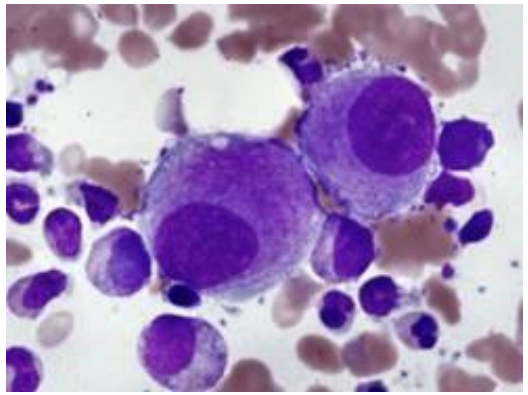
Myelodysplastic Syndromes/Neoplasms
Current Standards and Future Therapies
Update 2023



MDS del5q megakaryocytes

High-throughput sequencing

Artificial intelligence

DGHO Meeting, Hamburg 16.10.2023
N. Bonadies
bonadies@hin.ch

Potentielle Interessenskonflikte

Anstellungsverhältnis oder Führungsposition: Hämatologie Praxis Bern-Solothurn, Belegarzt Hirslanden

Beratungs- bzw. Gutachtertätigkeit: BMS/Celgene, Novartis, Sandoz, Takeda

Besitz von Geschäftsanteilen, Aktien oder Fonds: Hämatologie Praxis Bern-Solothurn

Patent, Urheberrecht, Verkaufslizenz: keine

Honorare: Keros

Finanzierung wissenschaftlicher Untersuchungen: Astellas, BMS/Celgene, Novartis, Roche, Sandoz, Serviez, Takeda (Fördermittel an Institution)

Andere finanzielle Beziehungen (Reisen): Amgen, BMS/Celgene, Gilead, Janssen, Novartis, Roche

Immaterielle Interessenkonflikte: Mitgründer Swiss MDS Studiengruppe, Register, Biobank

Overview

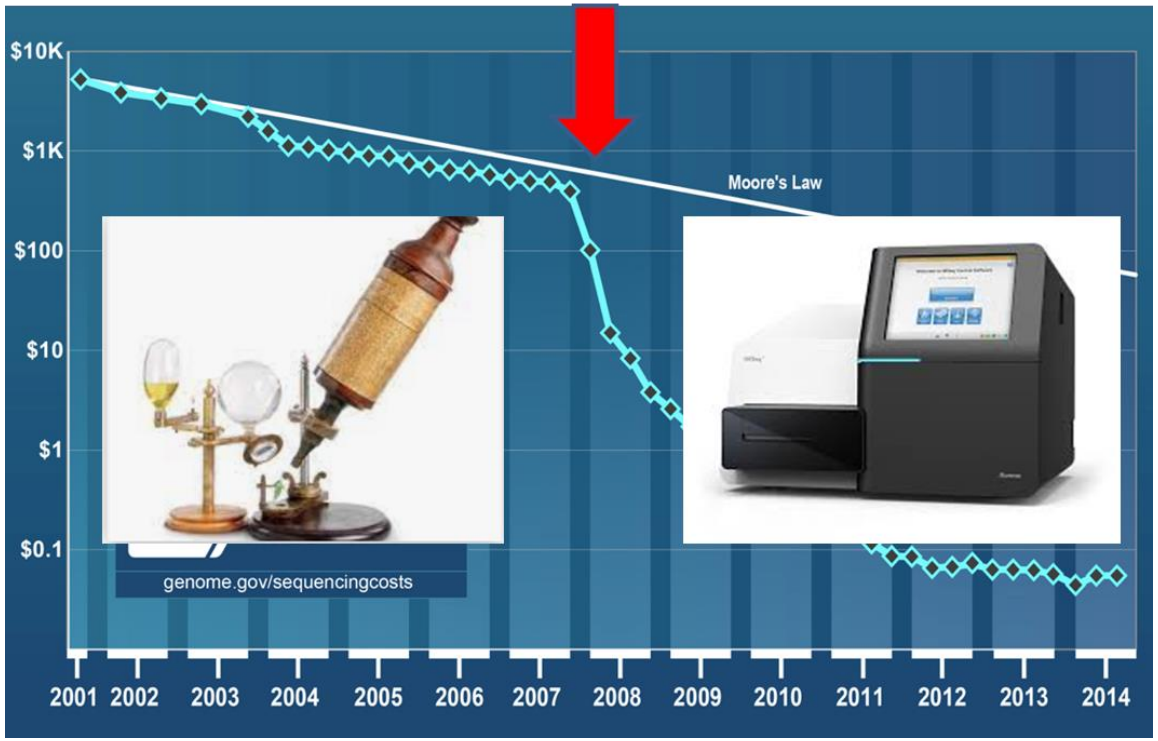
- General aspects
- Lower-risk MDS
- Higher-risk MDS
- Future outlook

Overview

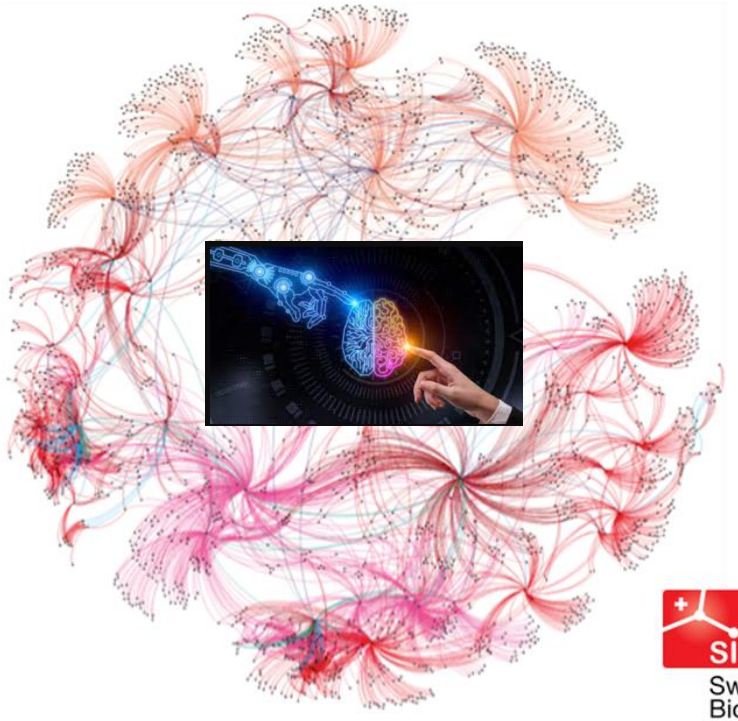
- **General aspects**
- Lower-risk MDS
- Higher-risk MDS
- Future outlook

Technological advances

Costs pro Megabase DNA sequenced



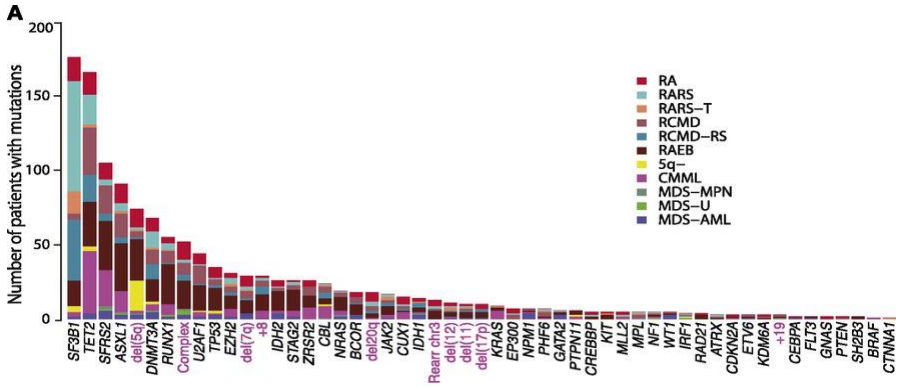
Analysis of high-dimensional data

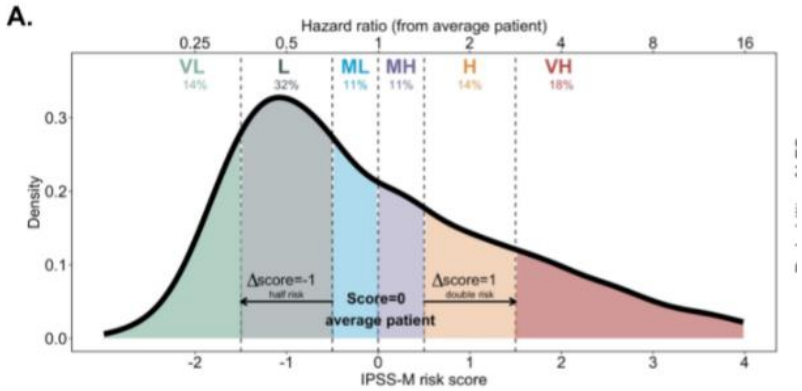


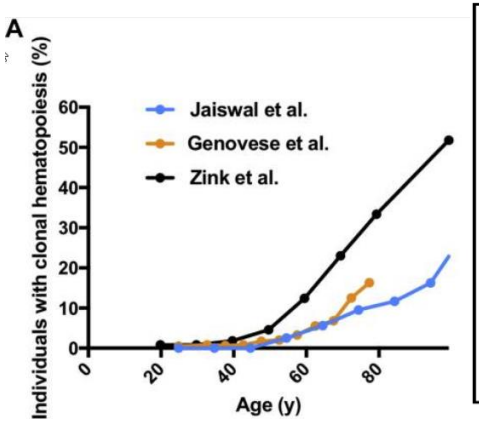
SIB Swiss Institute of Bioinformatics

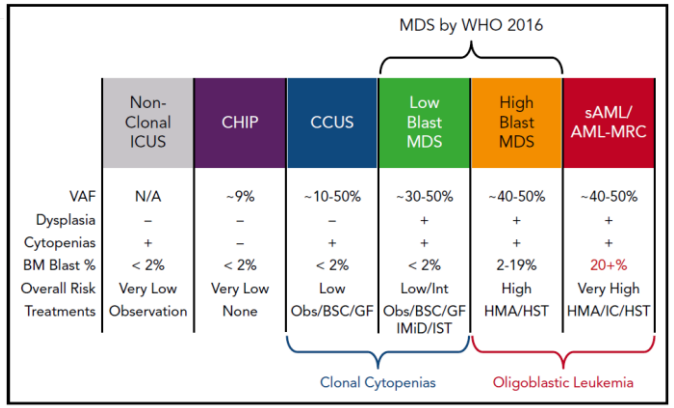
Genomic/bioinformatic revolution

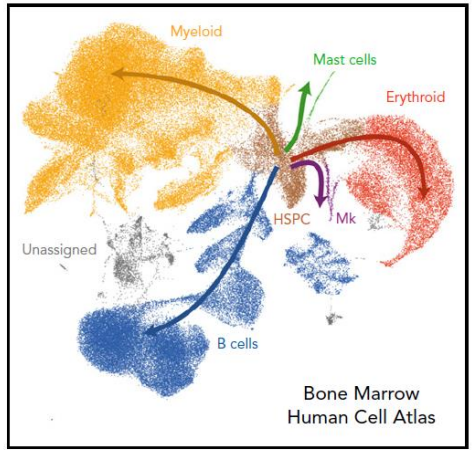
Biological/clinical impact









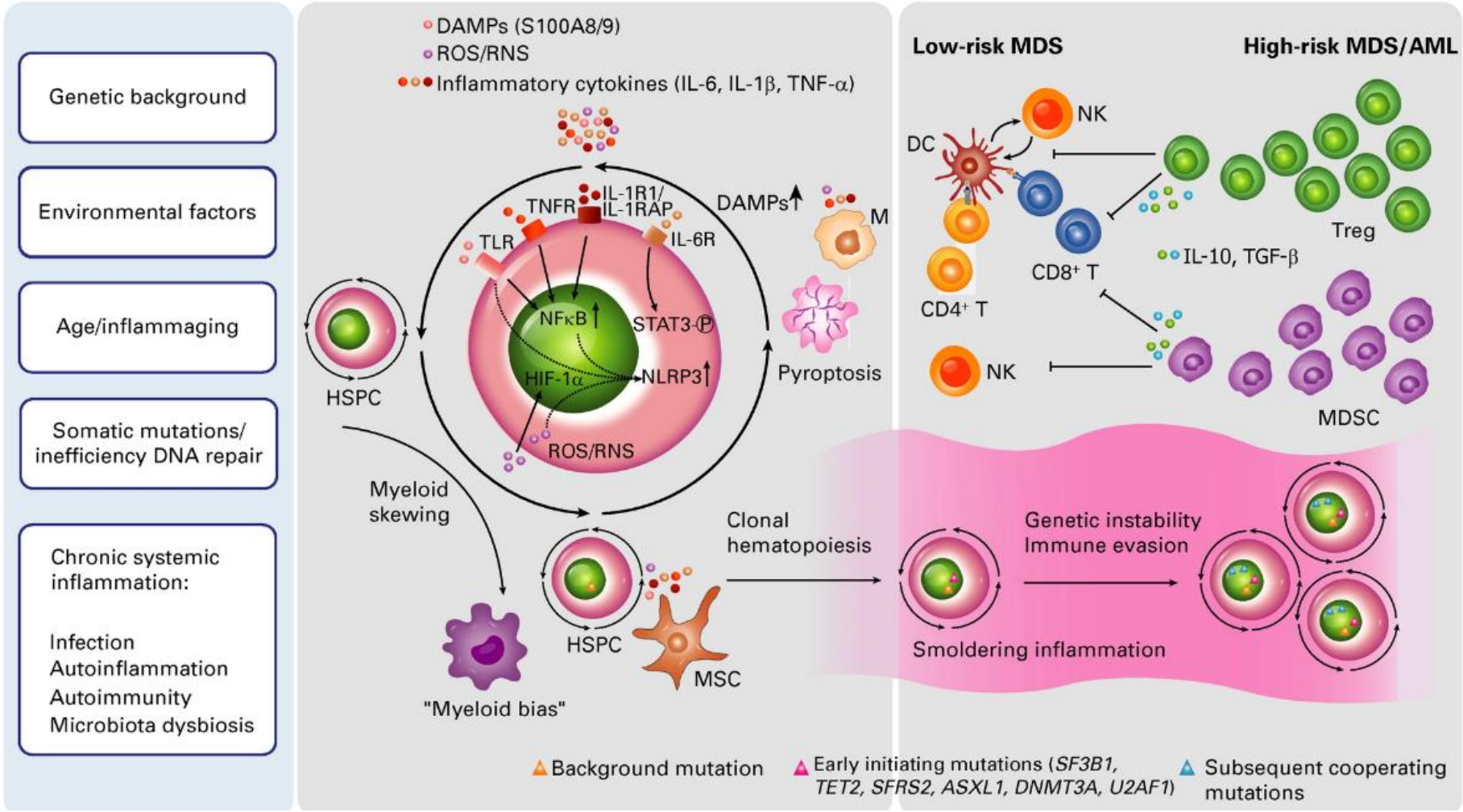


Increasing heterogeneity/complexity

Papaemmanuil E et al. Blood 2013;122:3616-3627
Yura Y, et al. JACC Basic Transl Sci. 2020;5(2):196-207.
Tanaka TN, Bejar R. Blood. 2019 Mar 7;133(10):1086-1095.

