Hematopoietic Stem Cell Transplantation in T cell Lymphoma

Autologous or allogeneic

Dr. Farzaneh Ashrafi
Hematologist, Oncologist
Isfahan University Of Medical Sciences
Esfand 1401

Outline

- outcome of peripheral T cell lymphoma
- Role of ASCT as consolidative treatment in PTCL
- Role of allogeneic transplantation in PTCL

Outcome of PTCL

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- The prognosis of the majority of PTCLs remains poorer than with aggressive B-cell lymphoma,
- The 5-year overall survival (OS) for
  - ALK+ ALCL, 80%
  - ALK- ALCL, 44.7%
  - AITL, 35.4%
  - PTCL-NOS, 25.4%

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Role of Autologous Transplant in PTCL

ASCT in PTCL

- In patients who are chemotherapy responsive, consolidation with auto-SCT in the first remission for most fit patients with PTCL

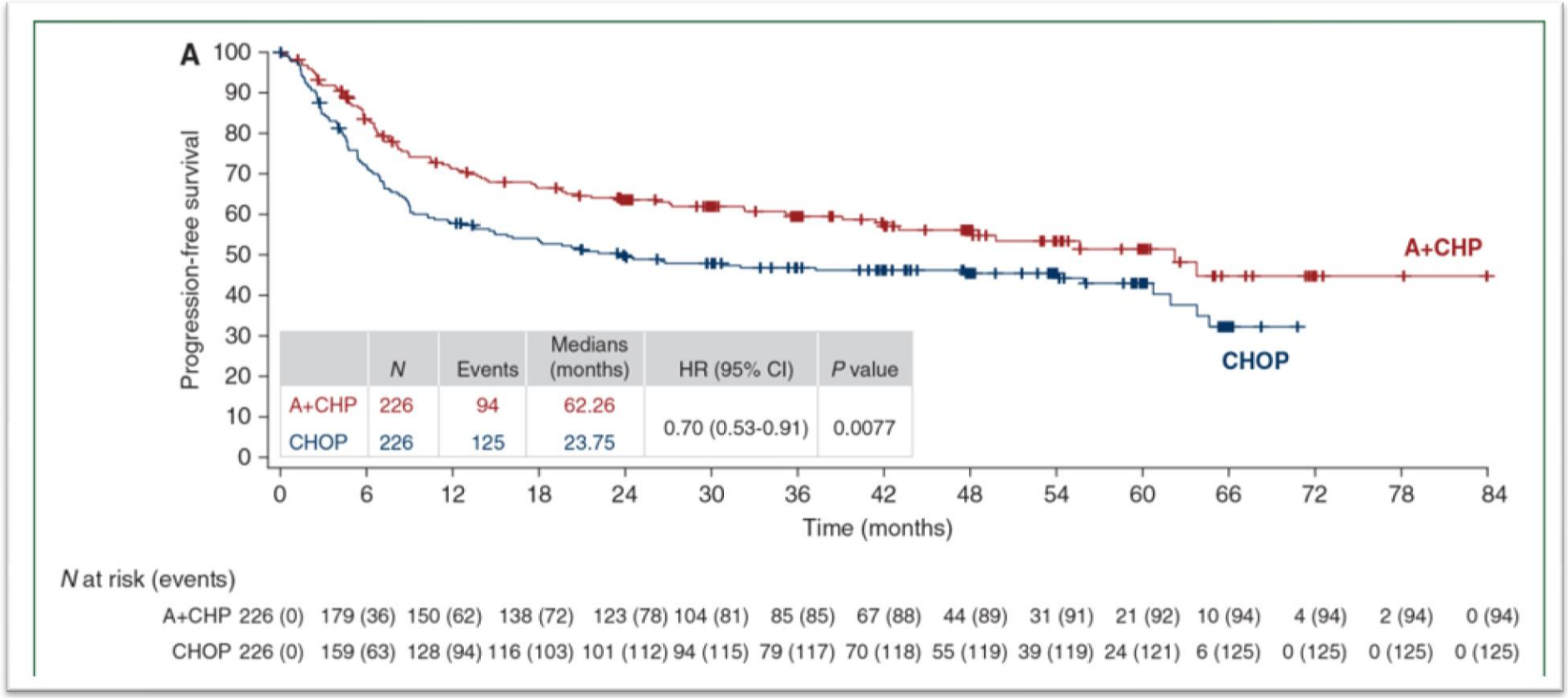
- For patients with ALK+ALCL, consolidation with auto-SCT is not recommended as these patients have a more favorable outcome compared with patients with other nodal PTCL subtypes

