Current, Emerging and Targeted Therapies for the Treatment of Relapsed and Refractory AML

Rami Komrokji, MD

Senior Member and Professor of Oncologic Sciences

Vice Chair-Malignant Hematology Department

Moffitt Cancer Center

Definitions of R/R AML

Definitions of R/R AML according to the 2022 ELN recommendations

Refractory disease	Failure to achieve CR, CRh, or CRi after
	Two courses of intensive induction for intensively treated patients or
	A defined landmark (eg, 180 d) after starting nonintensive therapy
Relapsed disease	After prior achievement of CR, CRh, or CRi
	Increase of blasts to ≥5%
	Development of extramedullary disease
	Reappearance of blasts in the blood in at least 2 peripheral blood samples at least 1 wk apart
MRD relapse	Conversion from MRD negativity to MRD positivity (independent of method)
	Increase of MRD copy numbers ≥1 log10 between any 2 positive samples in patients with CR, CRh, or CRi in MRD detectable at low levels by qPCR

Felicitas Thol,Hartmut Döhner,Arnold Ganser, Blood, 2024

Case 1:

- 56-year-old male no major co-morbidities diagnosed with AML, normal karyotype, NGS revealed NPM-1 and TET-2 somatic mutations, treated with 3+7 intensive chemotherapy achieving CR followed by 3 courses of high dose cytarabine consolidation. NPM-1 MRD negative at end of consolidation.
- At one year follow up , NPM-1 MRD on peripheral blood revealed >600 mutated *NPM1* copies per *ABL* $\times 10^4$
- What would be the next steps?

MRD relapse

- Actionable in cases of NPM-1, CBF AML, and FLT-3
- DTA mutations and other mutations associated with clonal hematopoiesis are not good AML MRD markers.
- MRD relapse need to be confirmed, assessment for hematological relapse and clonal evolution is very important.
- MRD relapse is a strong consideration for allo-SCT and treatment.

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Early trial results in patients with molecular failure after firstline therapy

Patient characteristics	N	Treatment	MRD response	Clinical outcome
NPM1 MRD failure	10	AZA	7 of 10 molecular response	CR sustained in 7 of 10, with median follow-up of 10 mo
RT-qPCR <1% or loss of donor chimerism	53 (32 *NPM1*mut)	AZA	36% MRDneg	1 y RFS, 46%
NPM1 MRD failure	33	20 chemotherapy/HMA ± HCT 13 direct HCT	80% MRDneg (8/10 after chemotherapy only)	2 y OS, 86%
NPM1 MRD relapse	30	27 chemotherapy + HCT 3 direct HCT	59% MRDneg (16/27 after chemotherapy only)	2 y OS, 63%
NPM1 MRD failure or *NPM1* MRD relapse	5 7	VEN + HMA/LDAC	5 of 5 CR MRDneg 6 of 7 CR MRDneg	All responders had MRDneg during median follow-up of 12 mo
NPM1 MRD failure or *NPM1* MRD relapse	2 9	VEN + AZA + HCT	11 of 11 CR MRDneg (9/11 after VEN + AZA only)	CR sustained in 9/10 with median follow-up of 26 mo
MFC-MRD relapse	16	7 HMA-based chemotherapy 9 direct HCT	43% MRDneg (3/7 after chemotherapy only)	5 y RFS, 31% 5 y OS, 45%
MRD relapse	26 (20 *NPM1*mut)	VEN-LDAC	54% MRDneg	2 y EFS, 54% 2 y OS, 73%
Molecular MRD failure	19	VEN ± LDAC or HMA or other	84% molecular remission	Median OS, 18.4 mo
MRD (*NPM1* or other gene fusions) failure with baseline *FLT3*mut	48 (39 *NPM1*mut)	32 gilteritinib 8 quizartinib 8 sorafenib	40% MRDneg	2 y OS, 80%

LDAC, low-dose cytarabine; MRDneg, negative MRD status; VEN, venetoclax.

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Case 2:

- 60-year-old lady diagnosed with AML, normal karyotype, FLT-3 ITD and WT-1 mutations. She originally was treated with 3+7 midostaurin achieving CR. She had one cycle of intermediate dose cytarabine with midostaurin and was planning for Allo-SCT in CR1. Unfortunately, patient relapsed before proceeding to Allo-SCT with same mutations.

The NEW ENGLAND JOURNAL of MEDICINE

Gilteritinib vs. Salvage Chemotherapy for AML

PHASE 3, OPEN-LABEL, MULTICENTER, RANDOMIZED TRIAL

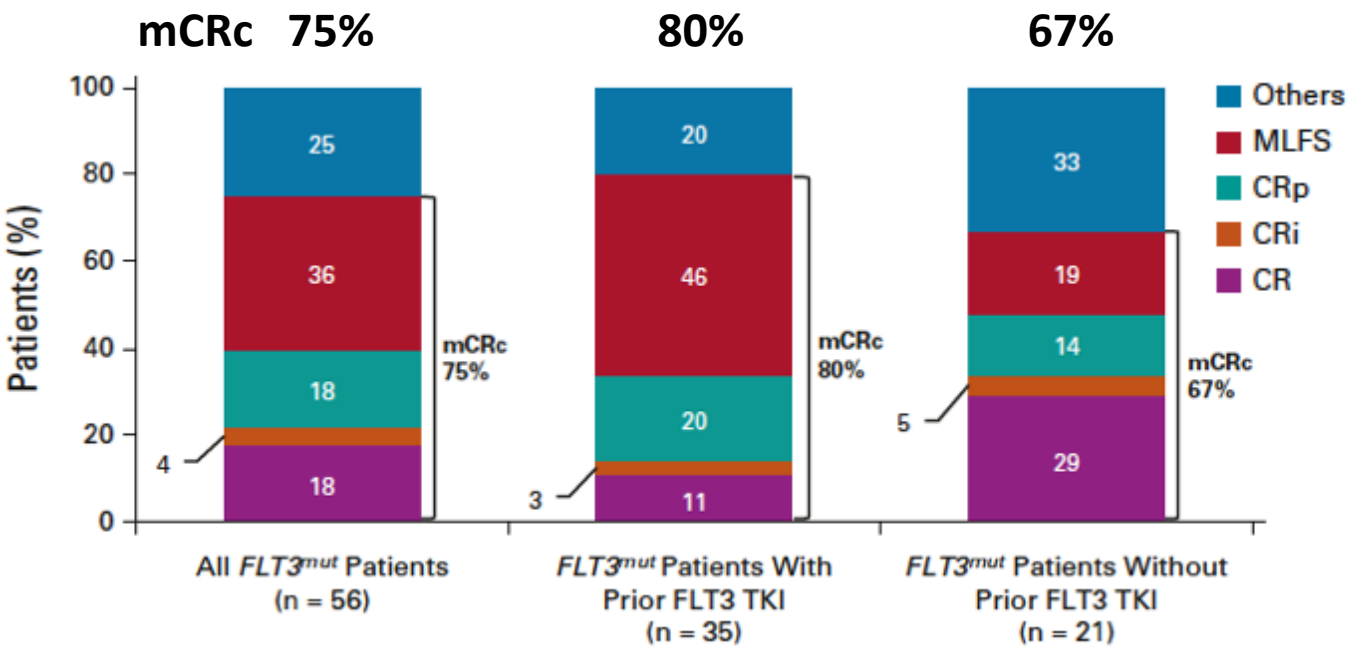
371 Patients
with refractory or relapsed *FLT3*-mutated AML