Elsa Bernard et al., NEJM Evidence, June 12, 2022
Watcham S, et al. Blood 2019

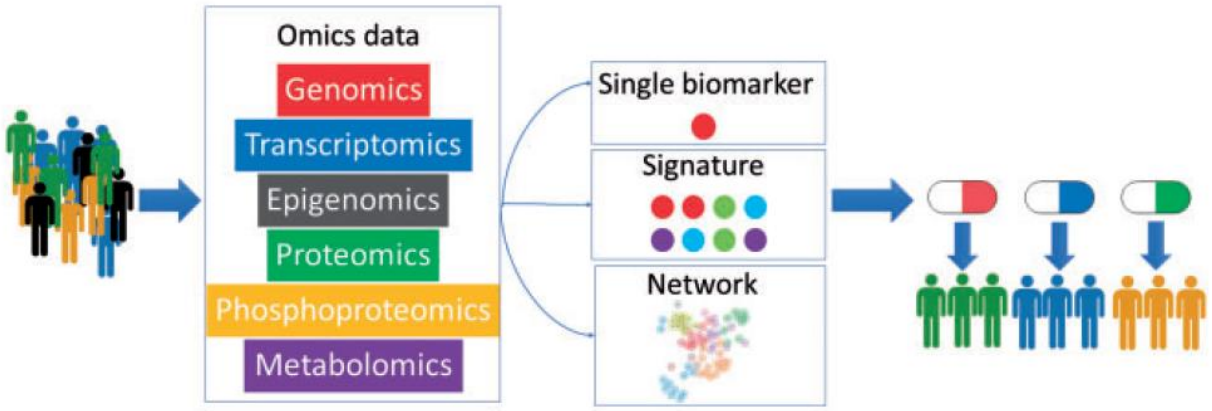
Immune-mediated pathophysiology of MDS

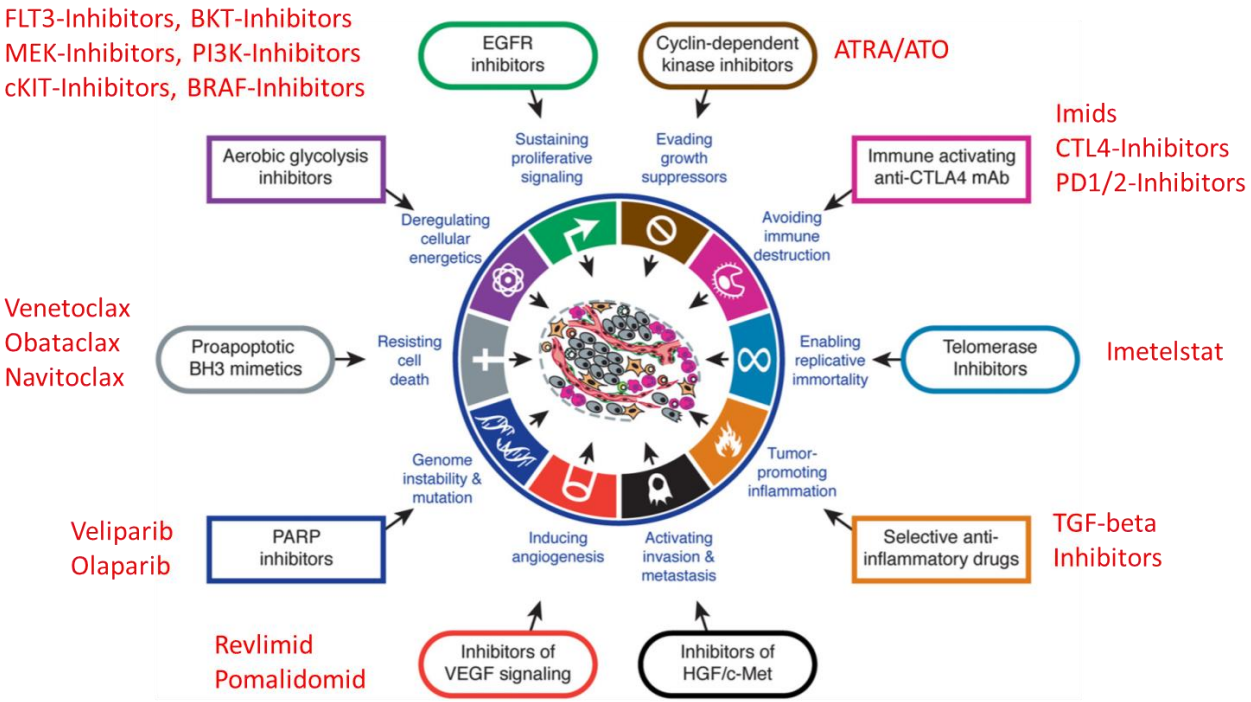


Susann Winter, Saeed Shoaie, Shahram Kordasti, and Uwe Platzbecker
Journal of Clinical Oncology 2020 38:15, 1723-1735

7

Precision Medicine/Targeted Therapies





Difficult to implement in MDS

Giudice G., Petsalaki E.. Briefings in Bioinformatics, 2017, 1–11

Adapted from Hanahan D, Weinberg RA. Hallmarks of Cancer: The Next Generation; Cell 2011; 144: 646-674

MDS Management Plan

Risk-stratification

Stratify according to IPSS-(R/M)/comorbidity/fraility

Lower-risk	Higher-risk
Aim for ↑quality of life	**Aim for ↑ survival**

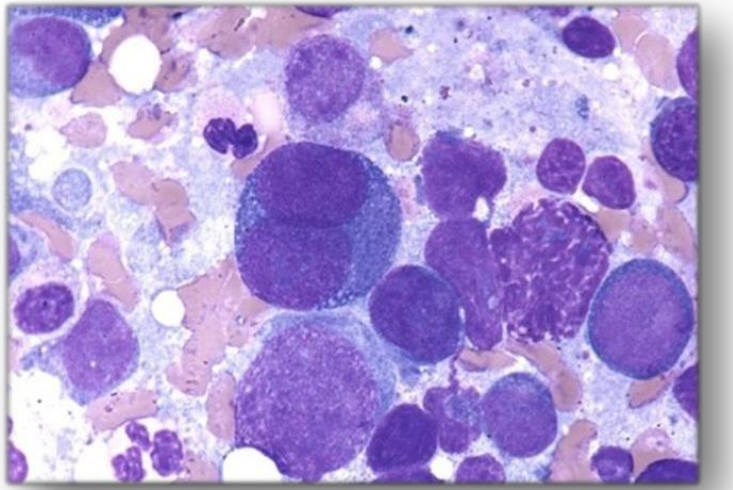
Supportive treatment

Lower-risk	Higher-risk
Infection/Haemorrhagia/ Thrombosis/Nutrition/Physio	Infection/Haemorrhagia/ Thrombosis/Nutrition/Physio
Transfusion/Fe-Chelation	Transfusion/Fe-Chelation
rHuEPO ± G-CSF/TPO-RA	rHuEPO ± G-CSF/TPO-RA

Disease modifying treatment

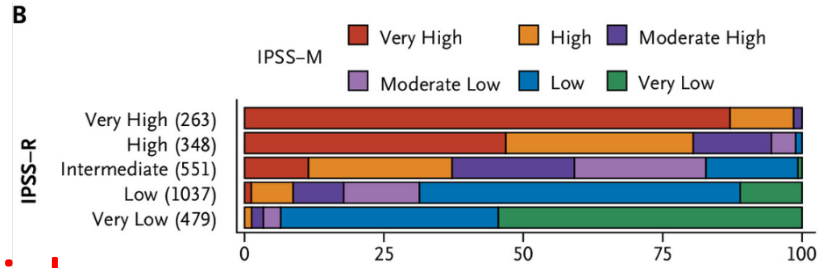
Lower-risk	Higher-risk
Lenalidomide (MDS del5q)	Chemotherapy/allo HSCT
CyA/ATG ± TPO-RA (Hypo-MDS)	Hypomethylating Agents ±VEN
Luspatercept (MDS-RS)	

Natural Course



~1/3 sAML

Higher-risk



Lower-risk

~2/3 BMF

Disease-based factors

Patient-based factors

Graubert T, ASH 2012

Elsa Bernard et al., NEJM Evidence, June 12, 2022

Risk Assessment

Disease-based factors

- **IPSS**
- WPSS
- **IPSS-R**
- **IPSS-M**
- Hypoplastic model
- CPSS (molecular)

Patient-based factors

Caregiver-based:

- **Karnofsky-Index, ECOG**
- **HSC-CI (Sorror) for fit**
- **MDS-CI for unfit**
- MDS Transplantation Risk Index
- MDS Survival Score

Patient-based:

- **QoL scoring systems (PROs)**
  - EORTC QLQ C30, EQ-5D, FACT-An, QUALMS
- MPN-SAF Score (MDS/MPN)

Greenberg, P., et al., Blood, 1997. **89**(6): p. 2079-88.
Malcovati L, JCO 2007
Greenberg PL, Blood. 2012 Sep 20;120(12):2454-65
Tong, W.G., et al. Cancer, 2012. **118**(18): p. 4462-70.
Such e. Blood. 2013 Apr 11;121(15):3005-15

Aaronson NK. J Natl Cancer Inst. 1993 Mar 3;85(5):365-76.
Cella D. Semin Hematol. 1997 Jul;34(3 Suppl 2):13-9.

Assessment

Functionality Assessment

Response Assessment

ESA: 3 months

Imid: 4 months

CyA/ATG, LUSPA, HMA: 6 months

Allo HSCT: 3/6/9/12 months

Proposals for revised IWG 2018 hematological response criteria in patients with MDS included in clinical trials

U. Platzbecker, P. Fenaux, L. Adès, A. Giagounidis, V. Santini, A. A. van de Loosdrecht, D. Bowen, T. de Witte, G. Garcia-Manero, E. Hellström-Lindberg, U. Germing, R. Stauder, L. Malcovati, Mikkael A. Sekeres, David P. Steensma and S. Gloaguen

Toxicity Assessment

Common Terminology Criteria

for Adverse Events (CTCAE)

Version 5.0

Published: November 27, 2017

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

ELN website

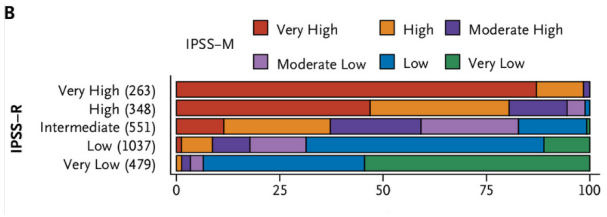
U. Platzbecker et al, Blood 2019 133: 1020-1030

Stojkov K, et al. *Blood Adv*. 2020;4(16):4029-4044.

The aim of the treatment has to be agreed with patients

Overview

- General aspects
- **Lower-risk MDS**
- Higher-risk MDS
- Future outlook

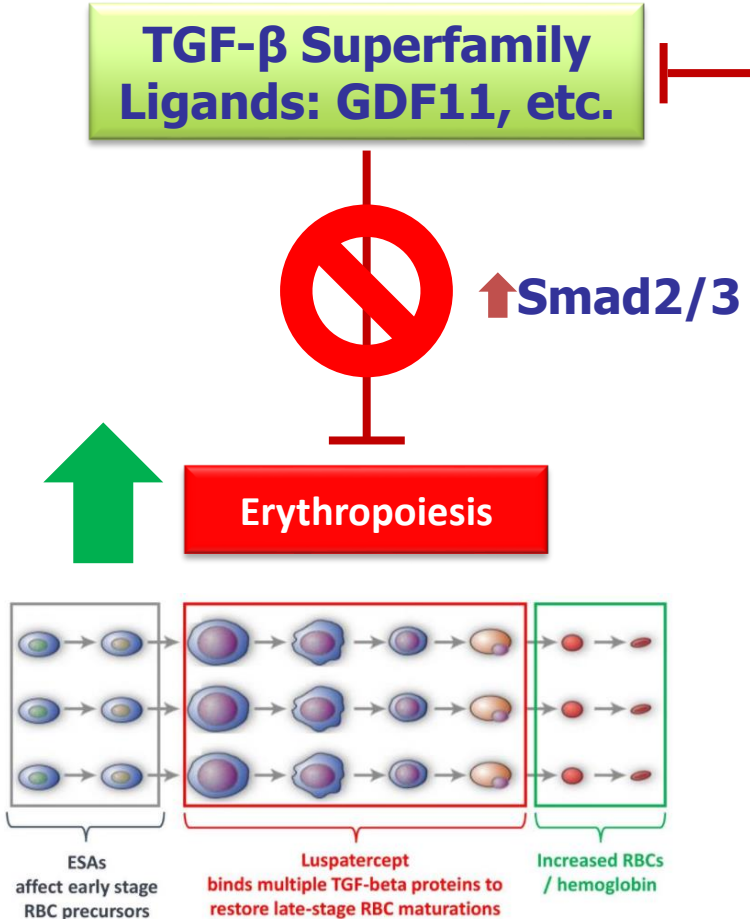


*check for targets and HR mutations

Chanias I, Bonadies N. healthbook TIMES Oncology Hematology. 2020;4(6):10-22.
Chanias et al. Cancers 2021, 13(13), 3296.
Elsa Bernard et al., NEJM Evidence, June 12, 2022

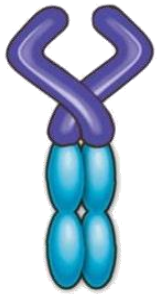
Luspatercept in RS+/SF3B1+ (5-10%)

(EMA, erythrocyte maturation agent)



Luspatercept

Fusion protein containing modified activin receptor type IIB (ActRIIB)



Activin Receptor Domain

Human IgG Fc Domain

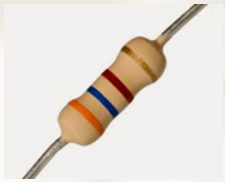
- Mechanism is distinct from erythropoietin
- Acts on **late-stage erythropoiesis** to increase mature RBCs

Suragani R, et al. Nature Med 2014
Zhou L, et al., Blood 2008
Attie K, Am J Hematol, 2014

With kind permission U. Platzbecker

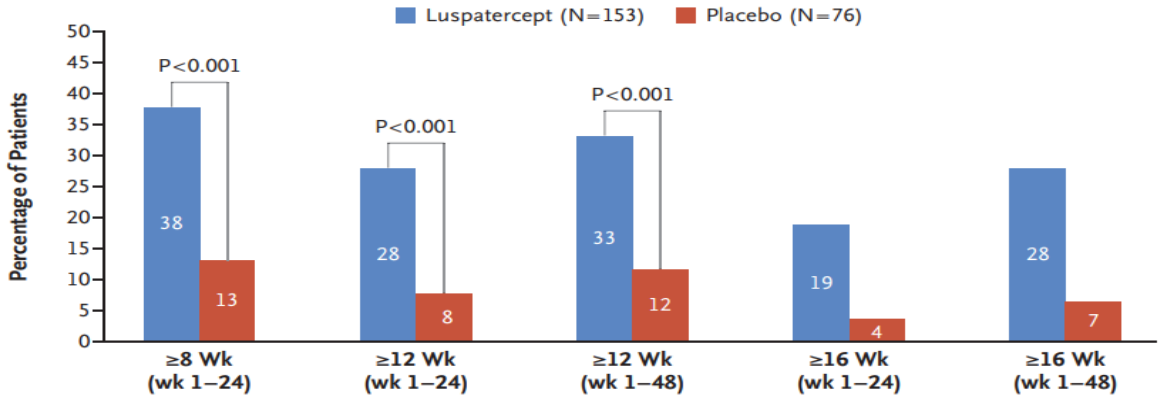
Onkologie/Hämatologie
Praxis Bern-Solothurn
HIRSLANDEN