Studies evaluating ASCT in patients with PTCL

Study	Year	Cases (*n*)	PTCL subtypes	Median follow-up (months)	Survival
Registry studies					
Rodriguez et al. [64] (GEL-TAMO)	2003	37	All subtypes including ALCL	37	DFS: 79% at 5 years OS: 80% at 5 years
Ellin et al. [16] (Swedish)	2014	128	All subtypes including ALCL (ALK − *n* = 24)	97.3	PFS: 41% at 5 years OS: 48% at 5 years
Park et al. [32] (COMPLETE)	2019	119 (auto-SCT *n* = 36)	All subtypes including ALCL (ALK − *n* = 42)	33.6	OS: 87.6% at 2 years Improved PFS and OS for AITL PFS: 68.8% at 2 years OS: 93.3% at 2 years
Garcia-Sancho et al. [30] GELTAMO/FIL	2022	174 (auto-SCT *n* = 103)	All subtypes excluding ALK + ALCL	66	PFS 63.8% at 5 years OS: 74%% at 5 years

The Echelon-2 Trial

5-Year Results of a Randomized, Double-Blind, Phase 3 Study of Brentuximab Vedotin and CHP (A+CHP) Versus CHOP in Frontline Treatment of Patients with CD30 Positive Peripheral T-Cell Lymphoma



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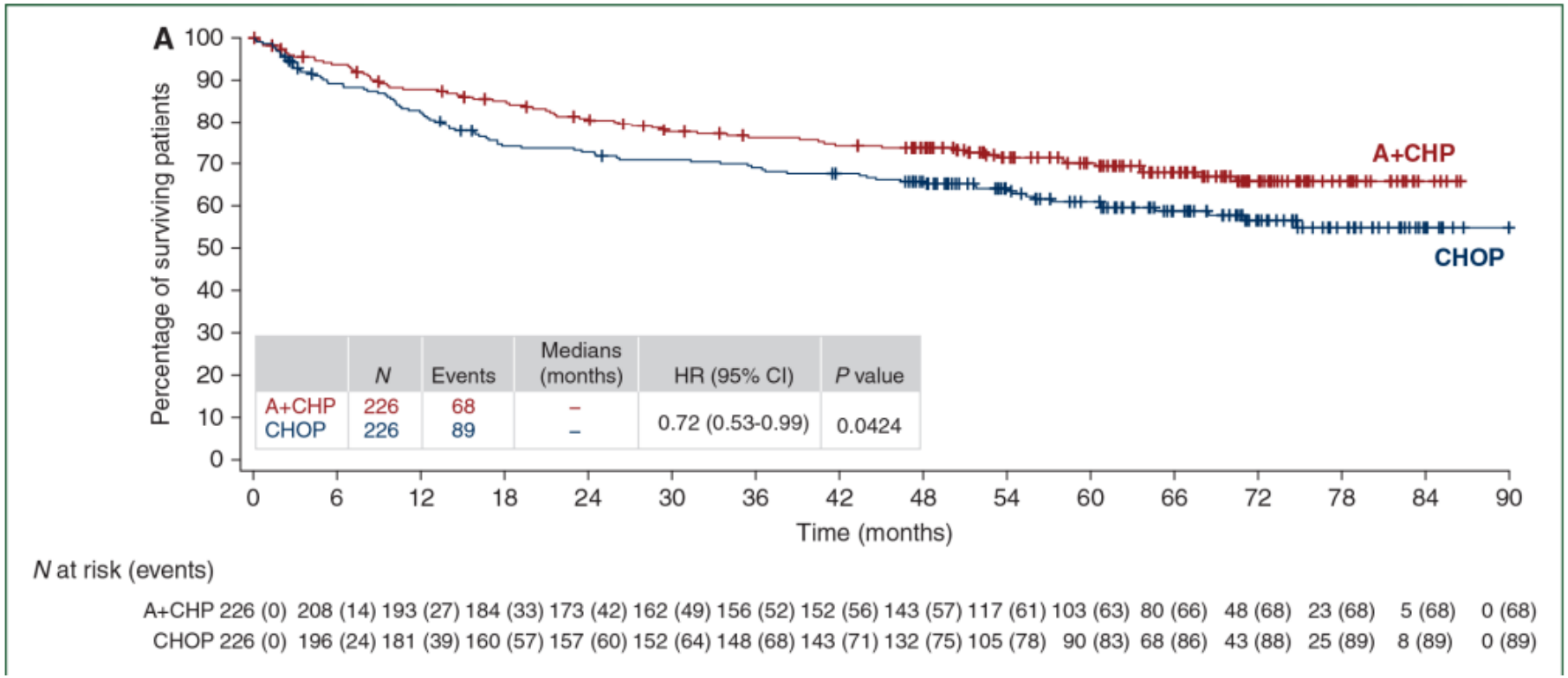


