GERIATRIC ASSESSMENT-BASED FITNESS COMBINED WITH GENETIC PROFILE HELPS TO DETERMINE OUTCOMES IN OLDER ACUTE MYELOID LEUKEMIA PATIENTS

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Introduction

Treating acute myeloid leukemia (AML) in old adults is challenging due to genetic complexity and clinical heterogeneity. **Integrating Geriatric Assessment (GA) and AML genetic profile may help guide therapeutic decisions.**

Aim

To assess whether Comprehensive Geriatric Assessments (CGA) outcomes are associated with prognosis in older patients with AML.

Methods

Single center (tertiary academic hospital) prospective observational study (Oct. 2023–April 2025).

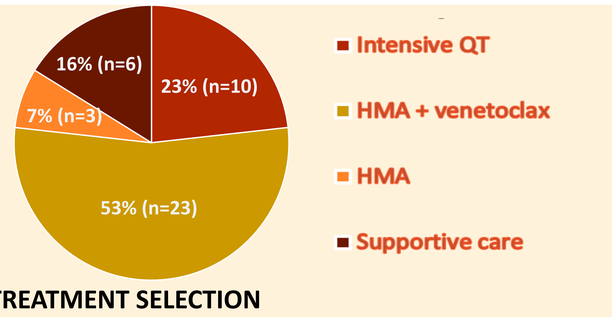
- **Newly diagnosed AML or SMD/AML (ICC 2022)[1] patients aged ≥65 years were included.**
- **Treatment selection based on CGA, genetic profile, and patient preferences. All patients received joint Hematology-Geriatrics follow-up.**

Frailty was assessed using FI-CGA-10, physical performance (SPPB), Clinical Frailty scale, Fried Phenotype, malnutrition (MNA-SF), and depression (PHQ-9) **at baseline and follow-up**

Results

Patients characteristics (N=42)

Age (Median, range)55	76 (65-91)
Sex (male) (n, %)	18 (42%)
AML subtype(n,%)	
De novo	23 (55%)
Prior hematologic disease	15 (35%)
Therapy-related	5 (12%)
Leucocyte x10^9/L(median, range)	3.6 (0.2-279)
Platelets x10^9/L (median, range)	61 (3-409)
Blasts in PB (%) (median, range)	9 (0-80)
Blasts in BM (%) (median, range)	37 (6-100)
Cytogenetic risk (n,%)	
Favorable	0
Intermediate	24 (57%)
Adverse	13 (31%)
N/A	5 (12%)
Risk stratification, (n, %): ELN 2022 (intensive QT, IC) / ELN 2024 (low intensity treatment, LIT)	
Favorable	5 (12%)
Intermediate	20 (47%)
Adverse	17 (40%)
TP53 mutated (n, %)	12 (30%)
FI-CGA-10 Frailty status(n, %)	
Fit	17 (40%)
Pre-frail	16 (38%)
Frail	7 (16%)
N/A	2 (5%)
SPPB	
<10 (frail)	27 (65%)
>10	15 (35%)



TREATMENT SELECTION

GERIATRIC INTERVENTIONS

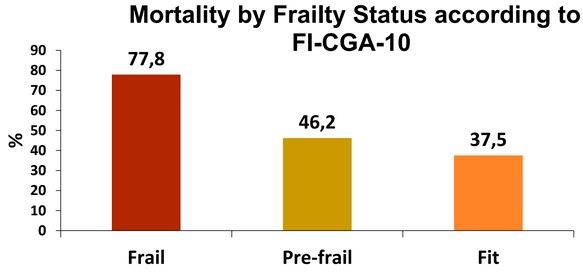
Physical activity recommendations (71%)
Nutritional support (39.5%)
Medication review (37.5%)
Involvement in treatment decisions (93%).

OUTCOMES

- **Complete remission:**
  - **Intensive chemotherapy:** 5/10, 2/10 pending assessment.
  - **Low intensity treatment:** 15/26

Median follow-up: 3.5 months (0-19).

- **Overall mortality:** 50%
- **Early complications:** 55%.



SPPB <10 was significantly associated with higher mortality (72% vs 8.3%, p<0.05), regardless of treatment.

Malnutrition (MNA-SF ≤8), slow gait speed (>4.82s over 4 meters), and depression (PHQ-9 >9) showed a trend to higher mortality and complications, not statistically significant. Adverse cytogenetics showed a trend toward higher mortality (p=0.058).

Conclusion

Despite the small sample size, preliminary findings suggest that **baseline physical performance (SPPB), alongside genetic risk, is significantly associated with mortality in older AML patients, regardless of selected therapy**.

References

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