

Management of B-ALL in older adults

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CME 49408

Case presentation

75M w hx indolent chronic ITP, prostate Ca (s/p XRT+ADT early 2010s), CAD, AVR 2015, HFrEF (LVEF 30% 2022), presented with several months of dyspnea on exertion, sore throat, and extreme fatigue.

Plts had been high 80s-low 100s since mid 2015 (s/p steroids, rituximab).

2014 BMBx variably cellular <10% to 30-40% with mild erythroid atypia and karyotype 4 of 20 cells with -Y.

Notable labs on presentation:

WBC 1.46, ANC 580

Hgb 9.1 (wnl a few months earlier)

Case presentation continued

Exam notable for jaundice (1wk per wife), no edema, JVP wnl

BMBx

>90% blasts

positive [CD34, HLA-DR, CD38, TdT, moderate CD58, moderate cytoplasmic CD22, and moderate cytoplasmic CD79a]

heterogeneous [CD19, CD38, dim CD10, CD20, cytoplasmic CD19]

negative [CD33, CD11b, CD15, CD16, CD14,

Defining the cohort

Age

Just a number, as they say.

ECOG Performance Status

Defined in [1982](#) by the Eastern Cooperative Oncology Group, a simplified version of Karnofsky. 0 is completely healthy, 5 is dead, 2.5 is the VA special. ([MDCalc](#))

Karnofsky Performance Status

Defined in [1948](#), in an early paper on nitrogen mustards. 100% is completely healthy, 0% is dead, 10% is mostly dead. ([MDCalc](#))

Charlson Comorbidity Index CCI

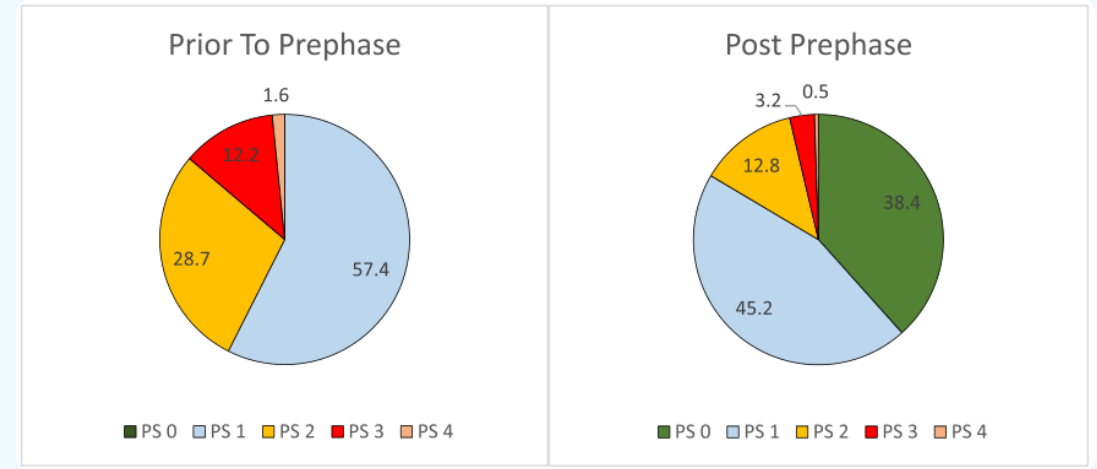
Defined in [1987](#), somewhat out of date (e.g. "AIDS" gets 6 points by itself), but among the more useful standardized measures of biological (rather than chronological) age. ([MDCalc](#))

Pre-Phase Chemotherapy

prednisone (GRAALL-2003, 7d prior to induction)