An Exploratory ECHELON-2

- At 5 years, frontline treatment with A+CHP continues to provide clinically meaningful improvement in PFS and OS versus CHOP, including ongoing remission in ~60% of pts with sALCL, with a manageable safety profile, including continued resolution or improvement of PN.

An Exploratory ECHELON-2: Impact of Consolidative Stem Cell Transplant

	ALK– sALCL N=76		Non-sALCL N=38		Combined N=114	
	SCT (n=27)	No SCT (n=49)	SCT (n=11)	No SCT (n=27)	SCT[a] (n=38)	No SCT (n=76)
Estimated PFS at 3 years, % (95% CI)	80.4 (59.1, 91.4)	56.9 (40.6, 70.3)	70.1 (32.3, 89.5)	46.7 (26.7, 64.4)	76.1 (56.9, 87.6)	53.3 (40.7, 64.3)
Univariate, HR (95% CI)	0.49 (0.19, 1.27)		0.36 (0.10, 1.26)		0.38 (0.18, 0.82)	
Multivariate, HR (95% CI) adjusting for:						
Age[b]	0.54 (0.20, 1.45)		0.32 (0.09, 1.15)		0.39 (0.18, 0.86)	
Region[c]	0.47 (0.18,1.22)		0.37 (0.10, 1.33)		0.38 (0.18, 0.82)	
Age[b] + Region[c]	0.52 (0.19, 1.41)		0.32 (0.09, 1.19)		0.39 (0.18, 0.86)	
Median follow-up[d], mos (95% CI)	29.9 (24.2, 36.1)	41.6 (29.8, 42.0)	49.8 (21.2, 54.0)	42.6 (29.5, 53.9)	35.9 (24.5, 41.9)	41.6 (33.2, 42.1)

Table presents HR of PFS for pts who achieved CR on A+CHP, SCT vs no SCT; HR<1 favors SCT; all HRs were stratified for baseline IPI score (0–1; 2–3; 4–5).