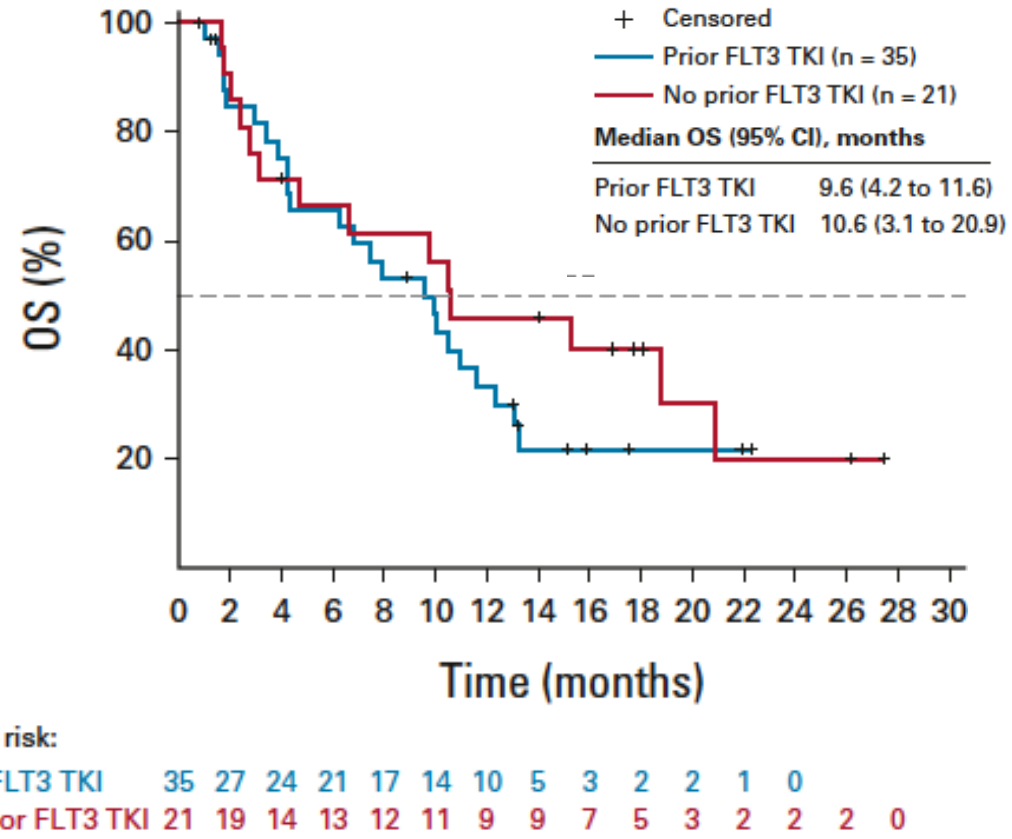
	Gilteritinib (120 mg per day)	Salvage Chemotherapy
	(N = 247)	(N = 124)
Median overall survival	9.3 mo	5.6 mo
	HR for death, 0.64; 95% CI, 0.49 to 0.83; P<0.001	
Complete remission with full or partial hematologic recovery	34.0%	15.3%
	Risk difference, 18.6 percentage points; 95% CI, 9.8 to 27.4	

Lower incidence of exposure-adjusted grade ≥3 adverse events with gilteritinib

A.E. Perl et al. 10.1056/NEJMoa1902688

Phase 1b trial of Ven + Gilt in FLT3^{mut} R/R AML



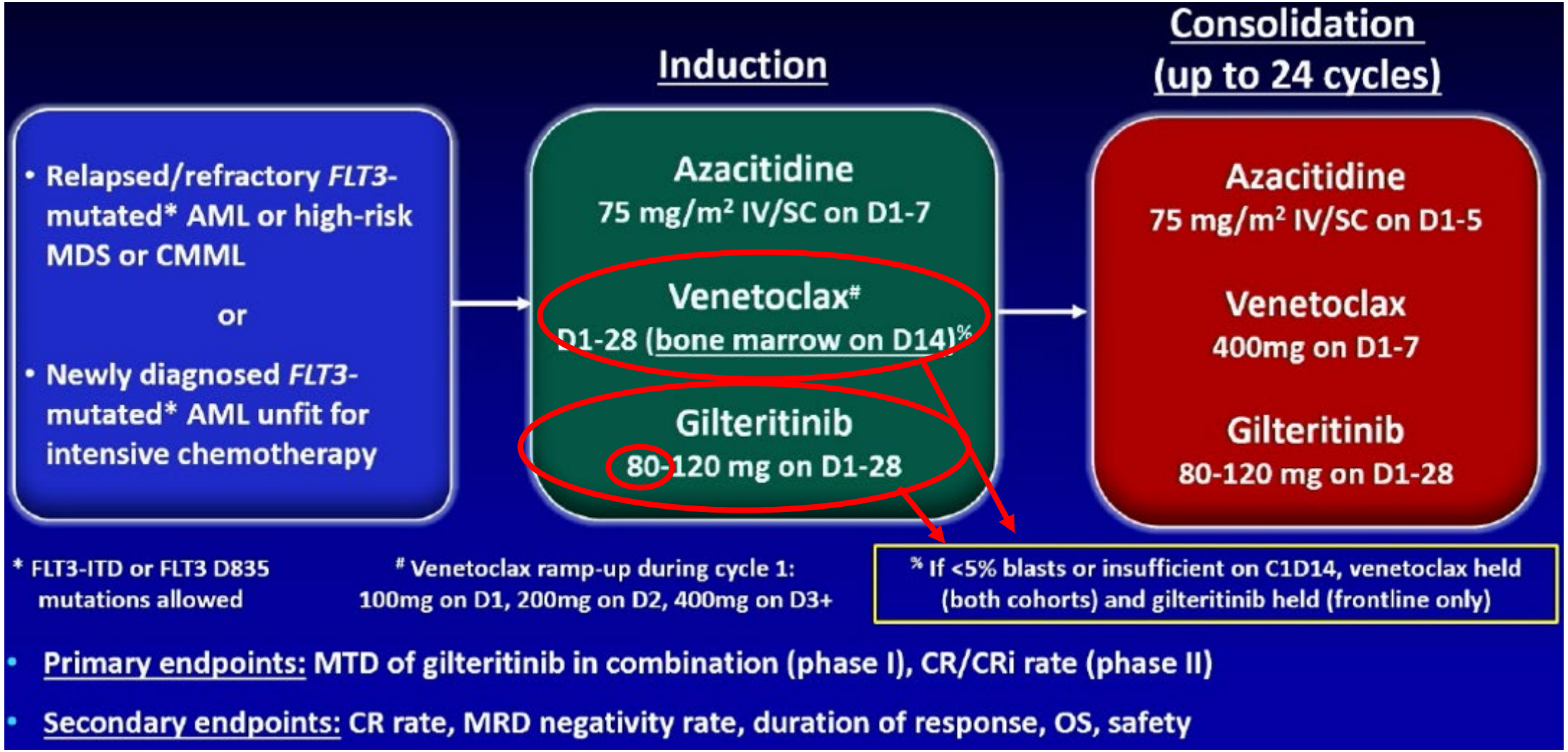


56 pts with R/R FLT3 mutant AML received Ven 400 mg and Gilteritinib 120 mg daily

- Grade 3/4 toxicities = cytopenias (80%)
- Dose interruptions in 48-51% pts

Daver N, Perl A et al J Clin Oncol 2022 Jul 18 (online)

Triplet therapy: Aza/Ven/Gilt in FLT3^{mut} AML



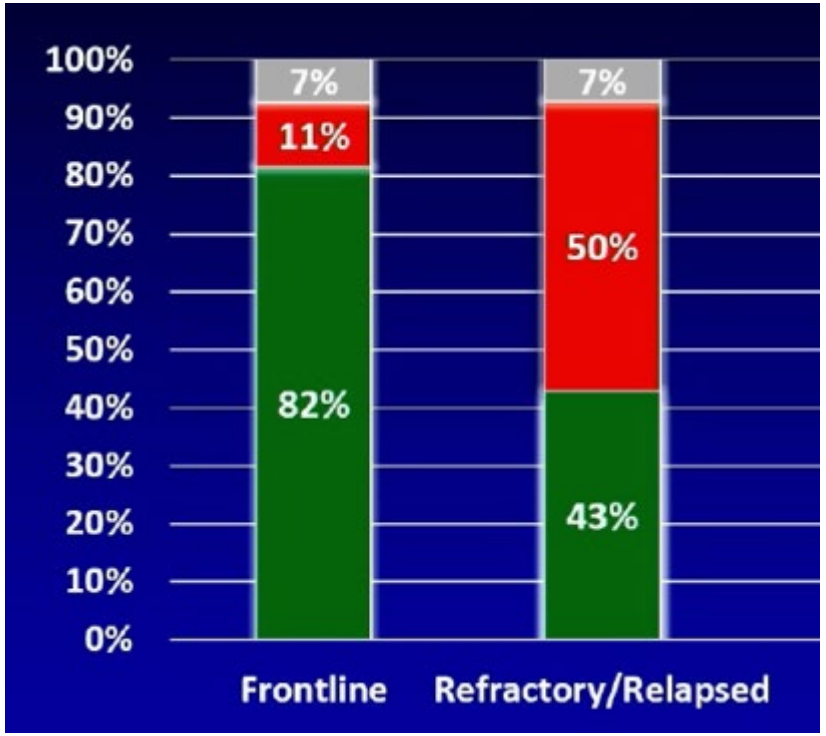
Short et al, ASH 2022

Aza/Ven/Gilt: Overall Responses

Response, n/N (%)	Frontline N = 27	R/R N = 20
mCRc (CR/CRi/MLFS)	27 (100)	14 (70)
CR	25 (92)	4 (20)
CRi	1 (4)	3 (15)
MLFS	1 (4)	7 (35)
PR*	0	1 (5)
No response	0	5 (25)
Early death	0	0