MEDALIST



JAHRESTAGUNG 2023 13.–16. Okt. Hamburg

TI



No. of Patients with Response (% [95% CI])					
Luspatercept	58 (38 [30–46])	43 (28 [21–36])	51 (33 [26–41])	29 (19 [13–26])	43 (28 [21–36])
Placebo	10 (13 [6–23])	6 (8 [3–16])	9 (12 [6–21])	3 (4 [1–11])	5 (7 [2–15])

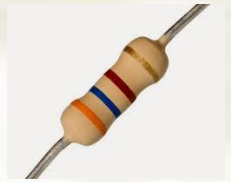
HI

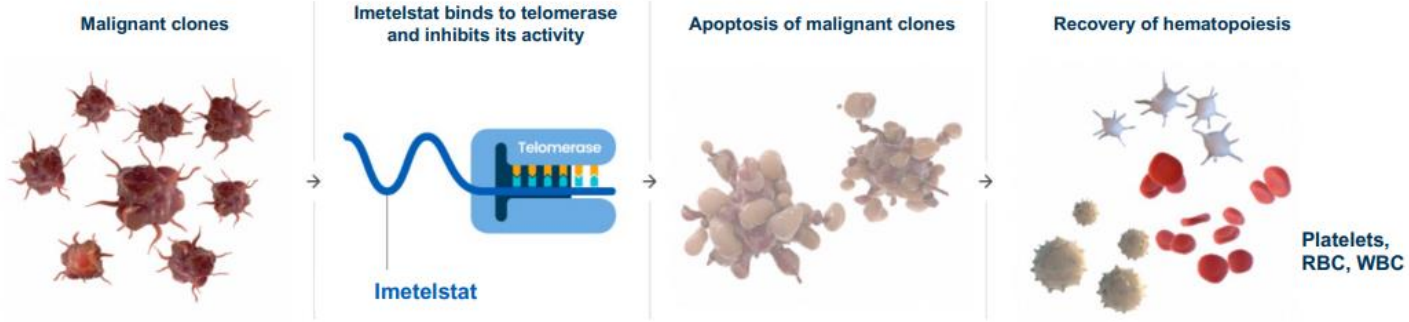
Table 2. Erythroid Response and Increase in Mean Hemoglobin Levels.

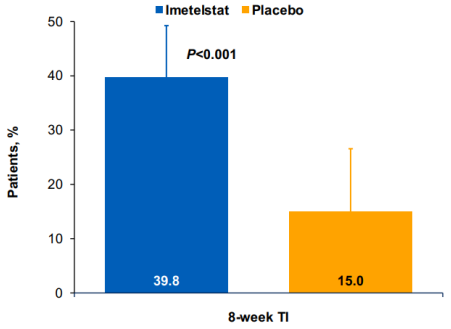
End Point	Luspatercept (N=153)	Placebo (N=76)
Erythroid response during wk 1–24*		
No. of patients (% [95% CI])	81 (53 [45–61])	9 (12 [6–21])
Reduction of ≥4 red-cell units/8 wk — no./total no. (%)†	52/107 (49)	8/56 (14)
Mean increase in hemoglobin level of ≥1.5 g/dl — no./total no. (%)‡	29/46 (63)	1/20 (5)
Erythroid response during wk 1–48*		
No. of patients (% [95% CI])	90 (59 [51–67])	13 (17 [9–27])
Reduction of ≥4 red-cell units/8 wk — no./total no. (%)†	58/107 (54)	12/56 (21)
Mean increase in hemoglobin level of ≥1.5 g/dl — no./total no. (%)‡	32/46 (70)	1/20 (5)
Mean increase in hemoglobin level of ≥1.0 g/dl — no. (% [95% CI])§		
During wk 1–24	54 (35 [28–43])	6 (8 [3–16])
During wk 1–48	63 (41 [33–49])	8 (11 [5–20])

Fenaux P, et al. N Engl J Med. 2020 Jan 9;382(2):140-151.

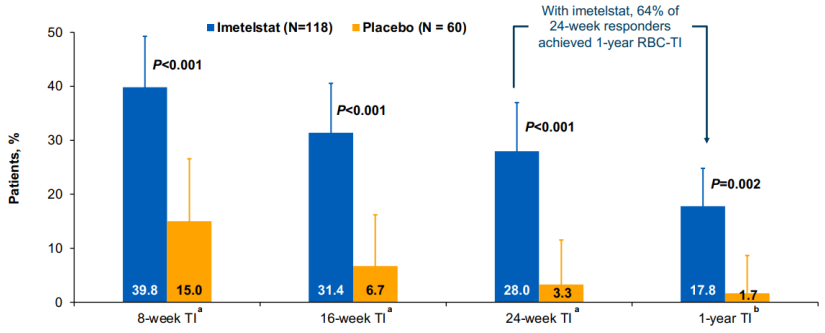
IMERGE (interim phase 3)



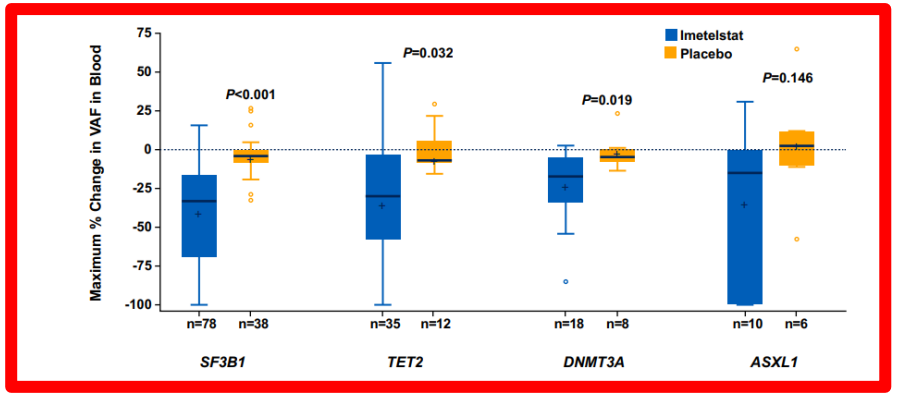




8-Week TI Responders	Imetelstat (N=118)	Placebo (N=60)
n (%)	47 (39.8)	9 (15.0)
95% CI[a]	30.93–49.25	7.10–26.57
% Difference (95% CI)[b] *P*-value[c]	24.8 (9.9–36.9) <0.001	



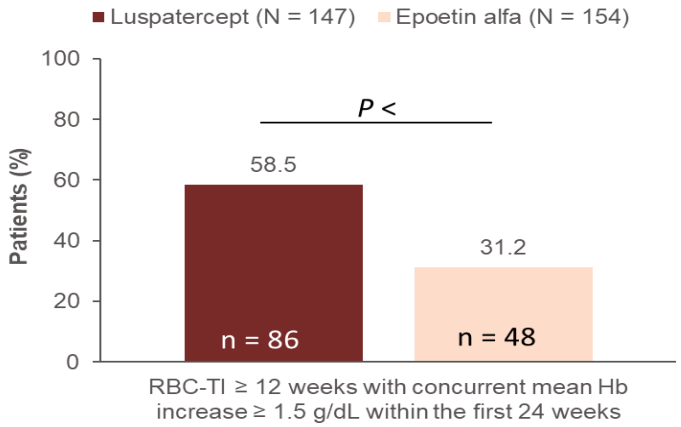
Hematologic Improvement	Imetelstat (N=118)	Placebo (N=60)	% Difference *P*-value[a]
HI-E (IWG 2018[1]), n (%) 95% CI[b]	50 (42.4) 33.3–51.8	8 (13.3) 5.9–24.6	29.0 <0.001
Patients with LTB, n[c]	21	18	
HI-E response (16-week RBC-TI), n (%) 95% CI[b]	7 (33.3) 14.6–57.0	4 (22.2) 6.4–47.6	11.1 0.562
Patients with HTB, n[c]	97	42	
Major HI-E response (16-week RBC-TI), n (%) 95% CI[b]	30 (30.9) 21.9–41.1	0 (0.0–8.4)	30.9 <0.001
Minor HI-E response (50% RBC units reduction in 16 weeks), n (%) 95% CI[b]	43 (44.3) 34.2–54.8	4 (9.5) 2.7–22.6	34.8 <0.001

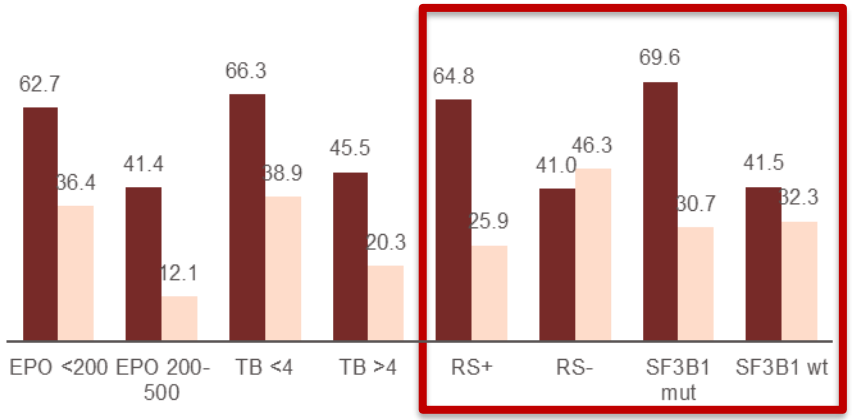


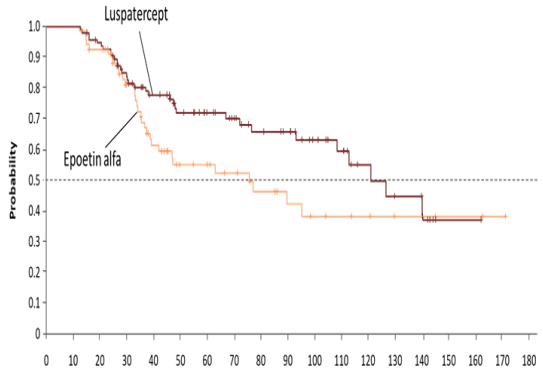
U. Platzbecker, EHA 2023, Session: s417

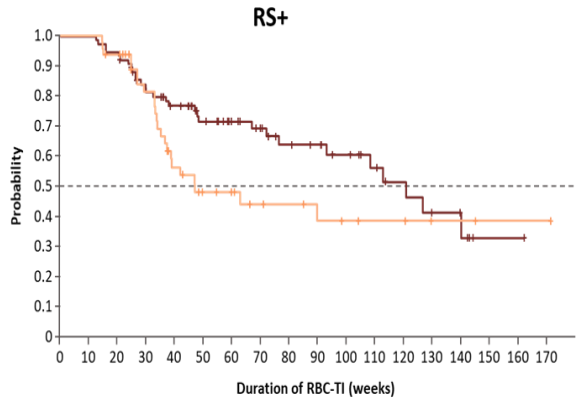
COMMANDS (interim phase 3)

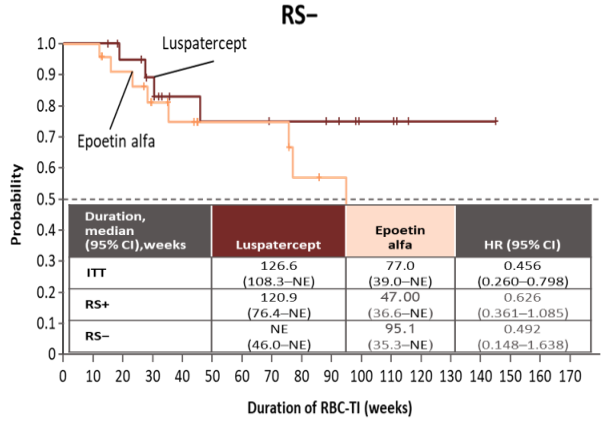
RBC-TI ≥ 12 weeks with concurrent mean Hb increase ≥ 1.5g/dL (weeks 1–24)







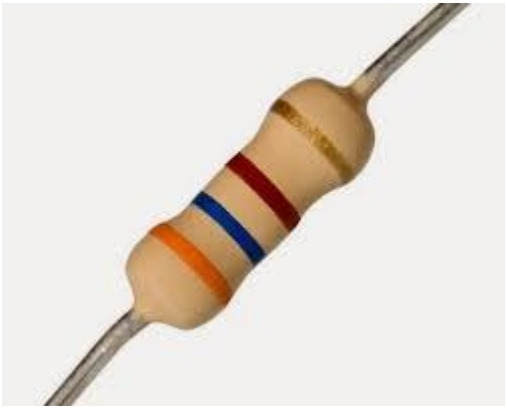




Duration, median (95% CI),weeks	Luspatercept	Epoetin alfa	HR (95% CI)
ITT	126.6 (108.3–NE)	77.0 (39.0–NE)	0.456 (0.260–0.798)
RS+	120.9 (76.4–NE)	47.00 (36.6–NE)	0.626 (0.361–1.085)
RS–	NE (46.0–NE)	95.1 (35.3–NE)	0.492 (0.148–1.638)

Garcia-Manero G, et al. ASCO 2023 [Abstract #7003]

«LR-MDS» with HR-behaviour

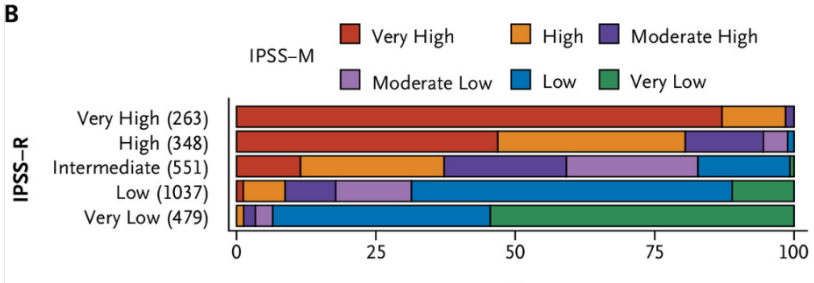


Regonzie the wolf in sheep's clothing

- age, kinetics, severity and multi-lineage affection
- Co-mutations?
- Specific therapeutic consequences (i.e. TP53, IDH1/2, FLT3 others..)

Resistance/refractoriness

- Co-mutations?
- Specific therapeutic consequences (i.e. TP53, IDH1/2, FLT3 others..)



Elsa Bernard et al., NEJM Evidence, June 12, 2022

Oral AZA (CC-486) in MDS

Patients were randomly assigned 1:1 to CC-486 300-mg or placebo for 21 days/28-day cycle.
Primary end point RBC transfusion independence (TI) was met, but too toxic.