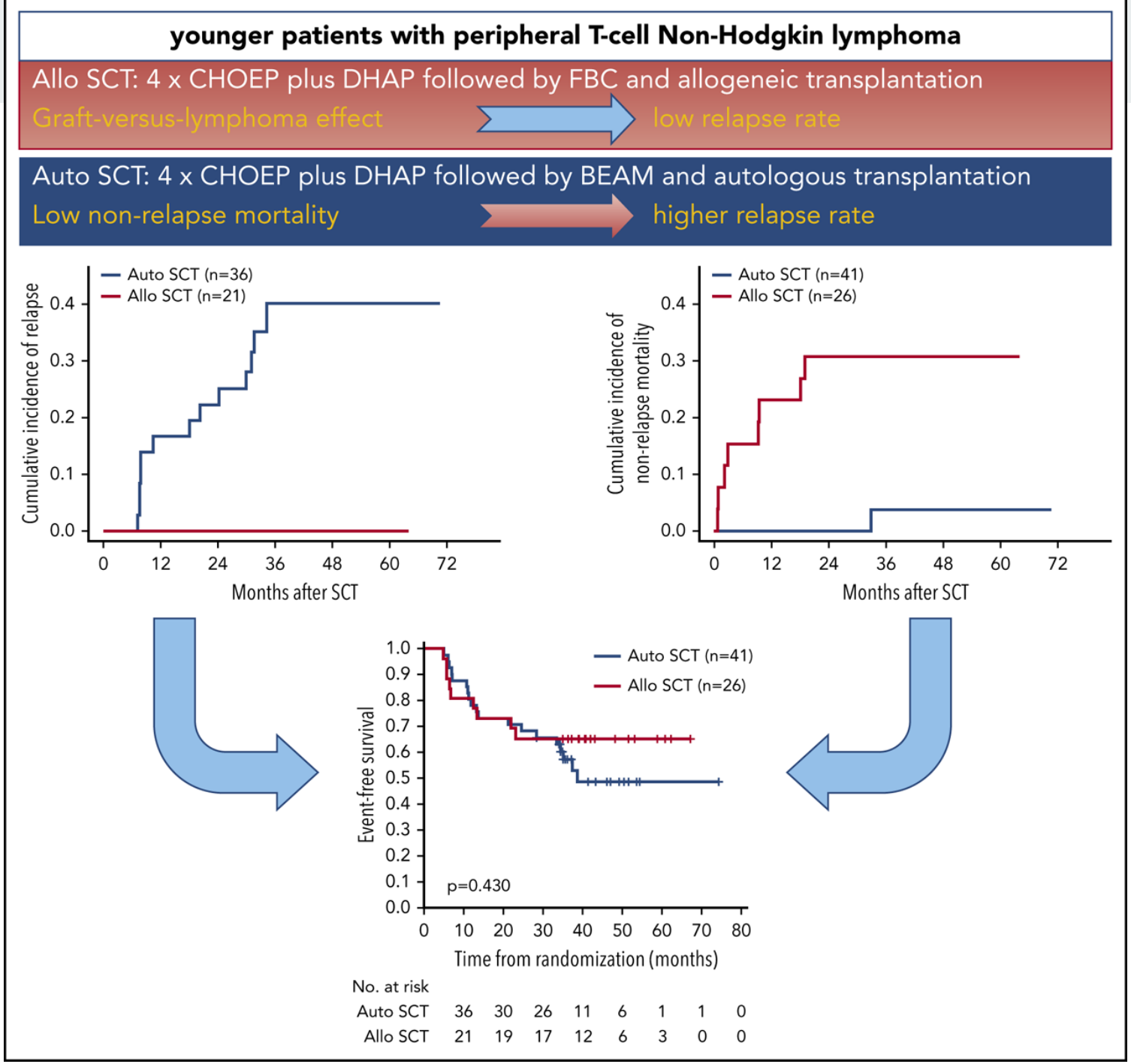
PFS was measured from randomization to progressive disease, death, or receipt of subsequent systemic chemotherapy to treat residual or progressive PTCL as determined by the investigator, whichever came first. Consolidative SCT was not considered an event.

a. Includes 2 allogeneic SCTs
b. <65; ≥65 yr
c. Non-Asia (rest of world); Asia (Taiwan, Japan, and South Korea)
d. Median follow-up is calculated for PFS using the Kaplan-Meier method of switching the PFS event and censored status.

Blood (2019) 134 (Supplement_1): 464.