* PR in 1 patient with extramedullary-only disease (assessed by PET scan)

Best MRD response



Flow cytometry (10^{-4})

Short et al, ASH 2022

Phase I/II Trial of Quizartinib, Venetoclax, and Decitabine in *FLT3*-ITD AML: Study Design

- Single-arm, multicohort phase I/II study

R/R Cohort

R/R *FLT3*-mutated AML or high-risk MDS (≥10% blasts) (n = 43)

Frontline Cohort

Newly diagnosed *FLT3*-mutated AML unfit for intensive chemotherapy (n = 14)

Induction

Decitabine 20 mg/m^2 IV on D1-10
Venetoclax* 400 mg/day on D1-21
Quizartinib 30-40 mg/day on D1-28†

*After BM biopsy on D14, venetoclax was discontinued in patients with BM blasts ≤5% or hypoplastic BM.
†Following an amendment, quizartinib was reduced to 14 days in C1.

Consolidation

Decitabine 20 mg/m^2 IV on D1-5
Venetoclax 400 mg/day on D1-14
Quizartinib 30-40 mg/day on D1-28
(Up to 12 cycles)

Venetoclax duration reduced in subsequent cycles for patients in CR based on count recovery durations. Quizartinib dose reduced to 14 days if prolonged count recovery.

- **Primary endpoint:** RP2D of quizartinib administered with decitabine + venetoclax in patients with *FLT3*-mutated AML
- **Secondary endpoints:** CR, CRi, MRD, OS

Yilmaz. ASH 2023. Abstr 158.

Phase I/II Trial of Quizartinib, Venetoclax, and Decitabine in *FLT3*-ITD AML: Efficacy

Parameter	R/R Cohort (n = 43)	Frontline Cohort (n = 14)
CRc, n (%) ▪ CR ▪ CRi ▪ MLFS	28 (65) 5 (12) 8 (19) 15 (34)	14 (100) 11 (79) 3 (21) 0
Day 14 BM blasts ≤5%, n (%)	18 (42)	14 (100)
Best MRD at any point, n/N (%) ▪ Flow cytometry negative ▪ *FLT3* PCR negative	 8/27 (30) 9/25 (36)	 9/12 (75) 12/14 (86)
30-day mortality, n (%)	0	0
60-day mortality, n (%)	3 (7)	1 (7)
Bridge to ASCT, n (%)	17 (40)	4 (19)
Median OS, mo	7.5	Not reached

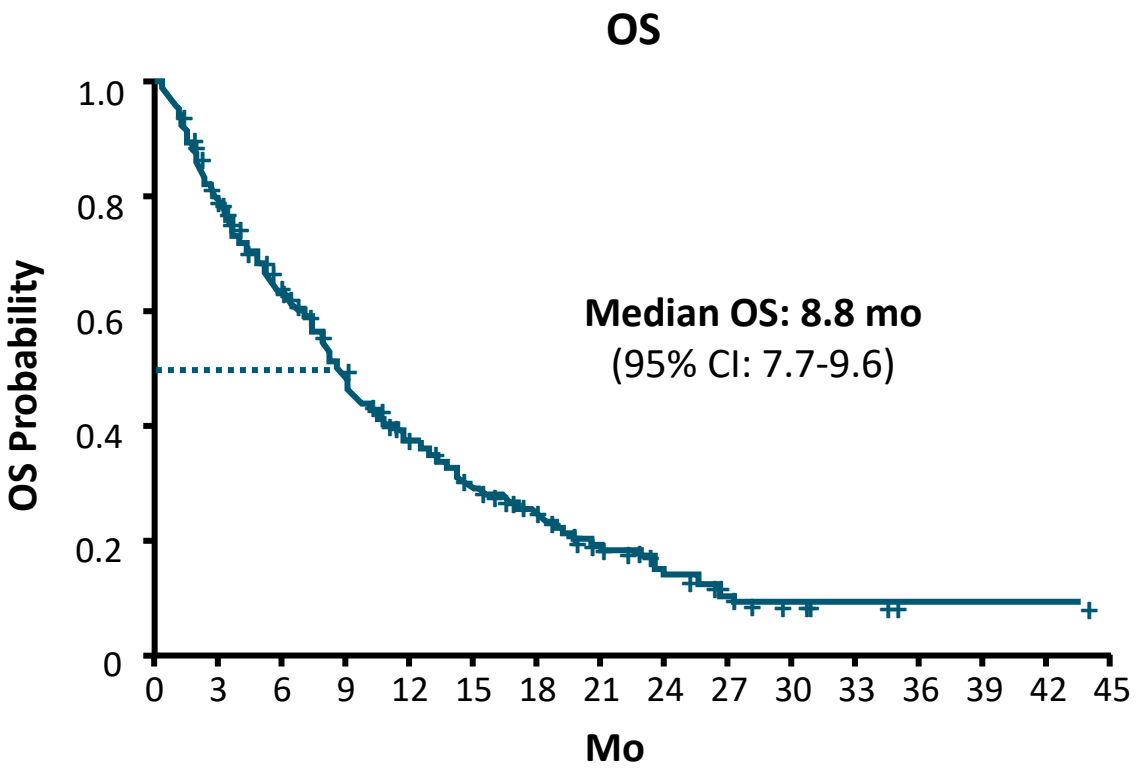
CRc Rates in Subgroups, n/N (%)	R/R Cohort (n = 43)	Frontline Cohort (n = 14)
Prior gilteritinib ▪ Yes ▪ No	 20/32 (63) 8/11 (72)	NA
Prior HMA + venetoclax ▪ Yes ▪ No	 14/24 (58) 14/19 (74)	NA
RAS/MAPK status ▪ Positive ▪ Negative	 6/12 (50) 22/30 (73)	NA
DNMT3A status ▪ Positive ▪ Negative	 14/20 (70) 14/22 (64)	NA
NPM1 status ▪ Positive ▪ Negative	 10/13 (77) 18/29 (62)	NA

