CR/CRi and MRD Outcomes With Intensive vs Low-Intensity Chemotherapy in AML: A Single-Center Retrospective Analysis

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BACKGROUND

- **Acute myeloid leukemia (AML) is the most common acute leukemia in adults**
- **While intensive chemotherapy (IC) remains standard induction for fit patients, venetoclax-based low-intensity chemotherapy (LIC) regimens have demonstrated high composite remission rates and are increasingly utilized[1]**
- **Whether IC confers superior depth of response, measured by measurable residual disease (MRD) negativity among responders, remains unclear**

OBJECTIVE

- **Compare CR/CRi rates and MRD negativity between IC and LIC in newly diagnosed AML**

METHOD

- **utilizing a retrospective analysis conducted at Baylor St. Luke's Medical Center**
- **Patients with newly diagnosed AML receiving standard IC or LIC were included. Best response was categorized as complete response (CR), complete remission with incomplete blood count recovery (CRi), or other (progressive disease, partial remission, MLFS, no response)**
- **Baseline characteristics including median age, and risk stratifications using ELN 2022 for IC and ELN 2024 for LIC were included[2,3]**
- **Patients lacking adequate response data were deemed non-evaluable**
- **Responders achieving CR/CRi were assessed for MRD by multiparameter flow cytometry (sensitivity ≥10^{-3})[4]**
- **Chi-square analysis was used for group comparisons**

CONTACT INFORMATION

- **Please reach out to bret.miller@bcm.edu for any questions**

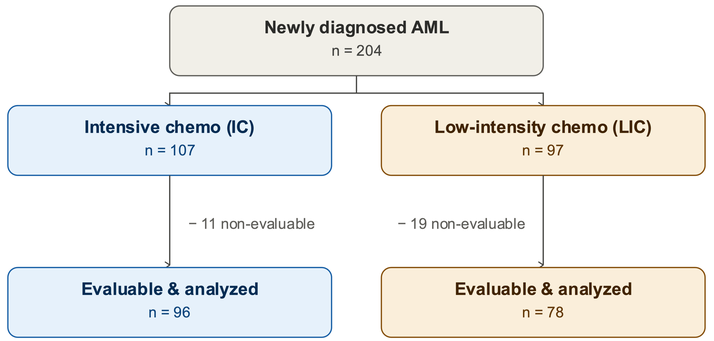

Figure 1: Schematic flow diagram of the patient selection. 11 patients in the IC grouzp and 19 in the LIC group were non-evaluable due to lack of adequate data

RESULTS

Characteristic	IC	LIC	p value
Enrolled, n	107	97	—
Median age, years	52.2	71.8	—
Male sex	56.1%	56.7%	—
Race: White	72.0%	69.1%	—
Race: Black or African American	13.1%	25.8%	—
Race: Asian	10.3%	3.1%	—
Race: Unknown	4.7%	2.1%	—
ELN favorable risk	26.2%	18.6%	
ELN intermediate risk	27.1%	48.5%	
ELN adverse risk	46.7%	29.9%	n/a (diff. ELN ver.)
ELN unknown risk	—	3.1%	
CR/CRi rate	**79.2%** 76/96	**59.0%** 46/78	**0.004**
MRD negativity among responders	**61.8%** 47/76	**45.7%** 21/46	**0.08**

Figure 2: Baseline characteristics and treatment response by intensity of chemotherapy (IC vs LIC). ELN 2022 was utilized for risk stratification of the IC group, and ELN 2024 for the LIC group. CR/CRi rates were compared between the IC and LIC groups. Within those who achieved CR/CRi, a subgroup analysis of depth of response (MRD negativity) was subsequently performed

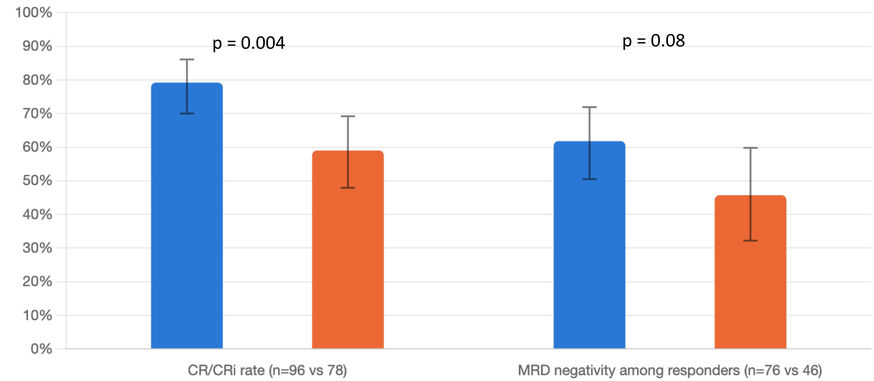

Figure 3: Bar graph comparison of CR/CRi rates between IC (blue) and LIC (orange) with p-values, and among CR/CRi responders, those who achieved MRD negativity among each group

CONCLUSIONS

- **IC was associated with significantly higher CR/CRi rates**
- **Among responders, there was a trend toward increased MRD negativity in the IC group; however, this didn't reach statistical significance**
- **Limitations include the retrospective design, non-randomized nature of the study which may introduce selection bias, and sample size that may be underpowered for the MRD subgroup analysis. Prospective studies with molecular risk stratification are warranted**

REFERENCES

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