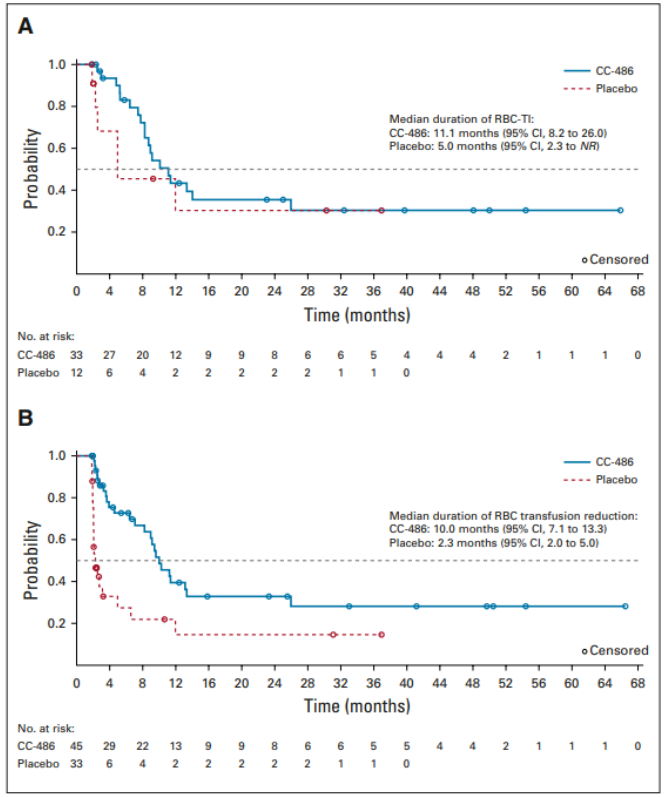


FIG 2. Kaplan-Meier estimated durations of (A) RBC transfusion independence and (B) RBC transfusion reductions (≥ 4 units). Data cutoff: January 25, 2019. NR, not reached; RBC-TI, RBC transfusion independence.

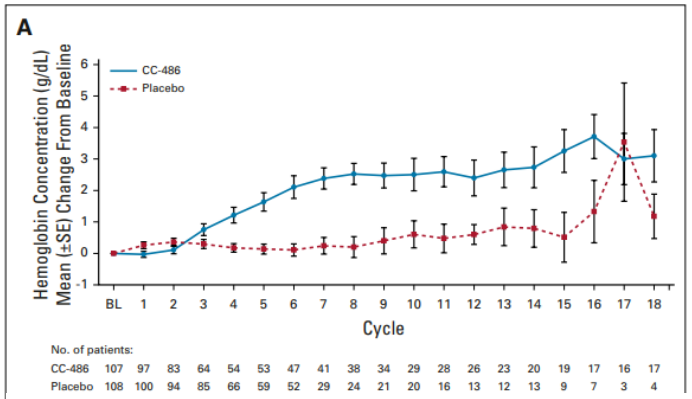
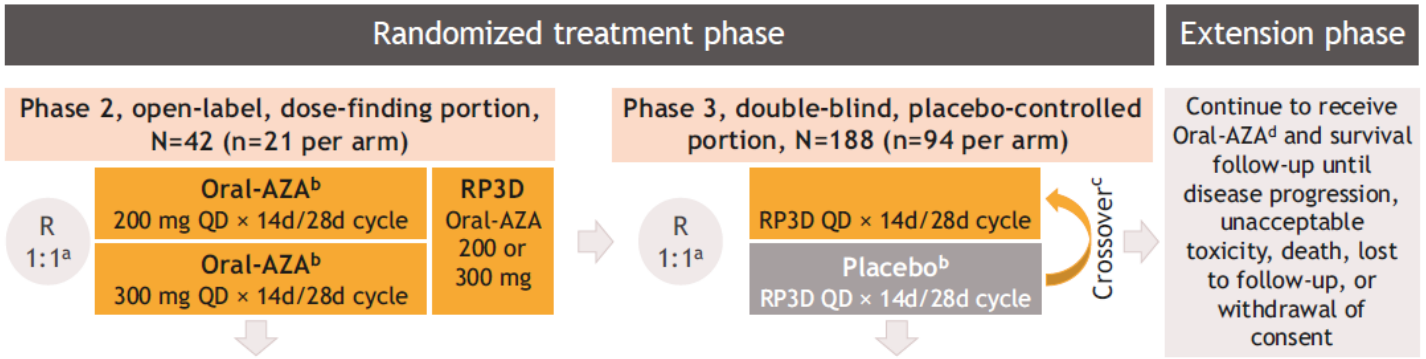


TABLE 2. Grade 3-4 Treatment-Emergent Adverse Events Reported in ≥ 10% of Patients Randomly Assigned to CC-486

Preferred Term	CC-486 (n = 107) n (%)	Placebo (n = 109) n (%)
≥ 1 Grade 3-4 TEAE	96 (89.7)	80 (73.4)
Neutropenia	50 (46.7)	13 (11.9)
Thrombocytopenia	31 (29.0)	17 (15.6)
Febrile neutropenia	30 (28.0)	11 (10.1)
Anemia	20 (18.7)	18 (16.5)
Pneumonia	13 (12.1)	10 (9.2)

Figure 1. CA055-026 trial design and endpoints

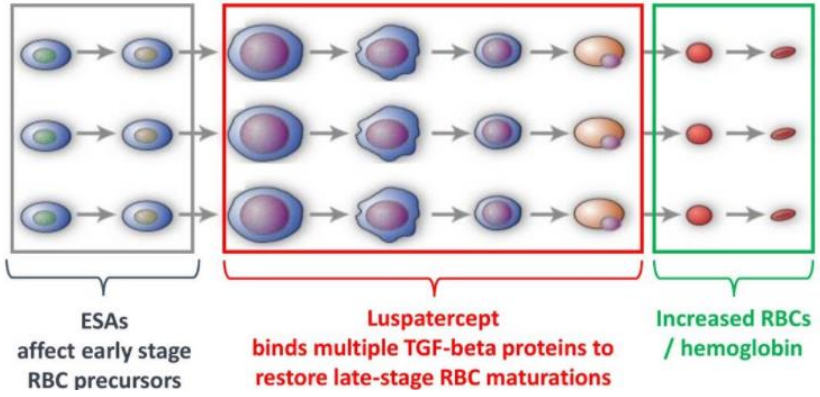


Garcia Manero etl al, J Clin Oncol. 2021 May 1;39(13):1426-1436

COMBOLA (phase 2/3)

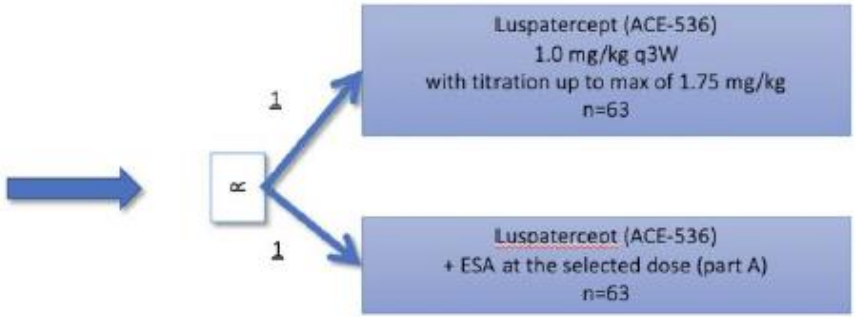
Combola Trial
EudraCT number 2021-000596-37

Groupe Francophone des Myélodysplasies



- Patients with lower risk MDS according to IPSS classification (LOW, INT-1) without RS
- failed to achieved a response or who subsequently relapse after ESA (at least 60000 U EPO-a over at least 12weeks or equivalent), without disease progression (Or ineligible to ESA defined by EPO > 500 UI/l)
- Hemogobin < 9 gr/dl or Transfusion dependant(at least 3 RBCs
- No del(5q) MDS

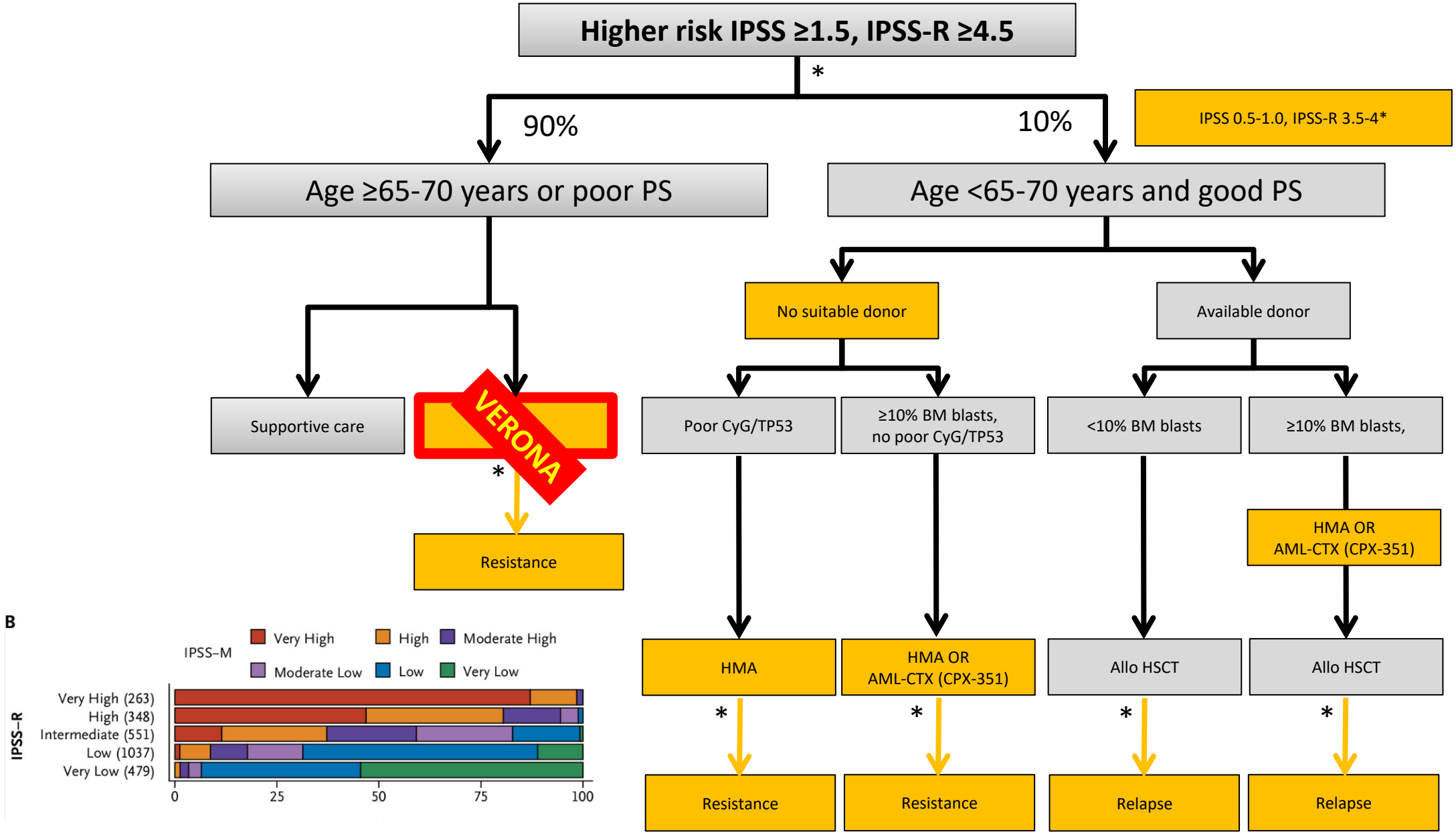
1° Endpoint: transfusion independence for TD dependent patients and hematological improvement For non TD dependent patient at W25



With kind permission L. Ades

Overview

- General aspects
- Lower-risk MDS
- **Higher-risk MDS**
- Future outlook



Chanias I, Bonadies N. healthbook TIMES Oncology Hematology. 2020;4(6):10-22.
Chanias et al. Cancers 2021, 13(13), 3296.
Elsa Bernard et al., NEJM Evidence, June 12, 2022

Definition of eligibility for allo HSCT

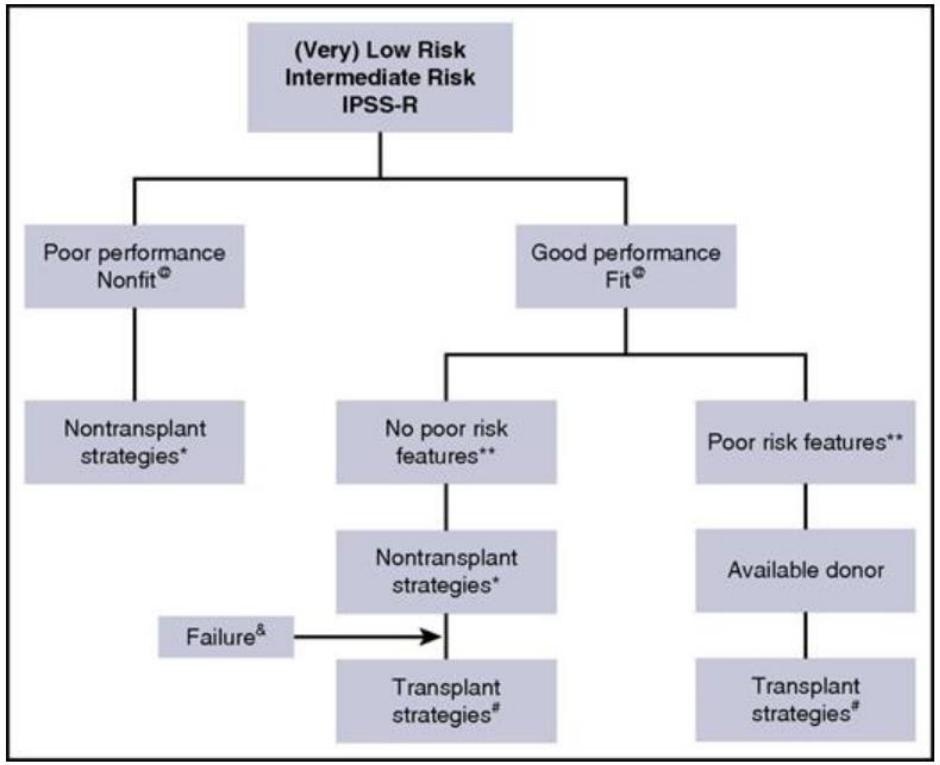
Table 1. Prognostic risk factors relevant for HSCT eligibility and for outcome after HSCT

Prognostic risk factor	Tools to measure risk factors in patients with MDS	Outcome after: Nontransplant interventions, including supportive care	Outcome after: HSCT
Patient related			
Age (chronological)	Calendar, IPSS-R[20]	Age influences prognostic impact of disease-related factors[20]	Impact age influenced by other patient-related factors[15]
Performance status (functional ability)	Karnofsky status ≥ 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]	Related to prognosis[20,21]	Only impact if <5% marrow blasts[22]
Cytogenetic risk groups	IPSS(-R), WPSS, CPSS[20,21,44]	5 prognostic groups[19]	Only very-poor-risk[29] and monosomal karyotype[30]
Severity of cytopenias	IPSS(-R), WPSS[41,42]	IPSS-R better prediction of prognosis compared with IPSS[42]	Only very-poor-risk group of IPSS-R prognostic
Marrow fibrosis	WHO criteria[51]	Severity fibrosis prognostic[51]	Severity fibrosis prognostic[52]
Transfusions burden	WPSS[41,63]	WPSS[41]	WPSS[64]
FCM	ELN FCM score[25,27]	ELN FCM score[24]	Not validated yet[27]
Molecular mutations	No specific tools yet[34]	Mutations in RUNX1, U2AF1, ASXL1, TP53, and others: poor prognosis[34]	Mutations in TP53, EZH2, ETV6 poor prognostic[23,35]
Disease status (after nontransplant treatment interventions)			
ESA failure	High Epo levels, high transfusion intensity[6,68]	High Epo levels, high transfusion intensity[6,68]	No direct impact reported
Lenalidomide failure	Absence of $5q^{-}$[5]	Absence of $5q^{-}$[5]	No direct impact reported
HMA failure	HMA-therapy–specific risk score[71]	HMA-therapy–specific risk score,[71] complex karyotype[118] TET2 and TP53 mutations[72,73]	Best available treatment after HMA failure,[76] but response status prognostic factor
ICT	MDS-specific risk score[4]	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]

Fit: HCT-CI of 0-2 and age ≤75 years old, without limiting co-morbidities for intensive treatment and/or allo HSCT
Unfit: HCT-CI >2 or age >75 years old or otherwise unfit for intensive treatment and/or allo HSCT

Stojkov K, et al. *Blood Adv*. 2020;4(16):4029-4044.

