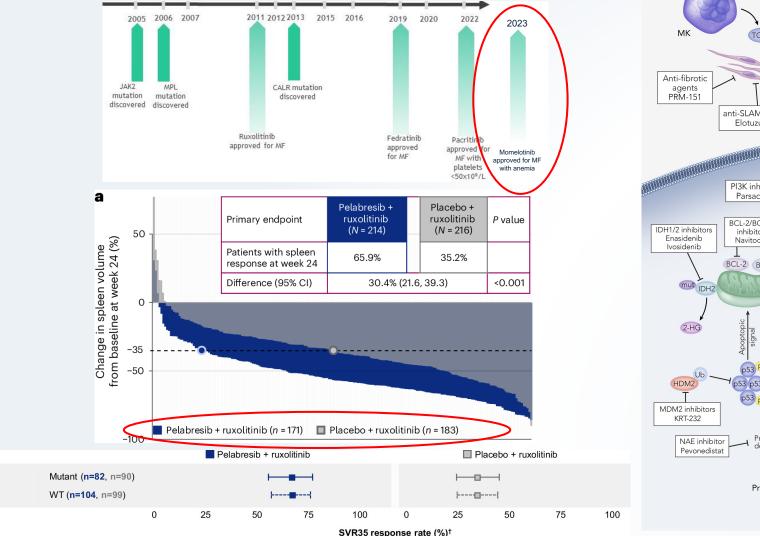


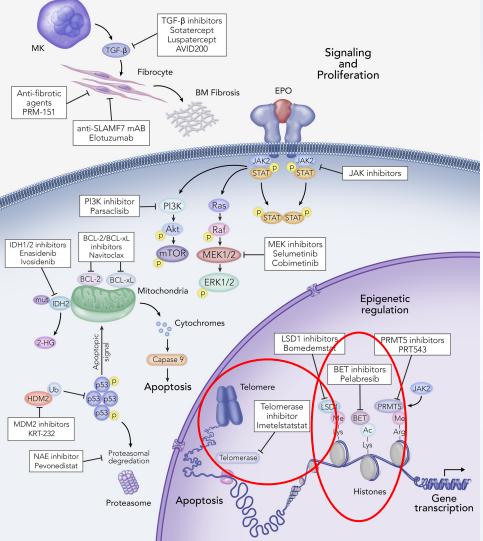
Hernández-Boluda JC et al. Blood (2025) 145 (26): 3139-3152. DOI: 10.1182/blood.2024027287

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#### https://gemfin.click/ebmt/

## New Drugs are Meaningfully Advancing Therapeutic Responses Among Higher Risk Myelofibrosis





Pettit K et al. Am Soc Clin Oncol Educ Book. 2022. DOI: 10.1200/EDBK\_349615; Rampal RK et al Nat Med. 2025 DOI: 10.1038/s41591-025-03572-3.

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HMR\*

### Conclusions

- Allogeneic SCT has unique challenges in MF
- Lower risk MF patients do not clearly benefit from transplant
- Higher risk MF patients are more likely to benefit
- Intermediate risk MF patients may benefit—transplant-related risk factors, shared decision making
- Numerous exciting drugs are around the corner in MF!
- Unclear how novel therapies, combinations may affect disease biology, modify transplant outcomes
- Therefore, delayed transplantation approach may benefit majority of MF patients