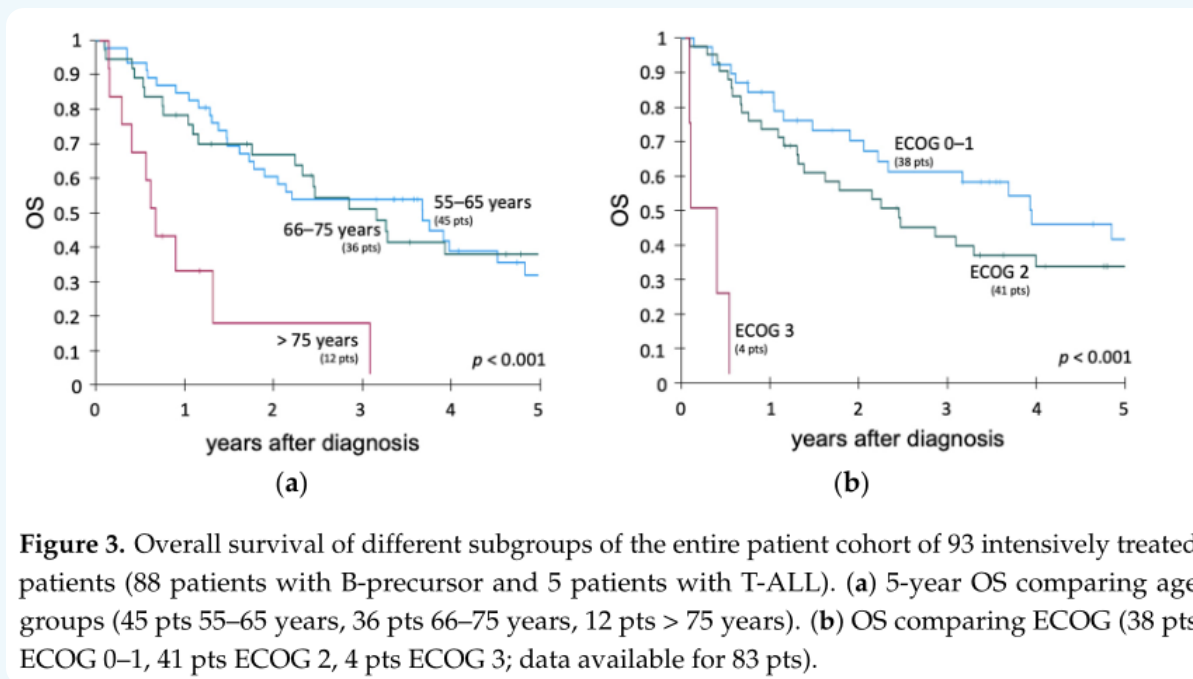
Vincristine + prednisone (SWOG-7416 1983, CR ~20% in all comers)