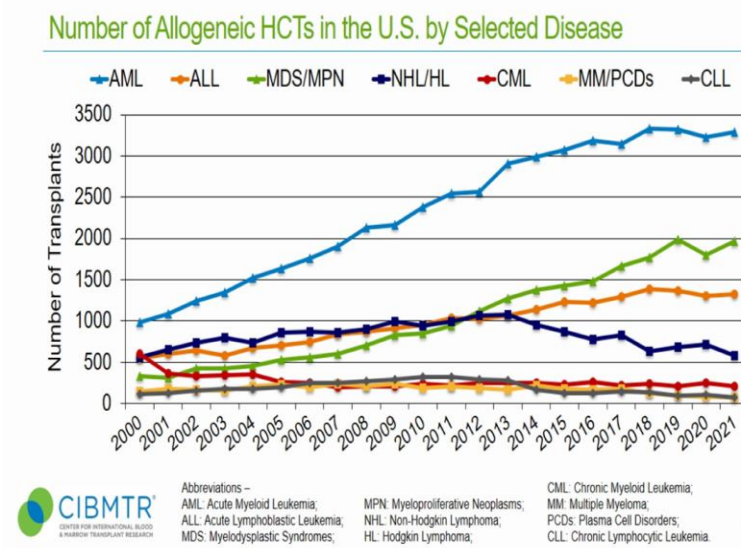
Allo HSCT in «lower-risk» MDS

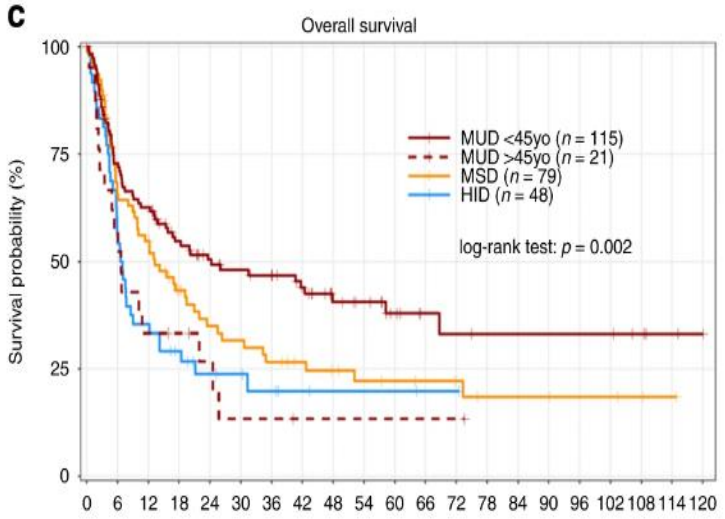


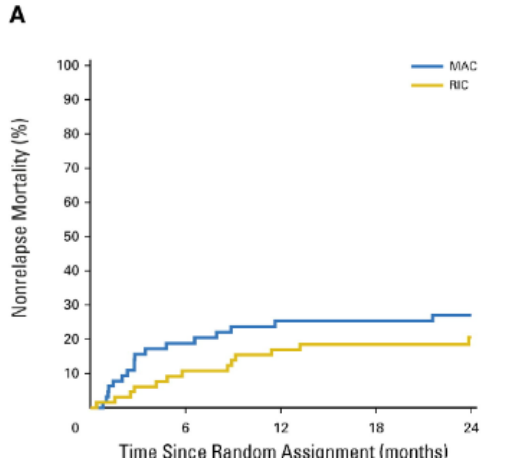
Poor-risk features in lower-/intermediate-risk patients may justify allo HSCT early after diagnosis
- frequent RBC transfusions (>2 units per month)
- life-threatening cytopenias (neutrophil counts <0.3 x 10^9/L or platelet counts <30 x10^9/L)
- very-poor prognostic cytogenetic or molecular (?) markers

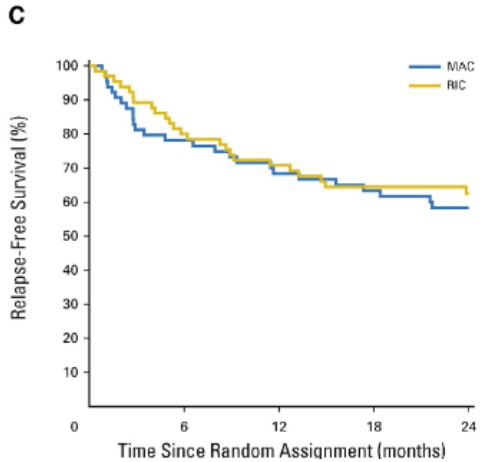
de Witte T, Blood. 2017 Mar 30;129(13):1753-1762.

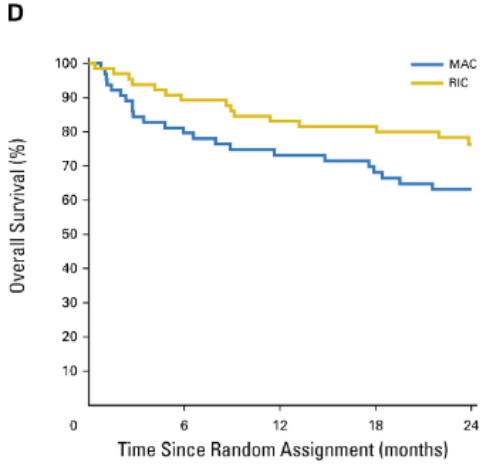
Allo HSCT in MDS







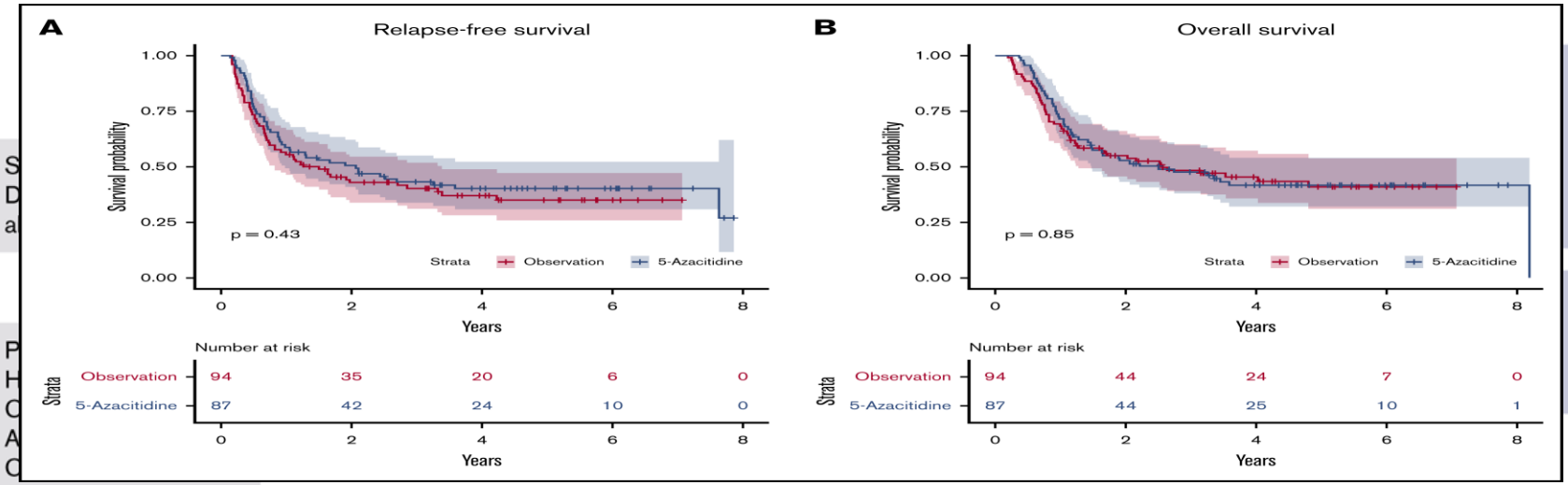




Michel C et al. Bone Marrow Transplant 58, 534–543 (2023).
Kröger N et al. JCO 2017 35:19, 2157-2164

Consolidation after allo HSCT

Azacitidine Maintenance after Allogeneic Hematopoietic Stem Cell Transplantation in High Risk AML and MDS Patients: Outcomes of a phase III Randomized Clinical Trial

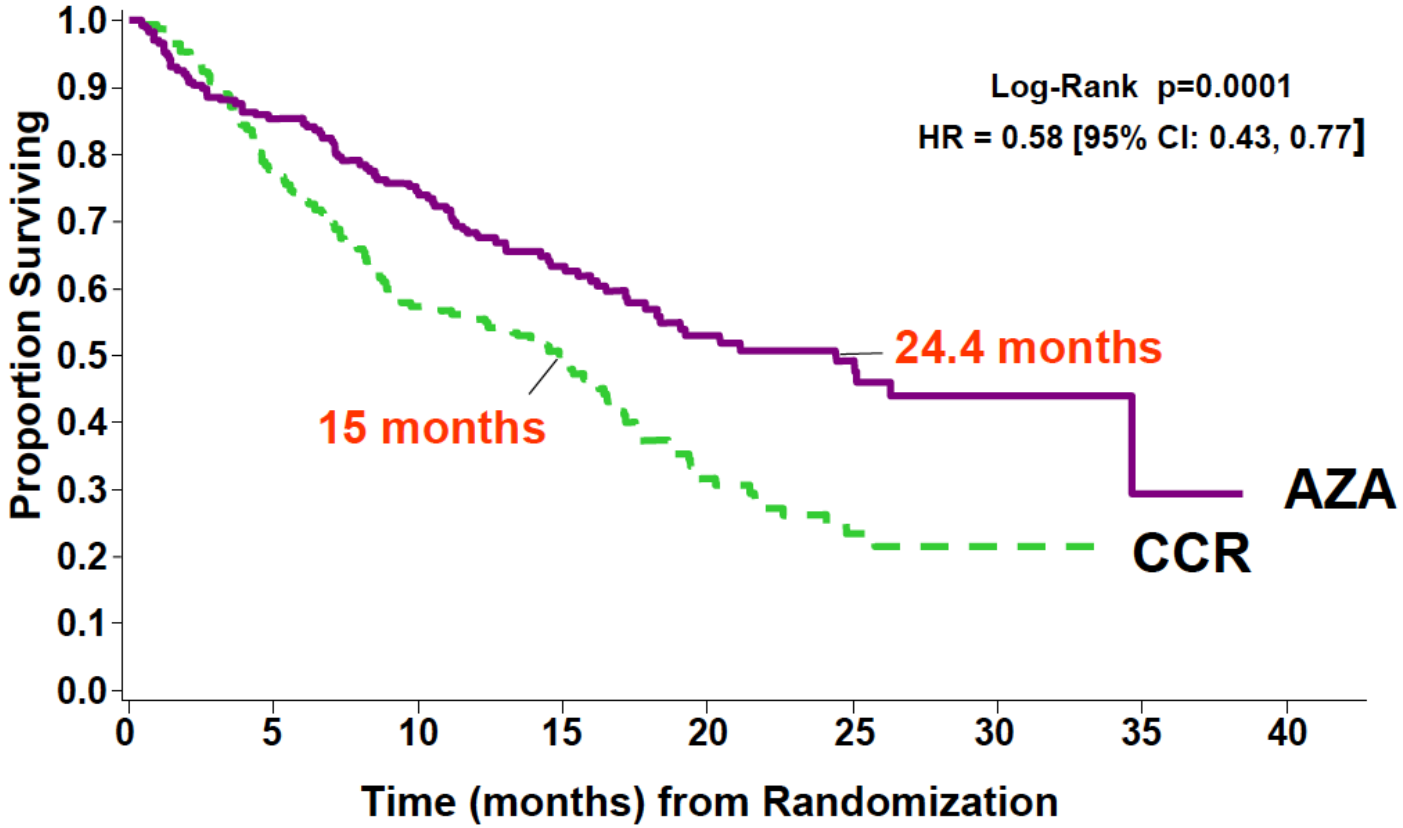


Efficacy endpoint	5-azacitidine, n=87	Observation, n=94	HR, 95%CI, p
RFS	2.07 yr	1.28 yr	0.77, 0.51-1.14, 0.19
OS	2.52 yr	3.56 yr	0.84, 0.56-1.28, 0.43

Conclusion:
- 5-azacitidine given as 32 mg/m2/dayX5 did not lead to improved RFS or OS.
- There was no safety concern.

Betül Oran,et al, Blood Adv, 2020

AZA remains SOC in NTE HR-MDS



	Total ITT (n=358)	
	Azacitidine (n=179)	CCR (n=179)
Haematological response		
Any remission	51 (29%)	21 (12%)
Complete remission	30 (17%)	14 (8%)
Partial remission	21 (12%)	7 (4%)
Stable disease	75 (42%)	65 (36%)

DoR (any response)
13.6m (95%CI 10.1-16.3m) vs
5.2m (95% CI 4.1-9.7m) (p.0002)

DoR (CR/PR)
3.2m (95%CI 2.4-4.2m) vs
3.0m (95% CI 2.1-4.0) (p.48)

No impact on clonal composition !!!