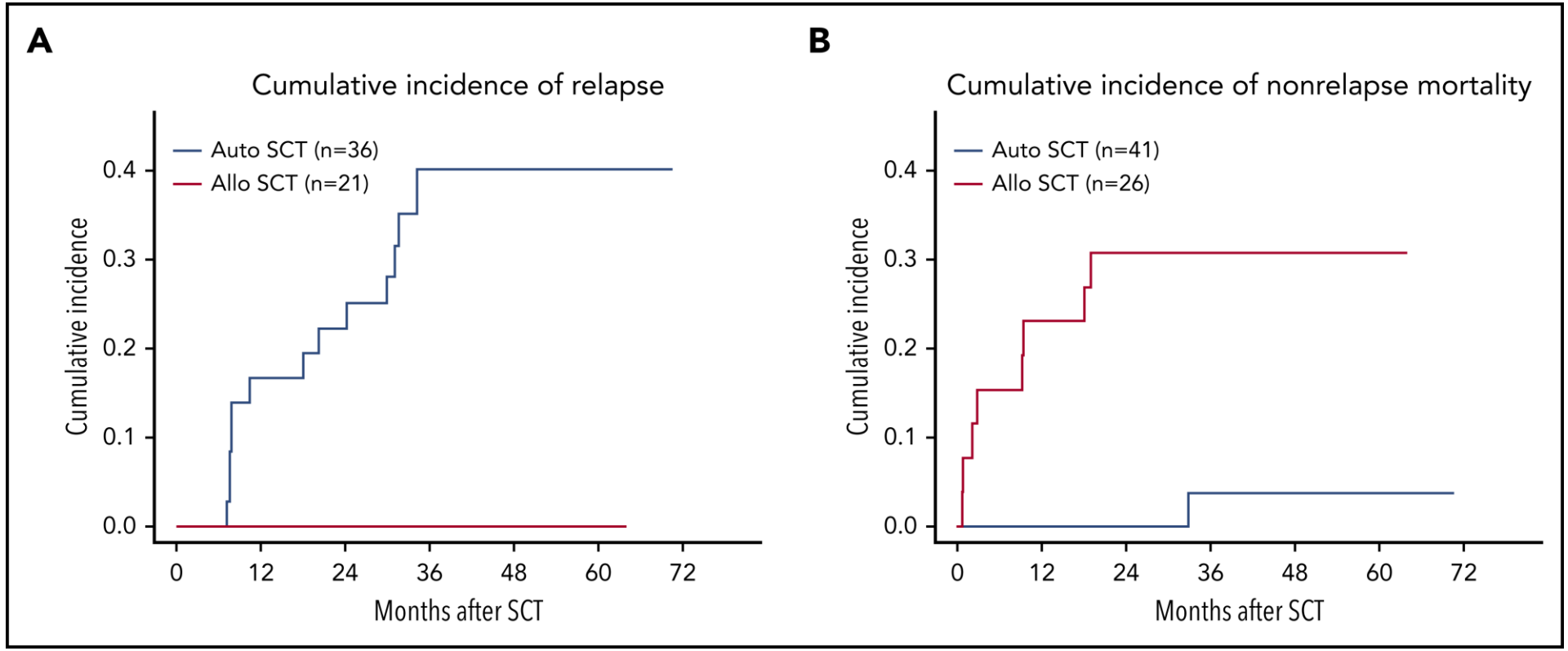
Allogeneic Transplantation in PTCL

A randomized phase 3 trial of autologous vs allogeneic transplantation as part of first-line therapy in poor-risk peripheral T-NHL



Blood (2021) 137 (19): 2646–2656.

The predominant cause of failure with auto-SCT is relapse compared to no relapse mortality with allo-SCT for PTCL.



Blood (2021) 137 (19): 2570–2571.

Key Points

- Conventional therapy consolidated by auto-SCT remains a promising option for treating patients with T-cell lymphoma.

- Patients with relapsing or refractory peripheral T-cell lymphoma should be offered allo-SCT.

Blood (2021) 137 (19): 2646–2656.

Thank you