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Abstract-ID 424

Prognostic value of the new AML60+ score for elderly patients with acute myeloid leukemia treated with hypomethylating agents

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Introduction

The AML60+ score combines clinical and genetic parameters and has recently been proposed for risk assessment in intensively treated elderly patients (pts) with AML or high-risk Myelodysplastic Syndrome (MDS).

Its prognostic significance in elderly pts treated with hypomethylating agents (HMAs) is currently unknown.

We therefore aimed to evaluate the prognostic impact of the AML60+ score in this frequent population in comparison to the ELN2022 classification.

Methods

We performed a retrospective chart review of pts diagnosed with AML or MDS/AML between 2017 and 2023. Pts were evaluable, if they had received an HMA-based therapy for at least one cycle.

The following variables are included in the AML60+ score with different weightings:

Variable	HR	95% CI	Weight
TP53 mutation	2.42	1.83-3.21	3
Monosomal karyotype	2.06	1.56-2.73	3
Age < 65 years	1.5	1.31-1.72	2
RUNX1 mutation	1.49	1.26-1.76	1
FLT3-ITD	1.36	1.13-1.65	1
ASXL1 mutation	1.32	1.10-1.58	1
DNMT3A mutation	1.25	1.07-1.45	1
WBC > $20x10^9$/l	1.22	1.03-1.44	1
Male sex	1.15	1.00-1.32	1

Based on the number of points, the following risk groups can be distinguished:

favorable	0-1
intermediate	2-3
poor	4-5
very poor	≥6

Results I

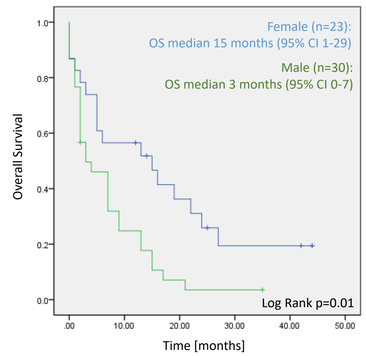
53/85 (62%) of all elderly (MDS/)AML-patients were evaluable for this analysis. (AML/MDS n=7, AML n=46).

23/53 (44%) were female; The median age was 77 years (range 61-91).

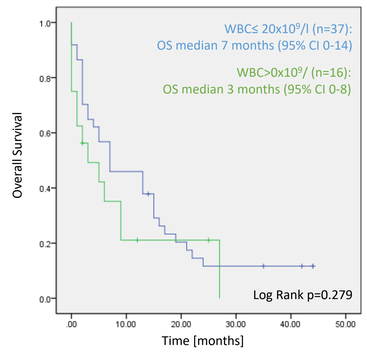
During follow-up (median 6 months [mo], range 0-44) 45/53 patients (85%) died.

29 pts received an HMA and Venetoclax, 5 pts Decitabine and Ibrutinib and 19 pts a HMA alone.

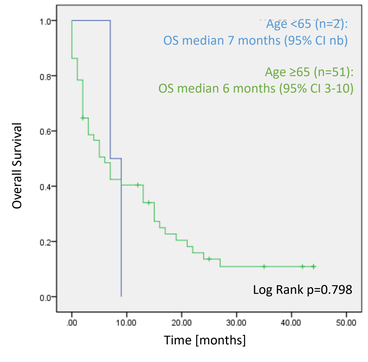
Results II



A Male sex: HR 2.17 (95% CI 1.16-4.07), p=0.015



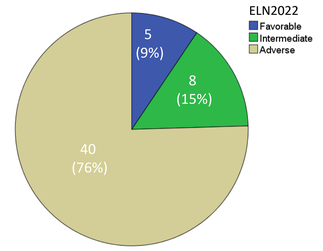
B WBC> $20x10^9$/l: HR 1.41 (95% CI 0.73-2.7), p=0.303

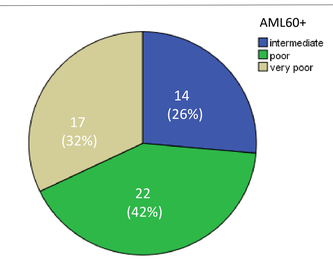


C Age> 65 years: HR 0.833 (95% CI 0.20-3.50), p=0.833

Impact of sex (Panel A),
white blood cell count (Panel B) and age (Panel C)
on overall survival as determinded by
Kaplan-Meier estimates and univariate COX regression analyses

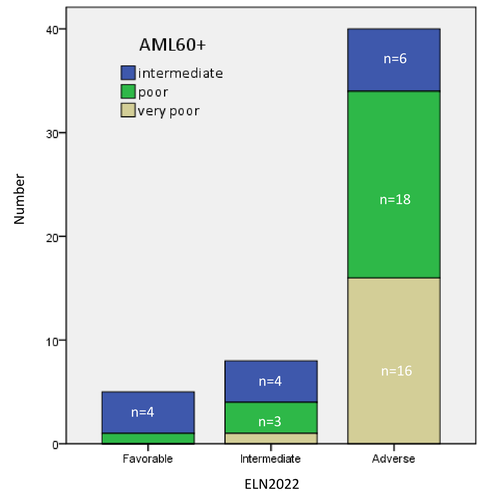
Results III





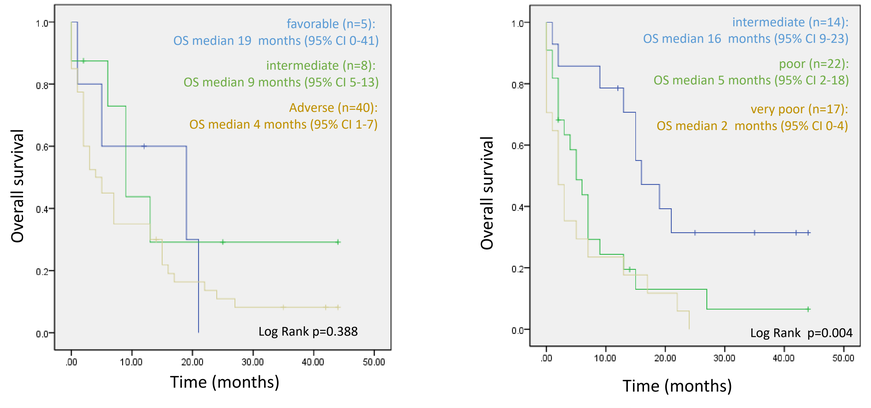
Distribution of patients following risk stratification according to ELN2022 (upper panel) and AML60+ (lower panel)

Results IV



Distribution of patients stratified accoring to AML60+ within the single risk groups according to ELN2022

Results V



Overall survival of patients stratified according to ELN2022 (left panel) and AML60+ (right panel)

Discussion

According to this retrospective analysis of a small cohort, the AML60+ score may be a useful prognostic tool for elderly AML patients treated with HMAs.

In particular, it may help to identify a group with a relatively favorable prognosis that is not clearly identified by the ELN 2022 risk classification.

However, analyses of larger cohorts are needed to provide more evidence for this observation.

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