P. Fenaux et al, Lancet Oncology 2009

Oral HMA for MDS (ASCERTAIN iv vs po)

Inquovi ® (FDA approved not by EMA)

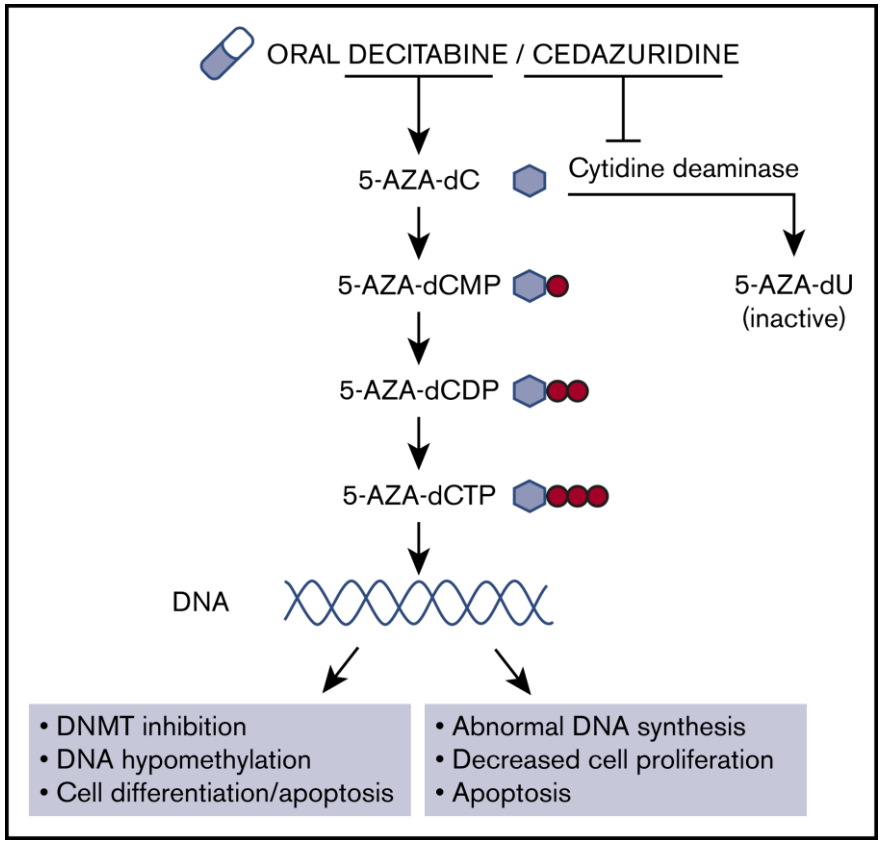
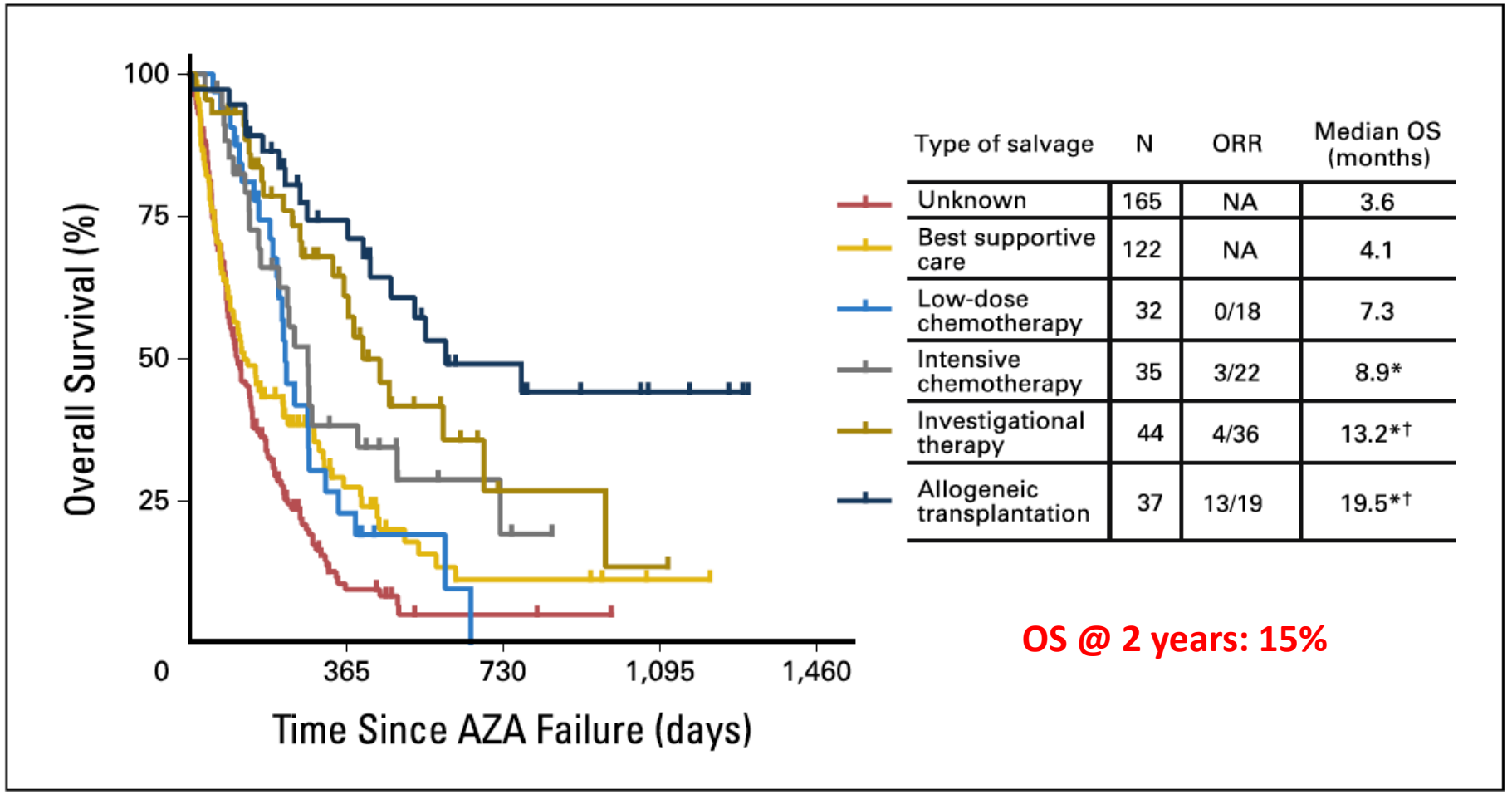


Table 3. Outcomes of phase 2 and 3 trials of oral decitabine/cedazuridine

Characteristic	Phase 2 (NCT02103478) ASTX727-01-B[45]	Phase 3 (NCT03306264) ASTX727-02[46,47]
Total patients, N	80	133
Mean age (range), y	71 (32-90)	71 (44-88)
MDS (intermediate-1), n (%)	35 (44)	11 (8)
MDS (intermediate-2), n (%)	19 (24)	85 (64)
MDS (high risk), n (%)	9 (11)	21 (16)
CMML, n (%)	17 (21)	16 (12)
Median number of cycles (range)	7 (1-29)	8 (1-18)
Oral/IV ratio of geometric LSM 5-d AUC, %	97.6	98.9
Difference (oral-IV) in mean maximum LINE-1 demethylation, %	0.017-1.079	0.7-0.8
Patients with CR, n (%)	17 (21)	29 (22)
Patients with PR, n (%)	0	0
Patients with mCR, n (%)	18 (22)	43 (32)
Overall response (CR + PR + mCR + HI), n (%)	48 (60)	82 (62)
Median follow-up, mo	24	24.7
Median overall survival, mo	18.3	NR
Most common grade ≥3 TEAEs, %	Neutropenia: 46 Thrombocytopenia: 38 Febrile neutropenia: 29 Leukopenia: 24 Anemia: 22 Pneumonia: 13 Sepsis 10	Neutropenia: 52 Thrombocytopenia: 50 Anemia: 40 Febrile neutropenia: 26 Leukopenia: 21 Pneumonia: 12

Anand A. et al. Blood Adv, 2021.
Garcia-Manero G, et al. Blood. 2020;136(6):674-683.

Prognosis after HMA failure

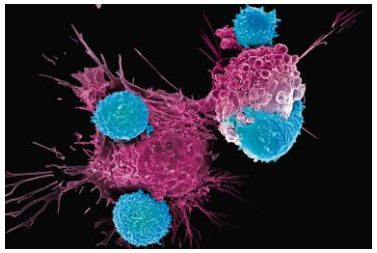


Type of salvage	N	ORR	Median OS (months)
Unknown	165	NA	3.6
Best supportive care	122	NA	4.1
Low-dose chemotherapy	32	0/18	7.3
Intensive chemotherapy	35	3/22	8.9*
Investigational therapy	44	4/36	13.2*†
Allogeneic transplantation	37	13/19	19.5*†

OS @ 2 years: 15%

Prébet et al, JCO 2011

HMA and more



Combinations with approved compounds

- **G-CSF,** ESA, TPO-RA
- Litalir, **Ruxolitinib (CMML phase 2)**
- **Interferon (MDS/MPN)**

Combinations with new oral compounds (AML context)

- iIDH1/iIDH2 (blasts ≥ 20%)
- iFLT3 (blasts ≥ 20%)
- **VEN (blasts ≥ 20%)**

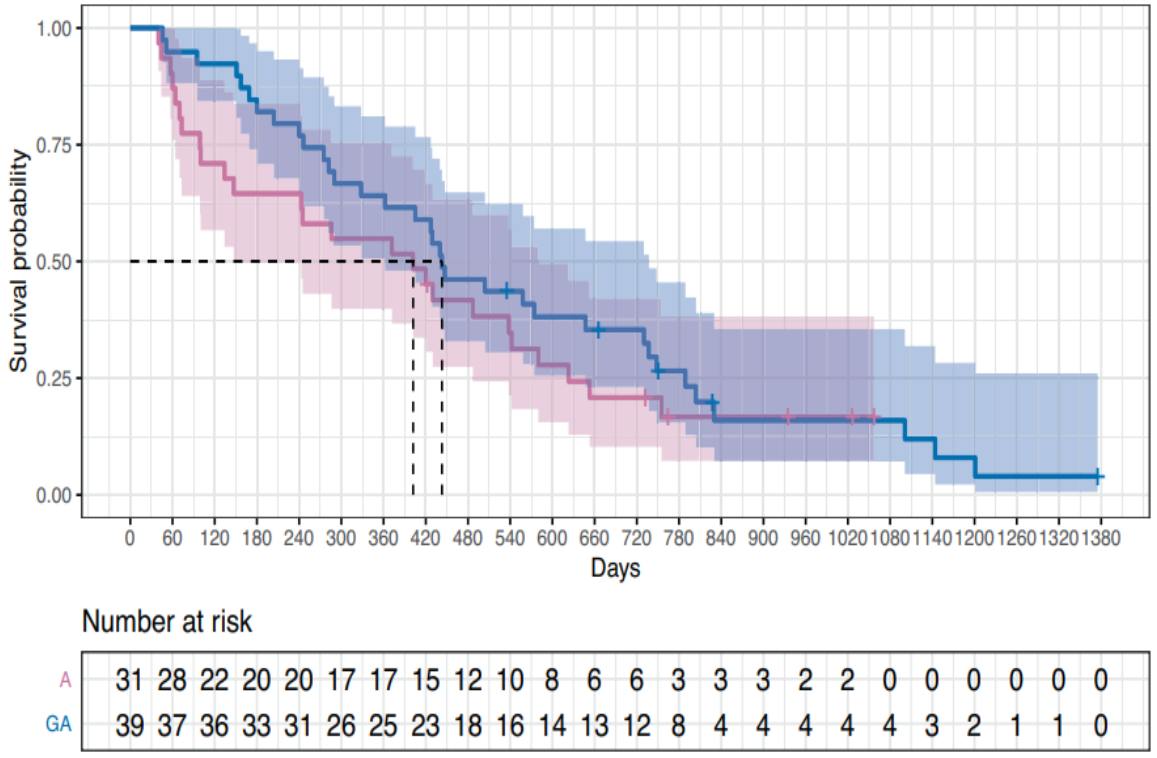
Combinations with new parenteral compounds

- ~~iNAE (NEDD8-activating enzyme: Pevonedistat)~~
- ~~ICI (CD47-Ab: magrolimab,~~ TIM3-Ab: Sabatolimab,
- ~~CD70-Ab: cusatuzumab, others)~~
- ~~APR-246 (TP53 reconforming agent: Eprenetapopt)(??)~~

Combinations with cellular-based therapies

- CAR-T or NK-cell based therapies

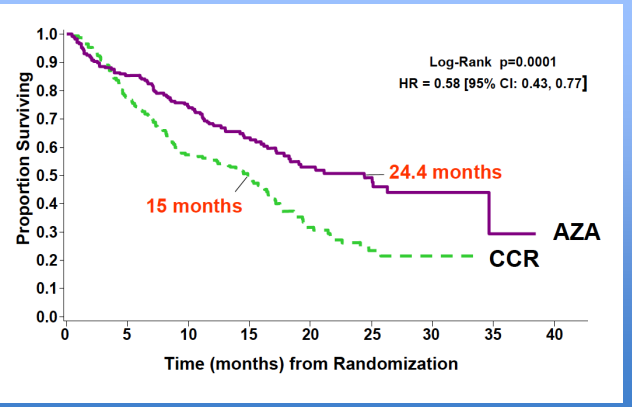
AZA + pulsed G-CSF (Czech approach)



- Median survival GA /A: 14.8 /13.4 Mo (n.s.)
- ORR (CR, CRm, PR, HI) GA/A: 77%/61 % (p < 0.001)
- ORR (@ 4 cycles): GA/A 72%/45%
- PFS GA/A: 9.7/6.1 Mo (n. s.)
- AML transformation GA/A: 52%/68% (comparable)
- Unfavorable mutations: DNMT3A, EZH2, ETV6

Stopka T., et al. Blood Cancer Journal (2022) 12:105 ;.

Venetoclax + AZA



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Any remission	51 (29%)	21 (12%)
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Partial remission	21 (12%)	7 (4%)
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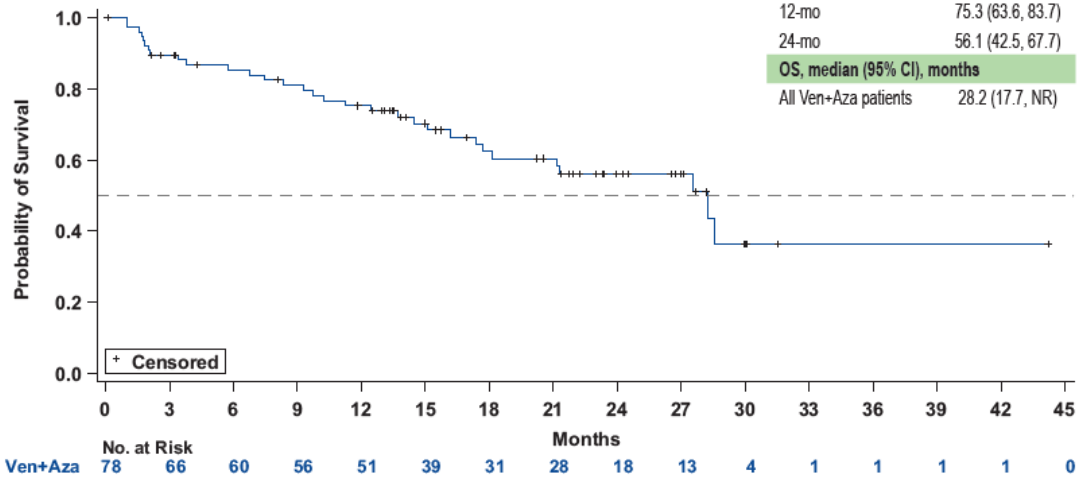
Figure 5. Overall Survival for All Patients



Survival estimates, % (95% CI)	
12-mo	75.3 (63.6, 83.7)
24-mo	56.1 (42.5, 67.7)
OS, median (95% CI), months	
All Ven+Aza patients	28.2 (17.7, NR)

Aza, azacitidine; CI, confidence interval; NR, not reached; OS, overall survival; RP2D, recommended phase 2 dose; Ven, venetoclax.