¹ Rudresha 2022



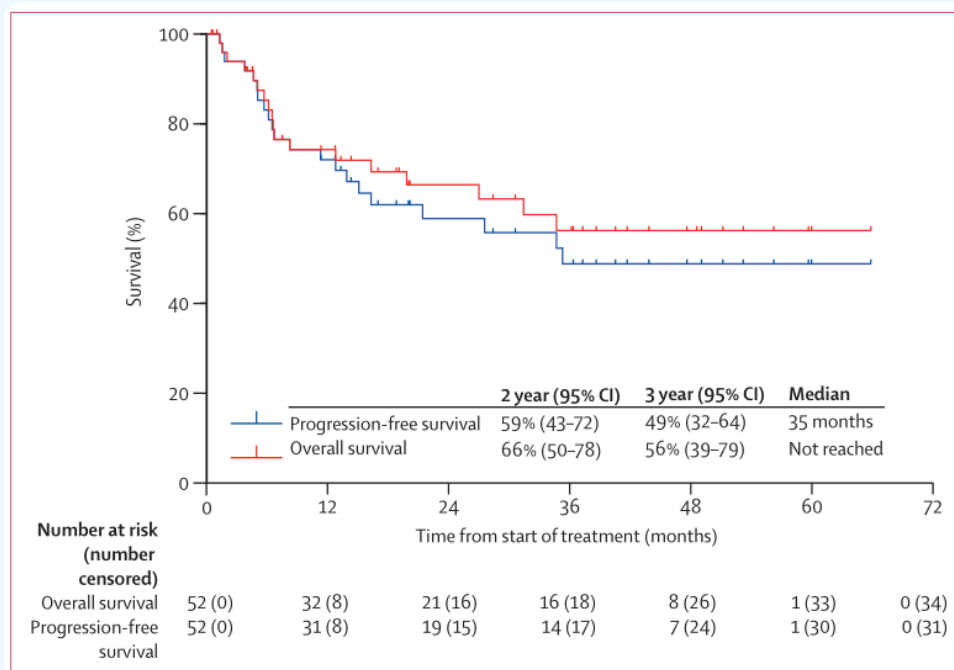
ECOG PS scoresj

Survival in Older Adults



inotuzumab ozogamicin in older adults

Inotuzumab



inotuzumab ozogamicin in older adults

Table 2. Novel approaches to Ph- ALL in older adults: published and ongoing trials*

Reference	Regimen	Phase	N	Line	Age, y	Regimen-related deaths	Response	Survival
Kantarjian et al (2018) ²² Short et al (2020) ²³ NCT01371630	IO + mini-hyper-CVD (Blina consolidation)	2	70	First	≥60	0% early mortality 34% mortality in remission	98% ORR 88% CR (96% MRD negative)	Continuous CR 3 years: 79% Median CCR NR OS 3 years: 56% Median OS 62 months
EWALL-INO NCT03249870	IO + mild-intensity chemotherapy CC consolidation	2	—	First	≥55	—	—	—
Stelljes et al (2020) ²⁴ GMALL (INITIAL-1) NCT03460522	IO induction CC consolidation	2	36	First	≥56	0% early mortality	100% CR/CRi (78% MRD negative)	EFS 1 year: 87% (95% CI, 70–100) OS 1 year: 87% (95% CI, 70–100)
Jain et al (2019) ²⁵ DFCI/MDACC IST NCT03319901	Venetoclax + mini-hyper-CVD	1b/2	19	R/R (8) First (11)	All ages ≥60	0% early mortality	91% CR (100% MRD negative)	—
Advani et al (2018) ²⁶ SWOG 1318 NCT02143414	Blina induction Blina consolidation	2	29	First	≥65	0%	66% CR/CRi (92% MRD negative)	DFS 1 year: 56% (95% CI, 58–90) OS 1 year: 65% (95% CI, 43–80)
Alliance 041703 NCT03739814	IO induction Blina consolidation	2	—	R/R First	All ages ≥60	Results pending	Results pending	Results pending

*Results at most recent publication.
Blina, blinatumomab; CCR, continuous complete remission; CRi, complete remission with incomplete count recovery; NR, not reached.

novel therapies

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Sas V, Moisoiu V, Teodorescu P, et al. Approach to the Adult Acute Lymphoblastic Leukemia Patient. J Clin Med. 2019;8(8):1175. Published 2019 Aug 6. doi:10.3390/jcm8081175

Short, Nicholas J et al. "Optimizing the treatment of acute lymphoblastic leukemia in younger and older adults: new drugs and evolving paradigms." Leukemia vol. 35,11 (2021): 3044-3058. doi:10.1038/s41375-021-01277-3

Wenge DV, Wethmar K, Klar CA, et al. Characteristics and Outcome of Elderly Patients (>55 Years) with Acute Lymphoblastic Leukemia. Cancers (Basel). 2022;14(3):565. Published 2022 Jan 23. doi:10.3390/cancers14030565

McCredie, K.B., Gehan, E.A., Freireich, E.J., Hewlett, J.S., Coltman, C.A., Jr., Hussein, K.K., Balcerzak, S.P. and Timothy Chen, T. (1983), Management of adult acute leukemia a southwest oncology group study. Cancer, 52: 958-966.

HemOnc.org B-cell lymphoblastic leukemia guidelines

NCCN Guidelines