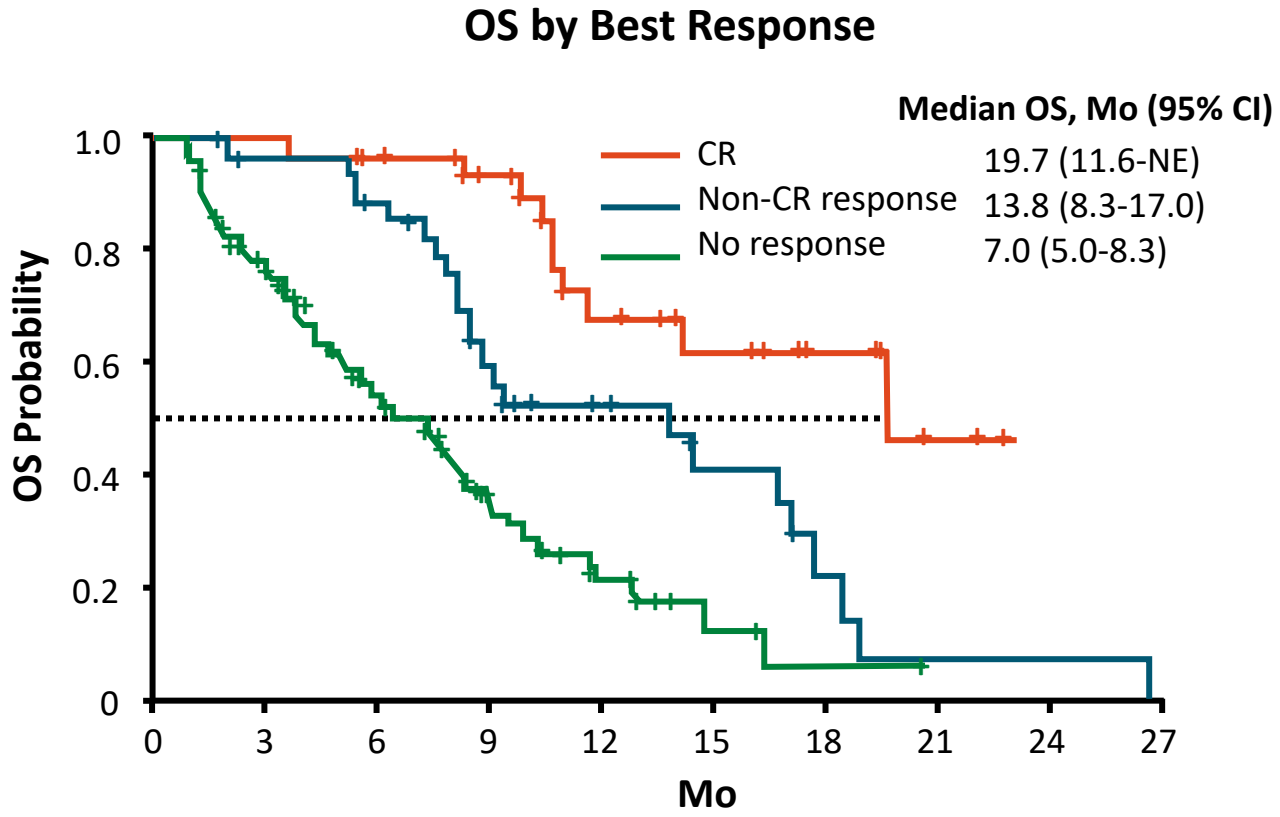
Yilmaz. ASH 2023. Abstr 158.

Case 3:

75-year-old lady pmhx of COPD presented originally with pancytopenia and found to have AML, trisomy 8, no molecular data were obtained. She received azacitidine and venetoclax combination for 11 month with hematological improvement however had progressive cytopenia again. Repeat bone marrow revealed 15% myeloblasts and IDH-1 mutation VAF 30%.

Enasidenib in R/R *IDH2*+ AML: Overall OS and OS by Best Response in Dose-Escalation and -Expansion Phase I Trial



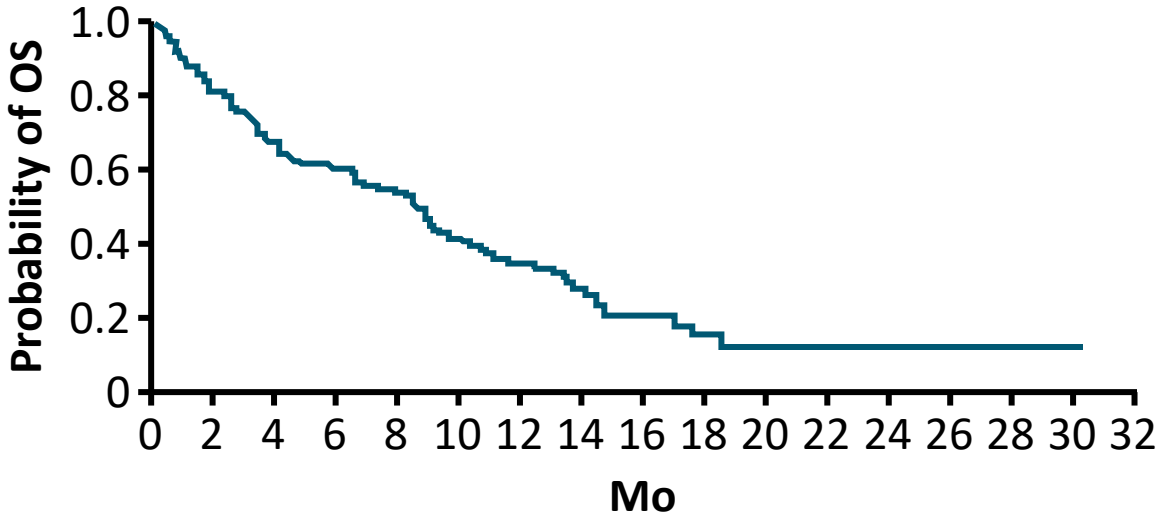


Stein. Blood. 2019;133:676. Stein. Blood. 2017;130:722.