Table 3. Efficacy Summary

	n (% of N = 78)
Overall Response Rate[a]	62 (80%)
CR	31 (40%)
mCR	31 (40%)
mCR + hematologic improvement[b] n/N (%)	13/31 (42%)
Transfusion Independence Rate[c] n/N (%)	20/43 (46.5%)
[95% CI]	[31.2, 62.3]
	Months [95% CI]
Median time on study	23 [16.9, 24.5]
Overall Survival, median	28.2 [17.7, NE]
Overall Survival for CR, median[d]	28.6 [27.5, NE]
Duration of Response for CR, median	13.8 [8.9, NE]
Median time to CR, months (range)	2.6 (1.2–19.6)
Median time to mCR, months (range)	0.9 (0.7–4.6)

[a]ORR = CR+mCR+PR; PR n = 0; per IWG 2006; [b]Hematologic improvement (HI) includes patients who are eligible for HI evaluations and achieved neutrophil, erythroid, or platelet responses; [c]Defined as no transfusion ≥8 weeks; calculated for patients who were transfusion-dependent on RBC or platelet at baseline; [d]mOS for mCR+HI has not been reached; [e]including bone marrow and peripheral blood stem cell.

CI, confidence interval; CR, complete remission; DoR, duration of response; mCR, marrow complete remission; NE, not estimable; ORR, overall response rate; PD, disease progression; PR, partial remission; SD, stable disease.

Improvement responses > survival

Awaiting phase 3 data in MDS (VERONA)

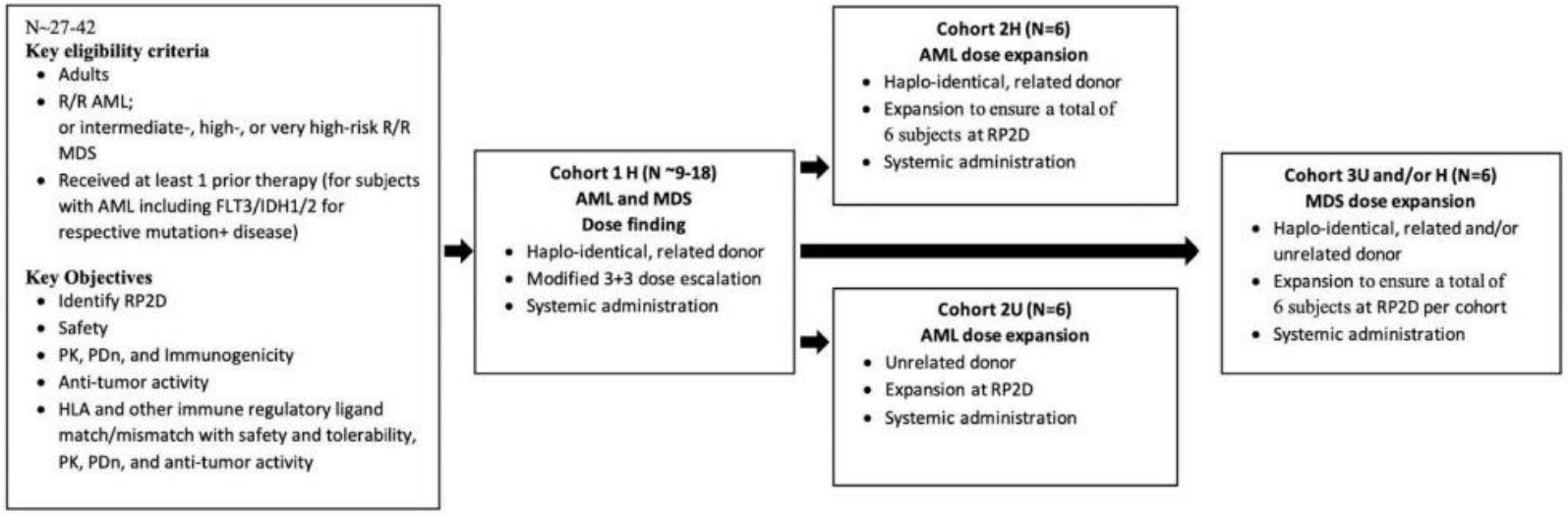
Wei A. 06/09/21; 325675; EP917

CAR-NKs for AML and HR-MDS

Chimeric NKG2D receptor fused to co-stimulatory (OX40) and signaling (CD3ζ) domains

3+3 Design, 3 Cohorts, 1×10^8 / 3×10^8 / 1×10^9 CAR NK Cells/Dose ————> Dose Expansion												
	Lymphodepletion (LD) Conditioning					NKX101 (28-Day Cycle)						
Study Day	−5	−4	−3	−2	−1	0	1–6	7	8–13	14	15–26	27
	LD	LD	LD			NKX101		NKX101		NKX101		Response Assessment

Figure. Study Design Overview

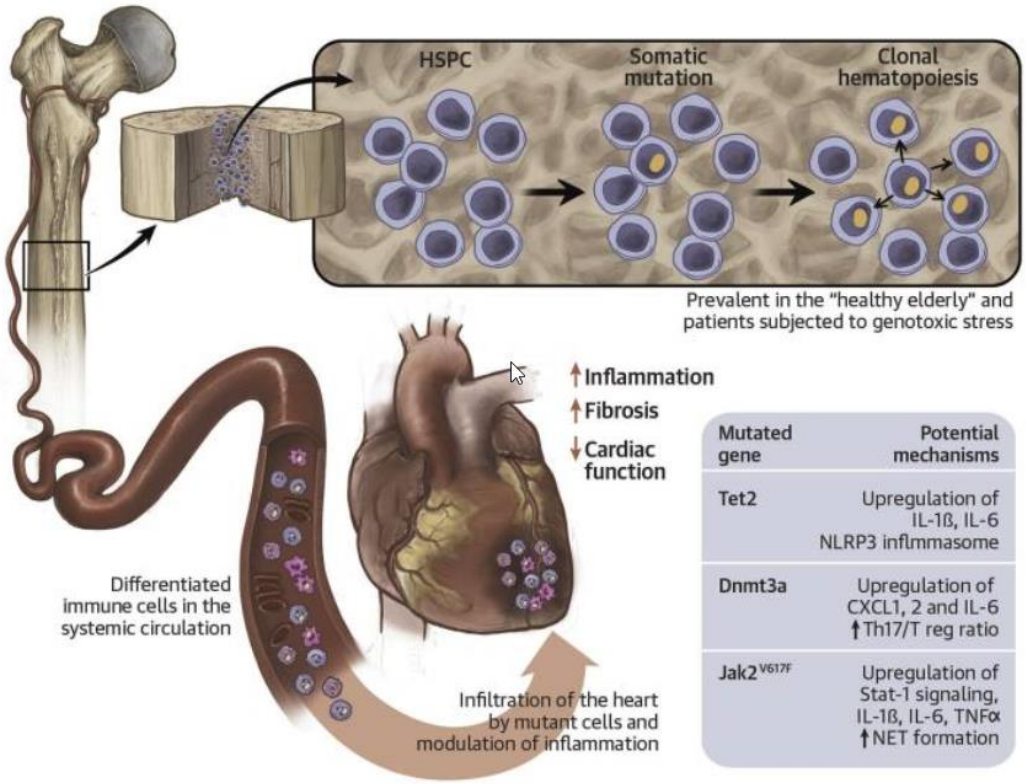


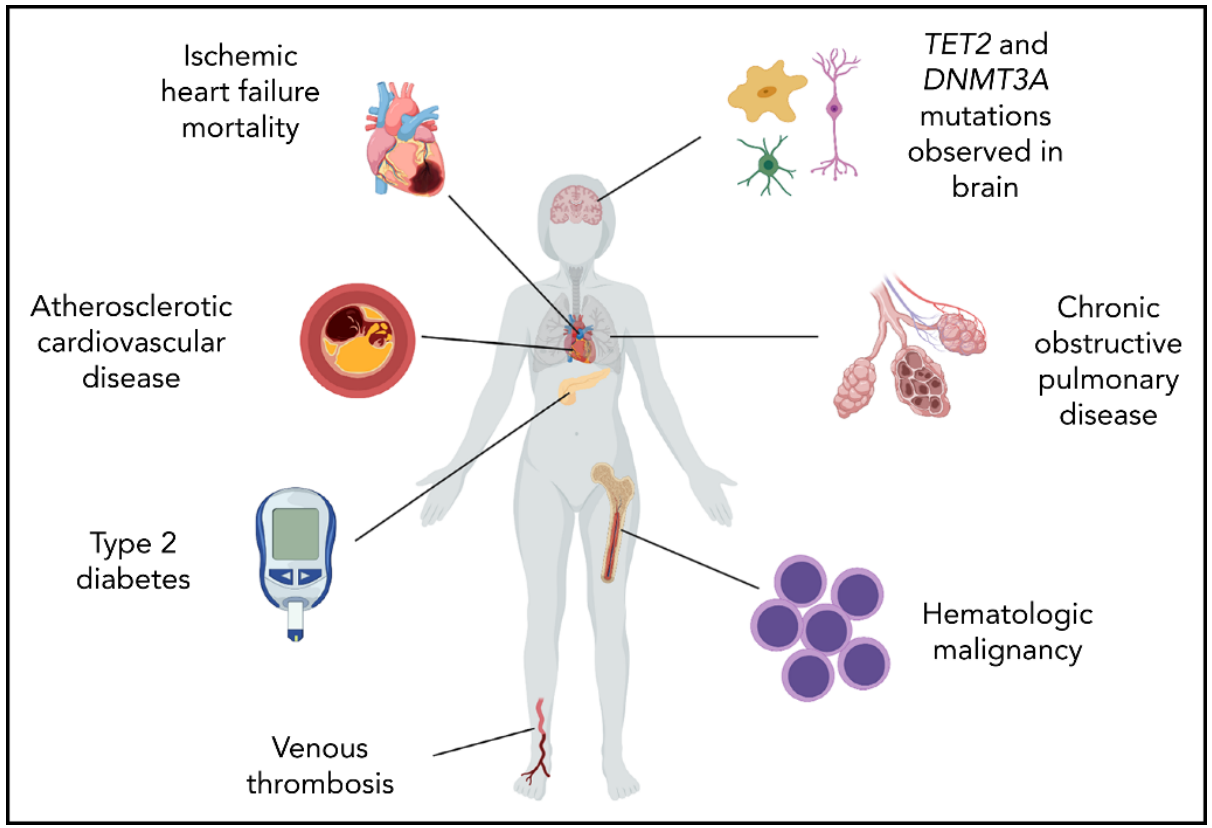
Bachier C et al, Abstract 1040, ASH 2020

Overview

- General aspects
- Lower-risk MDS
- Higher-risk MDS
- **Future outlook**

Associated Inflammatory degenerative disorders

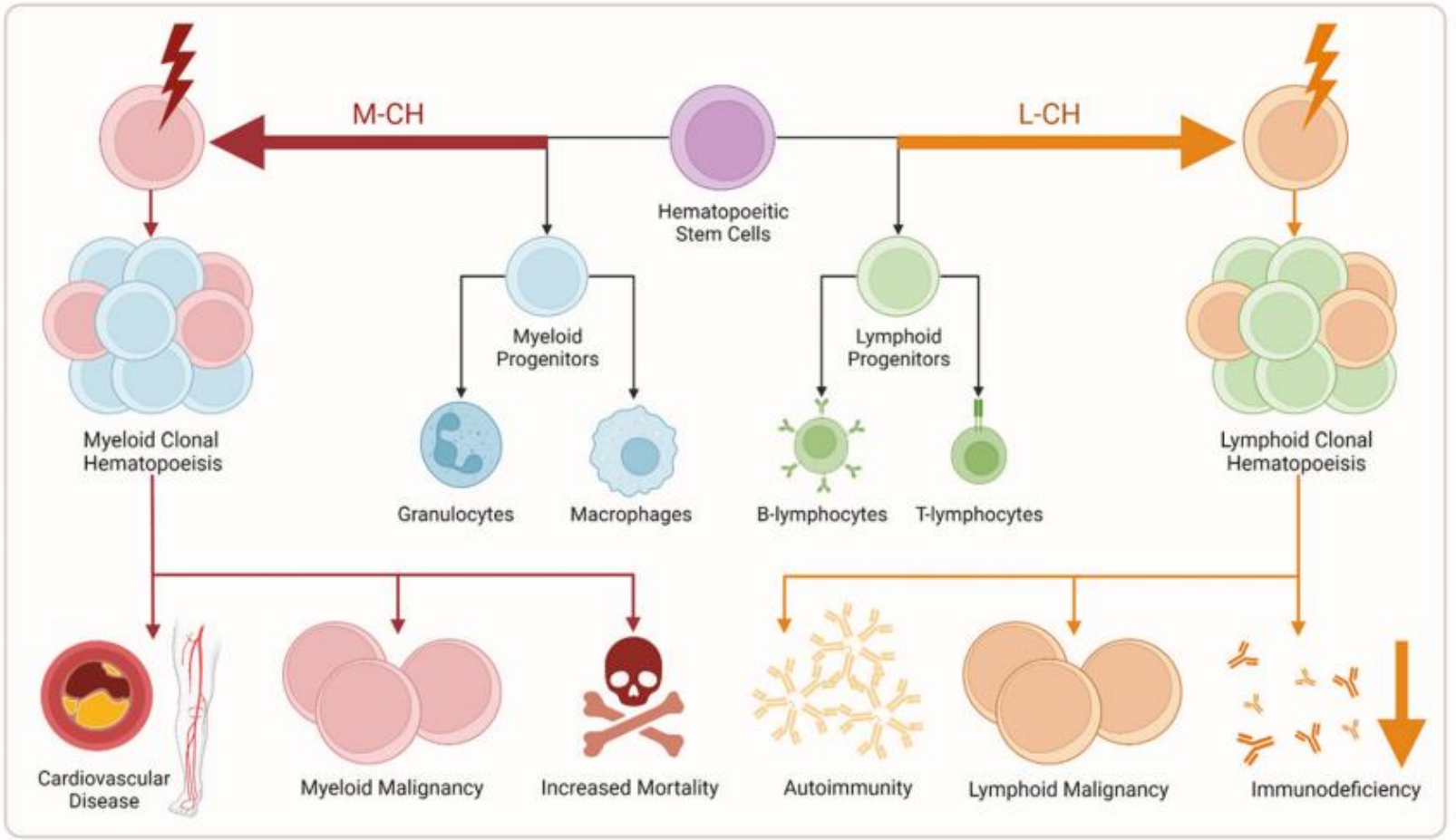




Clonal hematopoiesis influences inflammatory/degenerative disorders

Yura Y, Sano S, Walsh K. *JACC Basic Transl Sci*. 2020;5(2):196-207.
Jaiswal s et al. Clonal hematopoiesis and nonhematologic disorders, Blood (2020).