Slide credit: clinicaloptions.com

Ivosidenib in *IDH1*-Mutated R/R AML: OS

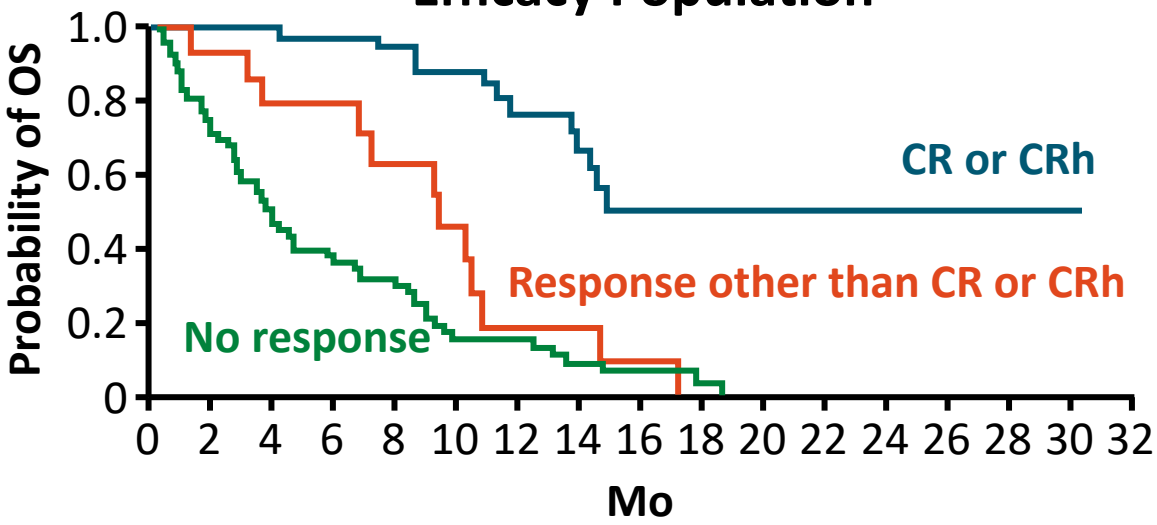
Primary Efficacy Population



Patients at Risk, n

125	102	81	72	59	38	28	19	11	6	4	3	1	1	1	1	0

By Response in Primary Efficacy Population



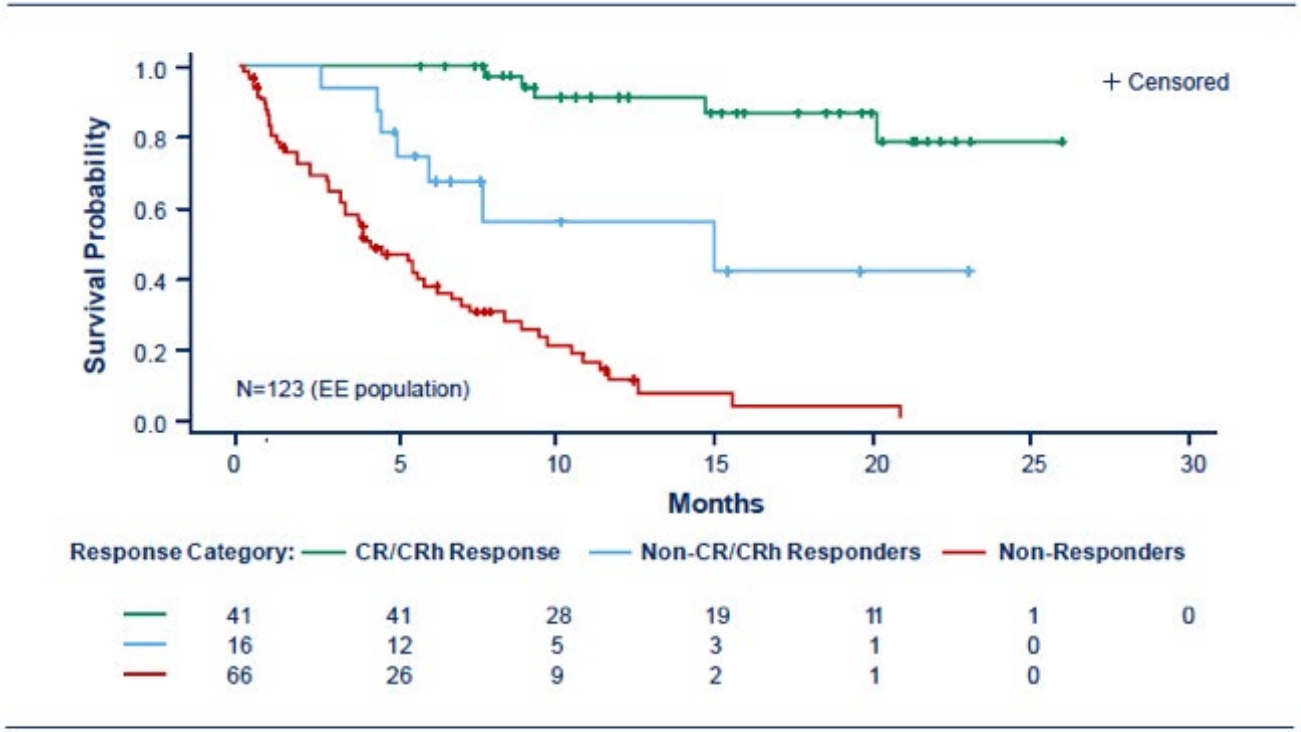
Patients at Risk, n

CR or CRh	38	38	38	37	32	25	19	13	8	5	4	3	1	1	1	1	0
Response other than CR or CRh	14	13	11	11	8	5	2	2	1	0							
No response	73	51	32	24	19	8	7	4	2	1	0						

DiNardo. NEJM. 2018;378:2386.

Slide credit: clinicaloptions.com

Olutasidenib: Efficacy in R/R IDH1^{mut} AML (n=153)



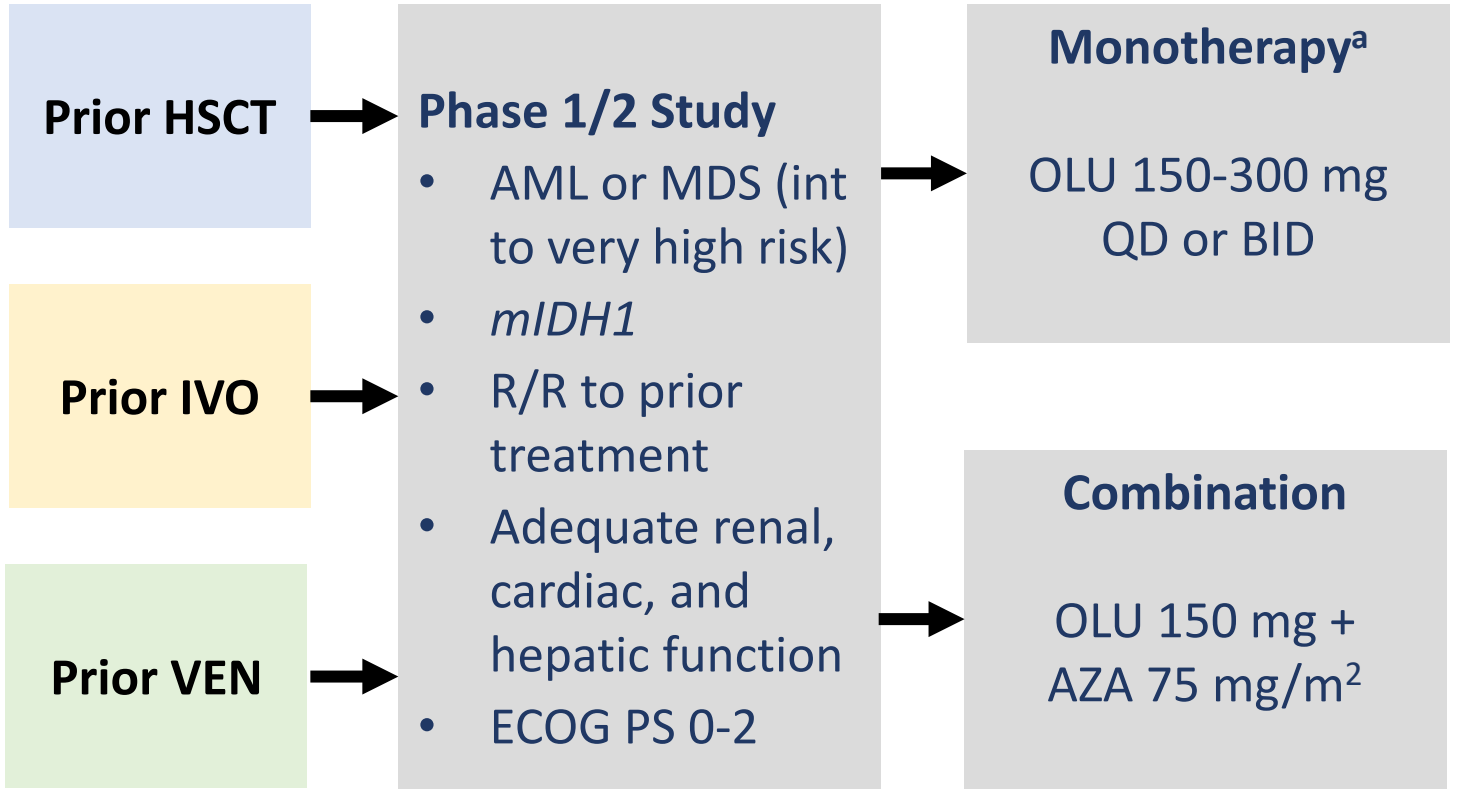
Clinical Response Rates	
Efficacy Evaluable Population n (%)	**Phase 2 Cohort 1 N=123**
CR + CRh	41 (33)
95% CI	(25.1–42.4)
Complete Remission (CR)	37 (30)
95% CI	(22.1–39.0)
Composite CR (CR + CRh + CRi)	55 (45)
95% CI	(35.7–53.9)
Overall Response Rate (ORR = CR + CRh + CRi + MLFS + PR)	57 (46)
95% CI	(37.3–55.6)

EE, efficacy evaluable; NE, not estimable; NR, not reached

De Botton et al Blood Advances online (Feb 2023)

Subgroup Analysis in R/R AML From Olutasidenib Phase 1/2 Study

- Phase 1/2 study enrolled 335 patients with confirmed *mIDH1* AML or intermediate-, high-, or very high-risk MDS
  - Patients were newly diagnosed, R/R, or in maintenance therapy
- Analysis focused on poor prognosis R/R *mIDH1* AML subgroups:
  - Prior HSCT, ivosidenib, and/or venetoclax
- Patients from 2 cohorts in phase 1 and 6 of 8 cohorts in phase 2 included in analysis



AML, acute myeloid leukemia; AZA, azacitidine; BID, twice daily; ECOG PS, Eastern Cooperative Oncology Group performance status; HSCT, hematopoietic stem cell transplant; IVO, ivosidenib; MDS, myelodysplastic syndromes; OLU, olutasidenib; QD, daily; R/R, relapsed/refractory; VEN, venetoclax.

Cortes J, et al. ASH 2023. Abstract 2888.

Phase 1/2 Olutasidenib Subgroup Analysis: Baseline Characteristics

- Of 335 patients in the phase 1/2 study:
  - 31 had prior HSCT
  - 9 had prior IVO
  - 20 had prior VEN

Characteristic	Post-HSCT (n=31)	Post-IVO (n=9)	Post-VEN (n=20)
Study treatment, n			
Monotherapy	22	4	16
Combination	9	5	4
Median age, y (range)	60 (40-73)	72 (61-83)	74 (65-83)
AML type, n			
Primary	22	8	10
Secondary	8 (1 MDS)	1	10
Status			
Relapsed / refractory	3 / 1	0 / 1	0 / 6
Relapsed ≤12 mo	8	6	10
Prior treatment regimens, median (range)	4 (2-7)	4 (2-6)	2 (1-6)

AML, acute myeloid leukemia; HSCT, hematopoietic stem cell transplant; IVO, ivosidenib; MDS, myelodysplastic syndromes; VEN, venetoclax.

Cortes J, et al. ASH 2023. Abstract 2888.

Phase 1/2 Olutasidenib Subgroup Analysis: Post-HSCT Efficacy

- 6 patients achieved CR including 1 with MDS
- 2 patients were enrolled in the monotherapy maintenance cohort while in CR prior to HSCT
- At data cutoff:
  - 2 patients were ongoing responders
  - 3 proceeded to second HSCT
  - 3 proceeded to DLI

Characteristic	Post-HSCT (n=31)
Response, n (%)	
CR	6[a,b] (19)
CRh	0
CRi	3 (10)
CRc, n (%)	9 (29)
MLFS or PR, n (%)	1 MLFS (<1)
ORR, n (%)	10 (32)
DOR, mo, median (range)	7.1 (1-23.4)

[a]One CR patient with prior HSCT was in a maintenance cohort and entered with a CR to prior HSCT.
[b]Response by regimen: 3 CR, 1 CRi, and 1 MLFS were in patients receiving combination therapy; all other responders received monotherapy.

CR, complete remission; CRc, composite CR; CRh, CR with partial hematologic recovery; CRi, CR with incomplete hematologic recovery; DLI, donor lymphocyte infusion; DOR, duration of response; MLFS, morphological leukemia-free state; ORR, overall response rate; PR, partial response.

Phase 1/2 Olutasidenib Subgroup Analysis: Post-IVO Efficacy

- 2 patients achieved CR
- Both responders received combination therapy
  - One proceeded to HSCT after 3.1 months
  - One patient responded for 5.6 months, then progressed

Characteristic	Post-IVO (n=9)
Response, n (%)	
CR	2[a] (22)
CRh	0
CRi	0
CRc, n (%)	2 (22)
MLFS or PR, n (%)	0
ORR, n (%)	2 (22)
DOR, mo	5.6 3.1 → HSCT

CR, complete remission; CRc, composite CR; CRh, CR with partial hematologic recovery; CRi, CR with incomplete hematologic recovery; DOR, duration of response; IVO, ivosidenib; MLFS, morphological leukemia-free state; ORR, overall response rate; PR, partial response.

Cortes J, et al. ASH 2023. Abstract 2888.

Phase 1/2 Olutasidenib Subgroup Analysis: Post-VEN Efficacy

- 6 patients achieved CR
- 2 patients in the monotherapy maintenance cohort were in CRi to prior treatment; both improved response to CR
- Median duration of response was not reached at 28.5 months

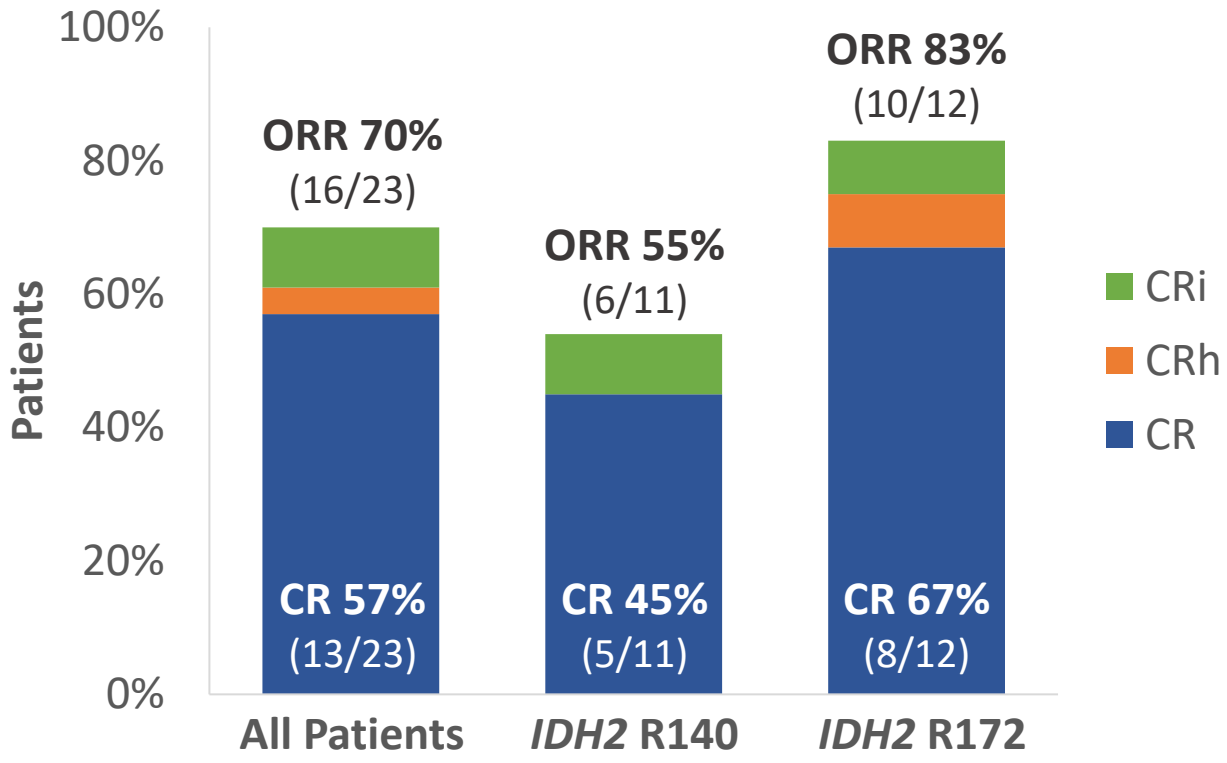
Characteristic	Post-VEN (n=20)
Response, n (%)	
CR	6[a,b] (30)
CRh	1 (5)
CRi	2 (10)
CRc, n (%)	9 (45)
MLFS or PR, n (%)	0
ORR, n (%)	9 (45)
DOR, mo, median (range)	NR (4.8-28.5+)

[a]Two CR patients with prior VEN were in a maintenance cohort and entered with CRi.
[b]Response by regimen: 1 CR was in a patient receiving combination therapy; all other responders received monotherapy.

CR, complete remission; CRc, composite CR; CRh, CR with partial hematologic recovery; CRi, CR with incomplete hematologic recovery; DOR, duration of response; MLFS, morphological leukemia-free state; NR, not reached; ORR, overall response rate; PR, partial response; VEN, venetoclax.

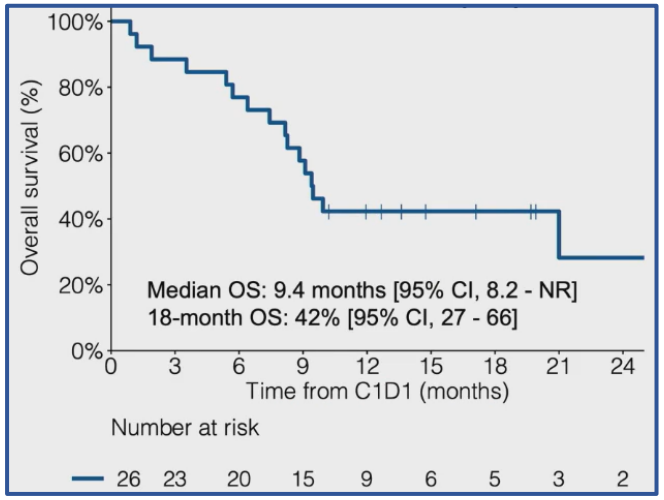
Final Results With Enasidenib in Combination With VEN in *IDH2m* R/R AML

- Median follow-up: 17.1 months (range, 0.9-31.4)

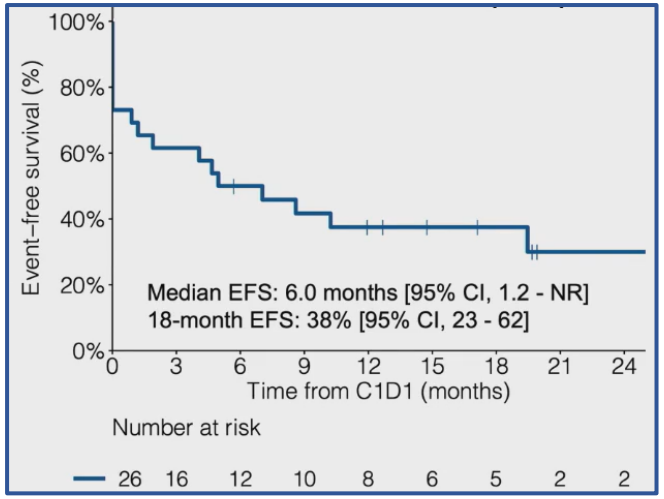


- Median DOR: 16.6 months (range, 5.0-NR)

Overall Survival



Event-Free Survival



The patient with R/R MDS received ≤1 cycle of treatment and was not evaluable for response.