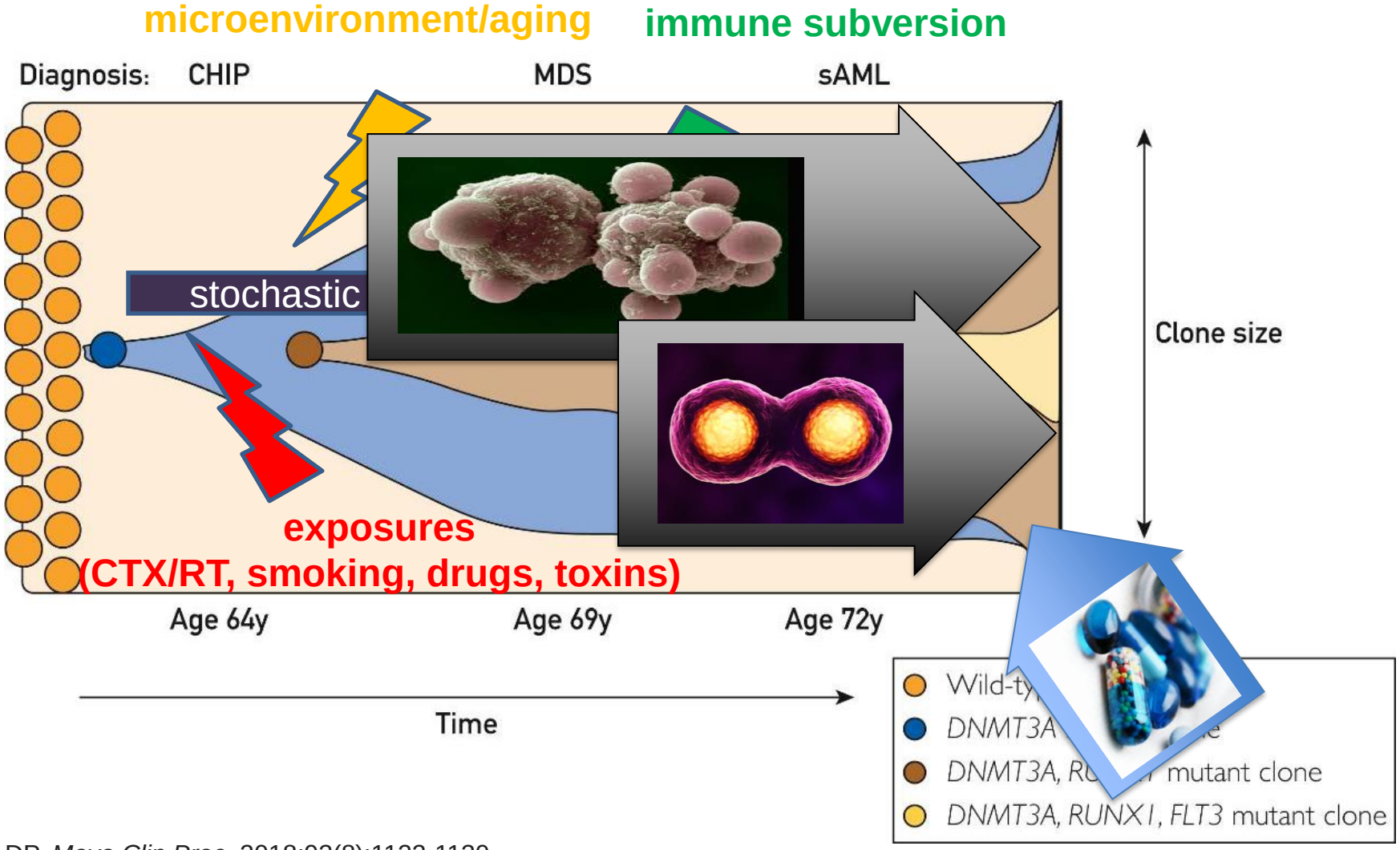
Genetic origin of Immune-dysregulation



Immune system is shaped by MDS

Von Beck K. et a., Blood Cancer Journal (2023)

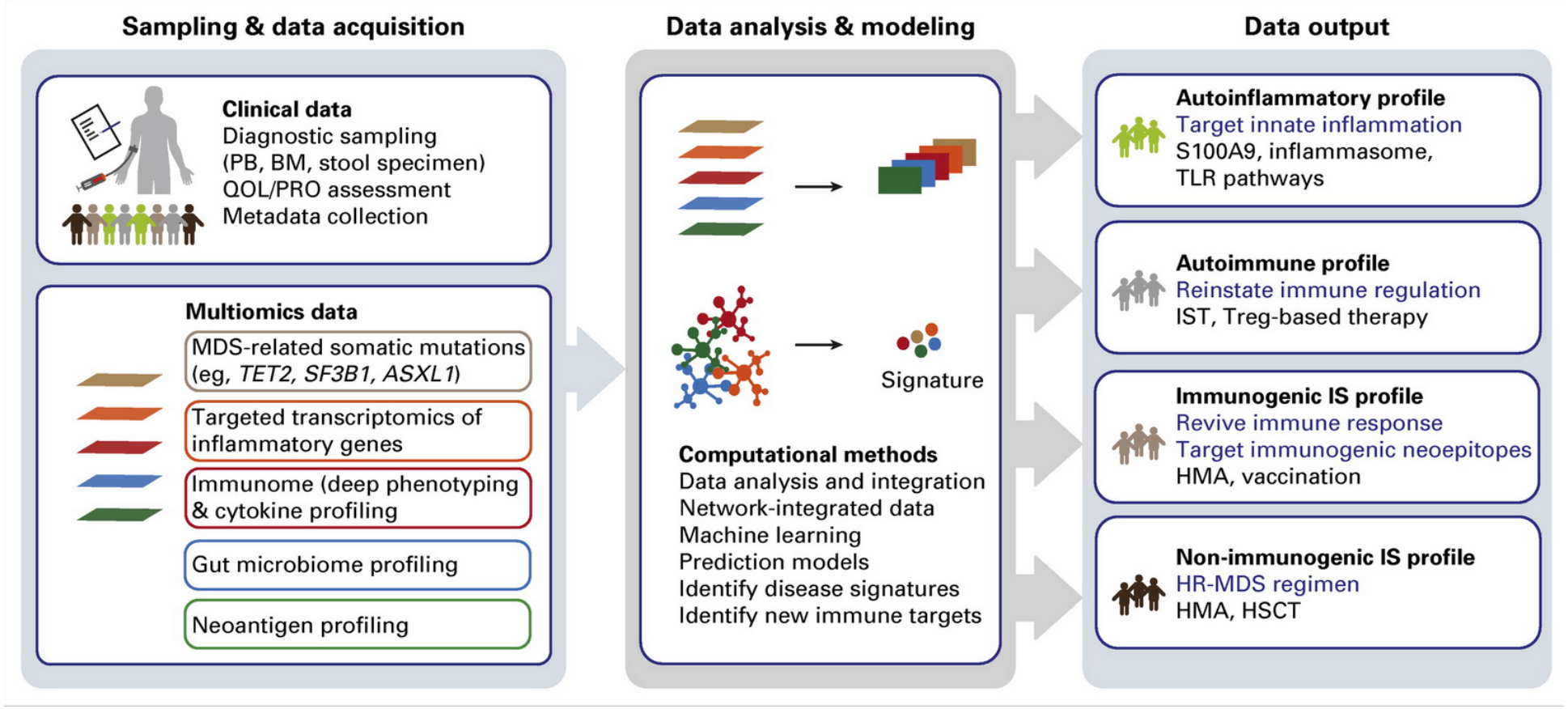
How to Defeat Clonal Evolution?



Adapted from Steensma DP. *Mayo Clin Proc*. 2018;93(8):1122-1130
Chanias I,, Bonadies N., healthbook TIMES Oncology Hematology 2021

Early intervention to reduce clonal complexity.

Assessment of immune state «Immunometer»



Susann Winter, Saeed Shoaie, Shahram Kordasti, and Uwe Platzbecker
Journal of Clinical Oncology 2020 38:15, 1723-1735

Onkologie/Hämatologie
Praxis Bern-Solothurn
HIRSLANDEN

EMSCO Trials

JAHRESTAGUNG 2023 13.–16. Okt. Hamburg

EMSCO MYELODYSPLASTIC SYNDROMES

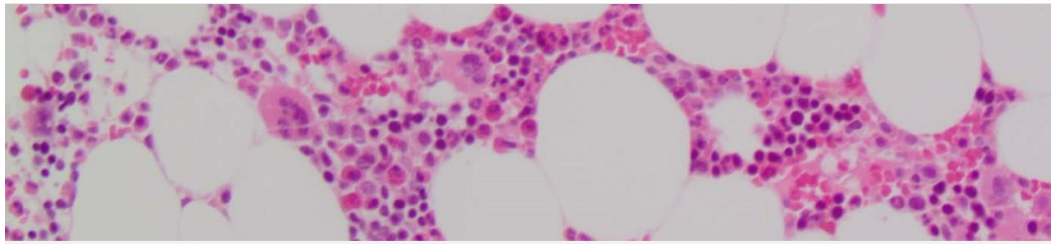
	Recruitment ongoing
LUCAS TRIAL (NCT05178342)	Treatment of Anemia in patients with very low, low or intermediate risk myelodysplastic syndromes with CA-4948 Status: recruiting in Germany
IDEAL TRIAL (NCT03744390)	A single-arm phase II multicenter study of IDH2 (AG-221) inhibitor in patients with IDH2-mutated MDS Status: recruiting in France and Germany
PALOMA TRIAL (NCT04061239)	Comparison of therapies before stem cell transplantation in patients with higher risk MDS and oligoblastic AML Status: recruiting in Germany
IDIOME TRIAL (NCT03503409)	A single-arm phase II multicenter study of IDH1 (AG 120) inhibitor in patients with IDH1 mutated myelodysplastic syndrome Status: recruiting in France and Italy
LUSPLUS TRIAL (NCT05181592)	A phase IIIb, open-label, single arm study to evaluate the efficacy and safety of luspatercept in patients with lower-risk MDS and ring-sideroblastic phenotype (MDS-RS) Status: recruiting in Germany
CANFIRE TRIAL (NCT05237713)	A Phase II, Single-Arm, Open-Label Study to Assess the Efficacy and Safety of Canakinumab for the Treatment of Anemia in Patients With IPSS-R Very Low, Low, or Intermediate Risk Myelodysplastic Syndromes or MDS/MPN nd

Clinical Development Cycles with Indicators

Hospital Information Management System

Patient management

MDS EUROPE



Patient management

Assess and compare quality of care in economically driven health care enviornments

Conclusions

MDS incident cases are rising with a relevant impact on health care resources.

Experienced physicians should assess MDS patients to provide the most appropriate management plan based on disease- and patient-based factors.

NGS allows identifying early stages of clonal hematopoiesis and monitoring of clonal evolution.

Allo-HSCT remains the only curative treatment option for the minority of eligible MDS patients.

New treatment options are on the horizon, but abrogation of clonal evolution remains out of reach.

Economically driven health systems require standardized assessment of procedural aspects to maintain high quality of care

Onkologie/Hämatologie
Praxis Bern-Solothurn
HIRSLANDEN

SWISS MDS STUDY GROUP WE CARE

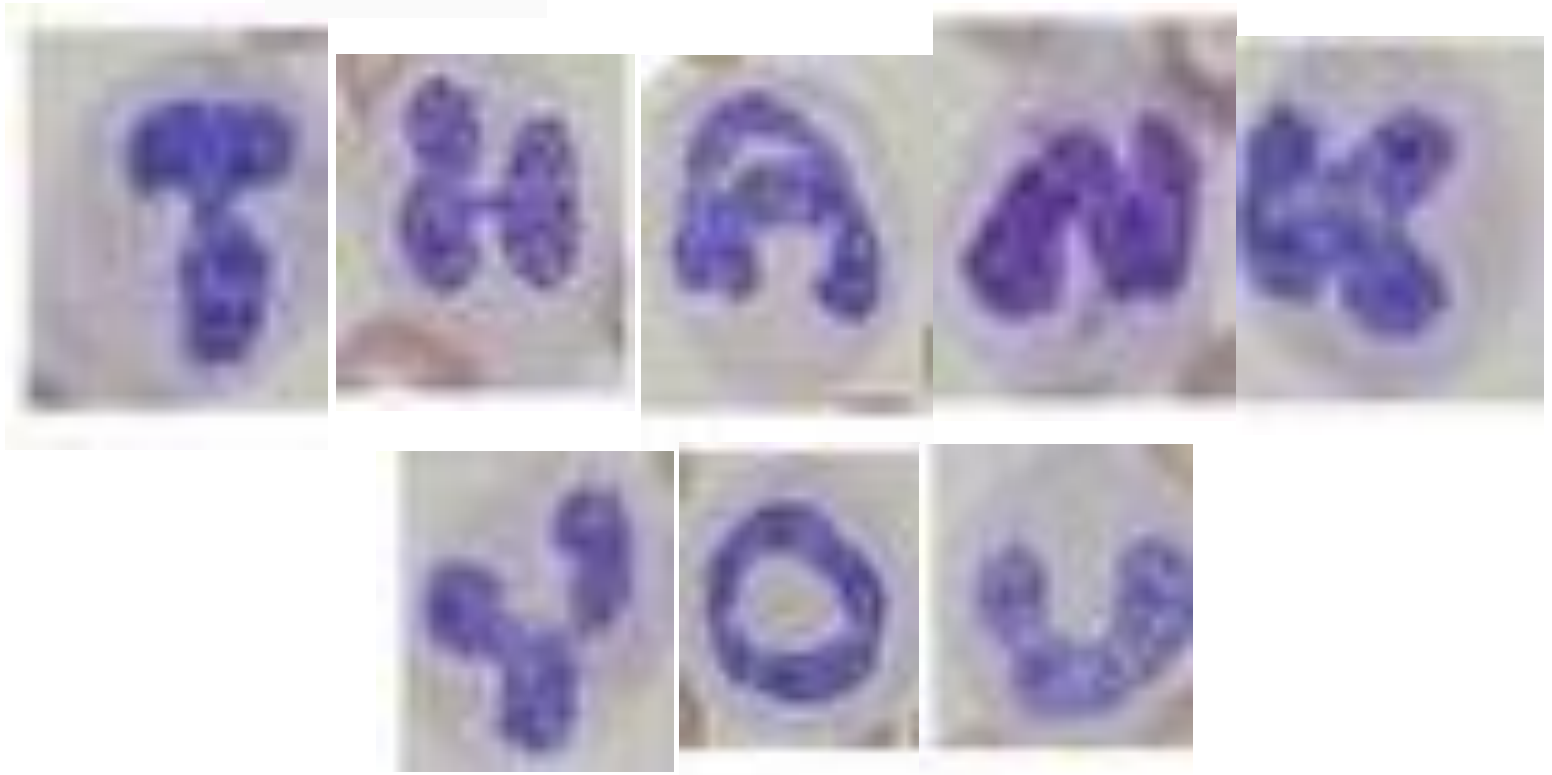
UNIVERSITÄT BERN

JAHRESTAGUNG 2023 13.–16. Okt. Hamburg

Patients

Families

Collaborators



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