C1D1, cycle 1 day 1; CR, complete remission; CRh, CR with partial hematologic recovery; CRi, CR with incomplete hematologic recovery; DOR, duration of response; EFS, event-free survival; MDS, myelodysplastic syndromes; NR, not reached; OS, overall survival; R/R relapsed/refractory; VEN, venetoclax.

Cortes J, et al. ASH 2023. Abstract 2888.

Case 4:

- 45-year-old female with history of breast cancer who previously underwent adjuvant chemotherapy. she was diagnosed with therapy related AML 11q23 rearrangement. She received intensive chemotherapy followed by allogeneic stem cell transplant but unfortunately relapsed within a year.

Menin inhibitors in Clinical Development

Company name/ Trial name (NCG)	Agent (route)	Phase 1/ 2 expansion cohorts For relapsed/refractory disease	Phase /# pts	Current status
Syndax/ AUGMENT-101 (NCT04065399)	**Revumenib (SNDX-5613)** PO BID	(a)ALL or MPAL with KMT2Ar (b)AML with KMT2Ar (c) AML with NPM1c	Phase 1 (n=186)	In expansion (10 sites) **FDA breakthrough**
Kura / KOMET-001 (NCT04067336)	**Ziftomenib (KO-539)** PO QD	(a)AML with KMT2Ar (b)AML with NPM1c	Phase 1 (n=90)	In expansion (25 sites)
Janssen Pharma (NCT04811560)	JNJ-75276617 PO QD	(a)AML/ALL with KMT2Ar (b)AML with NPM1c	Phase 1 (n=110)	Recruiting (27 sites)
Sumitomo Dainippon (NCT04988555)	DSP-5336 PO QD	RR-AML/RR-ALL Ph2:NPM1/KMT2Ar	Phase 1/2 (n=70)	Recruiting (6 sites)
Daiichi Sankyo (NCT04752163)	D1594 PO BID	(a)AML/ALL with KMT2Ar (b)AML with NPM1c	Phase 1/2 (n=122)	Cohorts (single, Ven/Aza, miniHCVD, azoles, food)
Biomea (NCT05153330)	BMF-219 PO	AML/ALL/MPAL, DLBCL, and multiple myeloma/PCD	Phase 1 (n=100)	Recruiting (6 sites) Cohorts (dz, CYP3A4)

Clinicaltrials.gov website (2022)

AUGMENT-101: Study Design

- Open-label phase I/II trial (data cutoff: July 24, 2023)

Patients ≥30 days of age with R/R *KMT2Ar* acute leukemia;* ECOG PS ≤2 or Karnofsky/Lansky score ≥50 (N = 94)

→

Revumenib
163 mg Q12H PO RP2D[†‡]
(28-day cycles)

*A separate cohort of patients with *NPM1*-mutant AML is still enrolling and is not described in this report. [†]Dose is 95 mg/m^2 if body weight <40 kg. [‡]Plus a strong CYP3A4 inhibitor. [§]Lower efficacy bound of CR/CRh rate in adult evaluable population considered >10%.

- **Primary endpoint:** CR/CRh rate[§]
- **Secondary endpoints:** CR/CRh/CRp/CRi rate, ORR

Aldoss. ASH 2023. Abstr LBA-5. NCT04065399.

AUGMENT-101: Baseline Characteristics

Characteristic	Efficacy Population (n = 57)	Safety Population (N = 94)*
Median age, yr (range)	34.0 (1.3-75)	37.0 (1.3-75)
▪ <18 yr, n (%)	13 (23)	23 (25)
▪ ≥18 yr, n (%)	44 (77)	71 (76)
Female, n (%)	33 (58)	56 (60)
Race, n (%)		
▪ White	43 (75)	68 (72)
▪ Non-White	10 (18)	14 (15)
▪ Unknown	4 (7)	12 (13)
Leukemia type, n (%)		
▪ AML	49 (86)	78 (83)
▪ ALL	7 (12)	14 (15)
▪ MPAL/Other	1 (2)	2 (2)

Characteristic	Efficacy Population (n = 57)	Safety Population (N = 94)*
Comutations, n (%)†		
▪ *FLT3*	5 (9)	7 (7)
▪ *RAS*	9 (16)	12 (13)
▪ *P53*	4 (7)	5 (5)
Primary refractory, n (%)	14 (25)	18 (19)
Median prior lines of tx (range)	2 (1-11)	2 (1-11)
▪ 1, n (%)	17 (30)	25 (27)
▪ 2, n (%)	14 (25)	28 (30)
▪ ≥3, n (%)	26 (46)	41 (44)
Prior venetoclax, n (%)	41 (72)	61 (65)
Prior HSCT, n (%)	26 (46)	47 (50)

*Safety population included patients who received ≥1 dose of revumenib. †In patients that had reported comutation status.

Aldoss. ASH 2023. Abstr LBA-5.

AUGMENT-101: CR/CRh Rate (Primary Endpoint) and Additional Efficacy Findings

Response	Efficacy Population (n = 57)
ORR, n (%)	36 (63)
CR/CRh rate, n (%) ▪ 95% CI ▪ 1-sided *P* value	13 (23) 12.7-35.8 .0036
CR/CRh/CRp/CRi rate, n (%) ▪ 95% CI	25 (44) 30.7-57.6
MRD^{neg} status,* n/n (%) ▪ CR/CRh ▪ CR/CRh/CRp/CRi	 7/10 (70) 15/22 (68)

*MRD tested locally and not reported for all patients. †Includes patients without post-baseline disease assessment.

Best Response, n (%)	Efficacy Population (n = 57)
CR	10 (18)
CRh	3 (5)
CRi	1 (1.8)
CRp	11 (19)
MLFS	10 (18)
PR	1 (1.8)
PD	4 (7)
No response	14 (25)
Other†	3 (5)

- Median OS (95% CI) for efficacy population: 8.0 mo (4.1-10.9)
- Median time to CR/CRh: 1.87 mo (range 0.9-4.6)

Aldoss. ASH 2023. Abstr LBA-5.

AUGMENT-101: Duration of Response

Parameter	Pts Achieving CR/CRh (n = 13)
Median duration of CR/CRh, mo (95% CI)	6.4 (3.4-NR)
Proceeded to HSCT, n/n (%)	14/36 (39)
▪ HSCT while in CR or CRh	6/14 (43)
▪ HSCT while in MLFS or CRp	8/14 (57)
Restarted revumenib post-HSCT, n (%)	7/14 (50)*

*At data cutoff, n = 3 patients remained eligible to start revumenib after HSCT.

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AUGMENT-101: Safety

TEAEs, n (%)	Safety Population (n = 94)*
Any-grade	93 (99)
Grade ≥3	86 (92)
SAE	72 (77)
TEAEs leading to: ▪ Dose reduction	9 (10)
▪ Tx d/c	12 (13)
▪ Death	14 (15)
Any-Grade TEAEs in ≥25% of Patients, n (%)	
Nausea	42 (45)
Febrile neutropenia	36 (38)
Diarrhea	33 (35)
Vomiting	29 (31)
Differentiation syndrome	26 (28)
Hypokalemia	26 (28)
Epistaxis	25 (27)
QTc prolongation	24 (26)

Grade ≥3 TEAEs in ≥10% of Patients, n (%)	Safety Population (n = 94)*
Febrile neutropenia	35 (37)
Decreased neutrophil count	15 (16)
Decreased WBC count	15 (16)
Decreased platelet count	14 (15)
Anemia	17 (18)
Differentiation syndrome	15 (16)
QTc prolongation	13 (14)
Sepsis	11 (12)
Hypokalemia	10 (11)

*Safety population included patients who received ≥1 dose of revumenib.

- No tx d/c due to differentiation syndrome, QTc prolongation, or cytopenias

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Mutation Agnostic therapies when no target

- Salvage chemotherapy regimen
  - FLAG or FLAG-IDA
  - CLIA, CLAG, CLAG-M
  - Mini-CLA
- Promising data integrating venetoclax in salvage regimen backbone.
- HMA+/- Ven if no prior exposure.

DiNardo CD. J Clin Oncol. 2021;39(25):2768-2778

Li YY et al Blood Cancer J. 2024 Jan 18;14(1):12.

Consideration after HMA and venetoclax failure

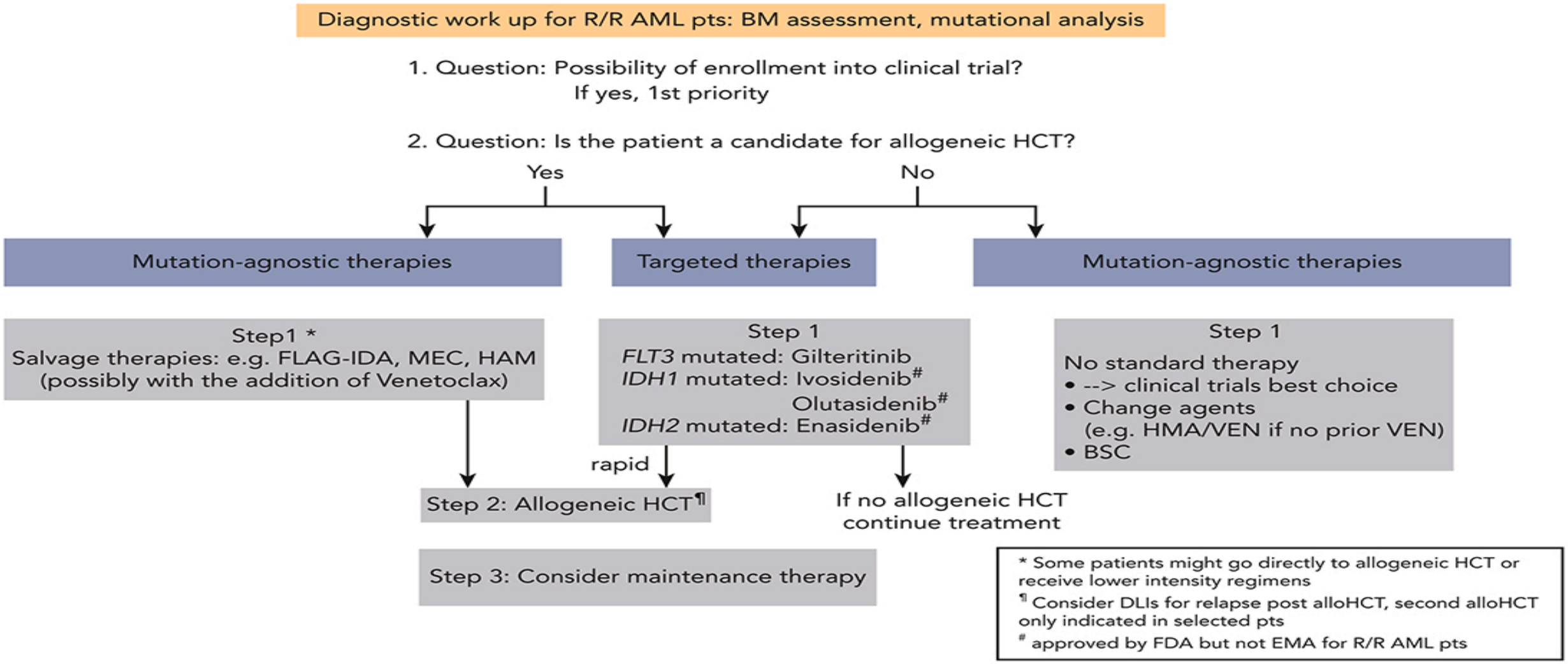
- Outcomes after HMA/Ven failure are poor.
- Limited data on activity of targeted therapies.
- Sequence of therapy maybe relevant (more salvage rates with Ven after IDH failure).
- Olutasidenib a selective IDH1 inhibitor, the ORR in R/R AML was not different between patients who were venetoclax-naïve and patients with prior venetoclax exposure.
- Mini-CLA+/-ven can be option particularly for patients with no adverse karyotype.

DiNardo CD et al Blood. 2020;135(11):791-803.

de Botton S et al, Blood Adv. 2023;7(13):3117-3127.

Li YY et al Blood Cancer J. 2024 Jan 18;14(1):12.

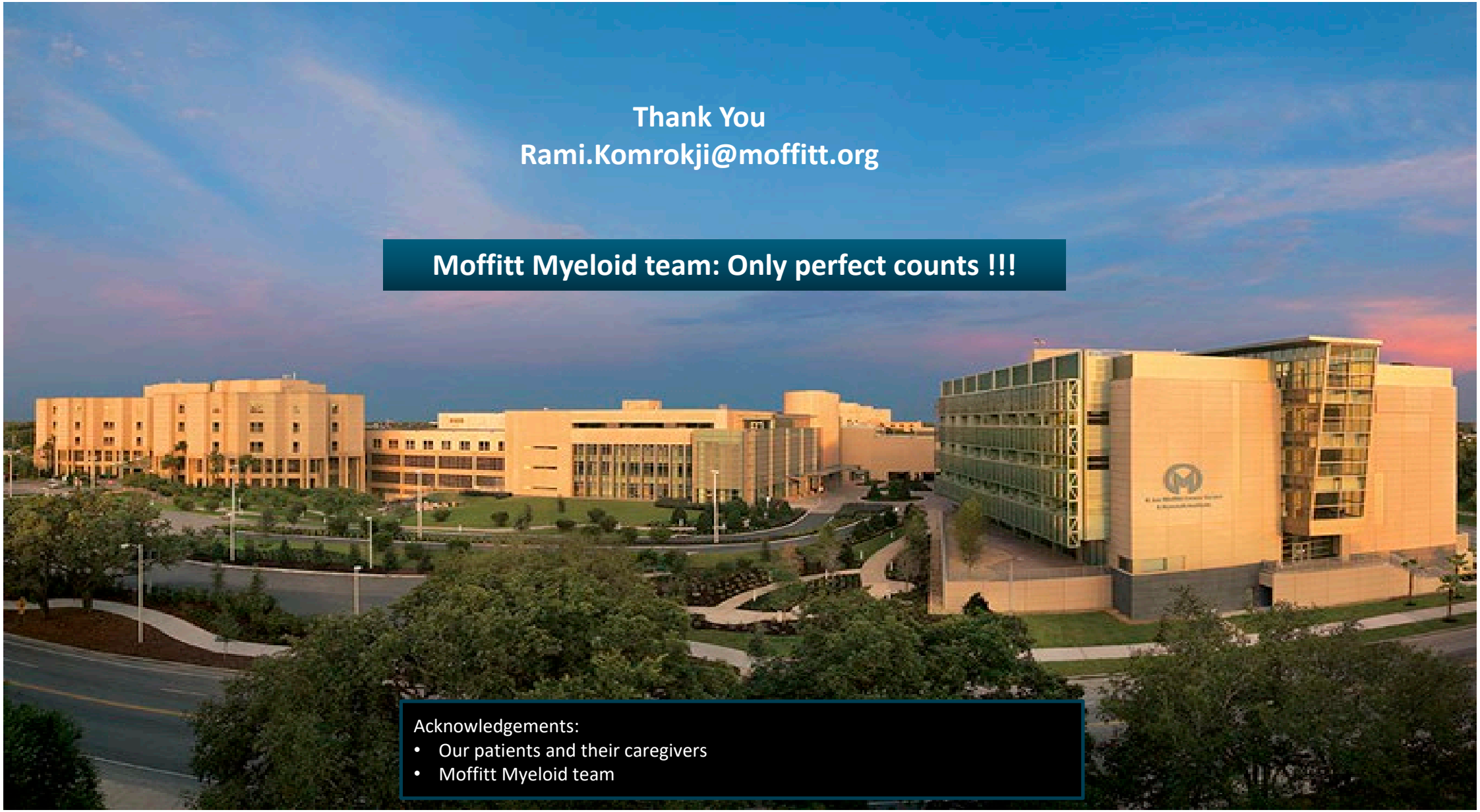
How I treat refractory and relapsed acute myeloid leukemia



Conclusions: **The options for patients with R/R AML include targeted as well as mutation-agnostic therapies. Allogeneic HCT is the only curative approach for the majority of patients.**

*Thol et al. DOI: 10.1182/**blood**.2023022481*

***Blood* Visual Abstract**



Thank You

Rami.Komrokji@moffitt.org

Moffitt Myeloid team: Only perfect counts !!!

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