Memorial Sloan Kettering Cancer Center

Today, how many PTCL patients are cured?

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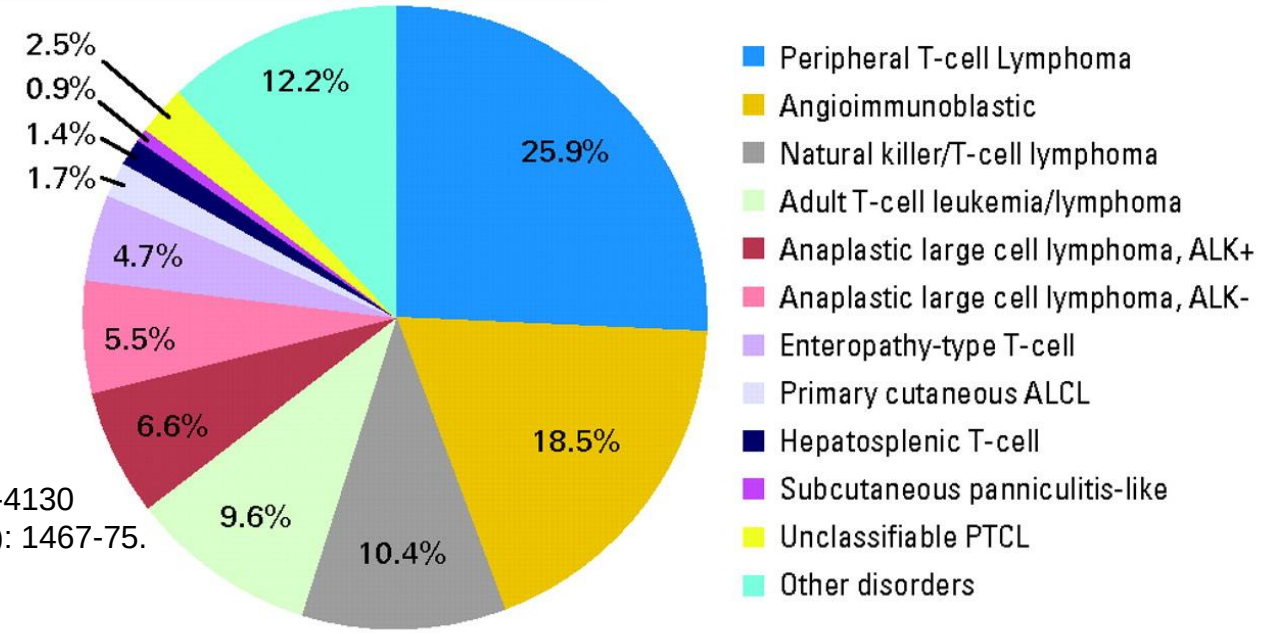
Today, how many PTCL patients are cured?

- Some…but not as many as we would like
- It depends
- On how you count
- And maybe, how hard you try?

Proportion of Major T-cell Subtypes: North America

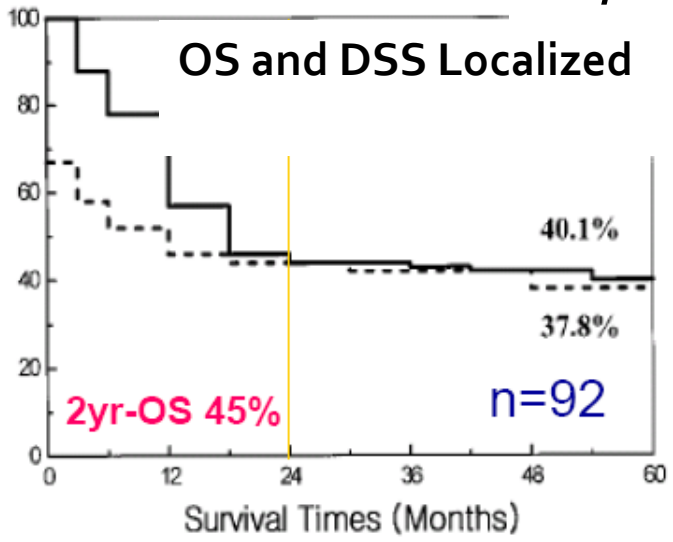
Registry	PTCL-NOS	AITL	ALCL, ALK +	ALCL, ALK -	NK/T	ATL	EATL
IPTCL (NA)	34%	16%	16%	8%	5%	2%	6%
BCCA	59%	5%	6%	9%	9%	NA*	5%
COMPLETE	34%	15%	11%	8%	6%	2%	3%

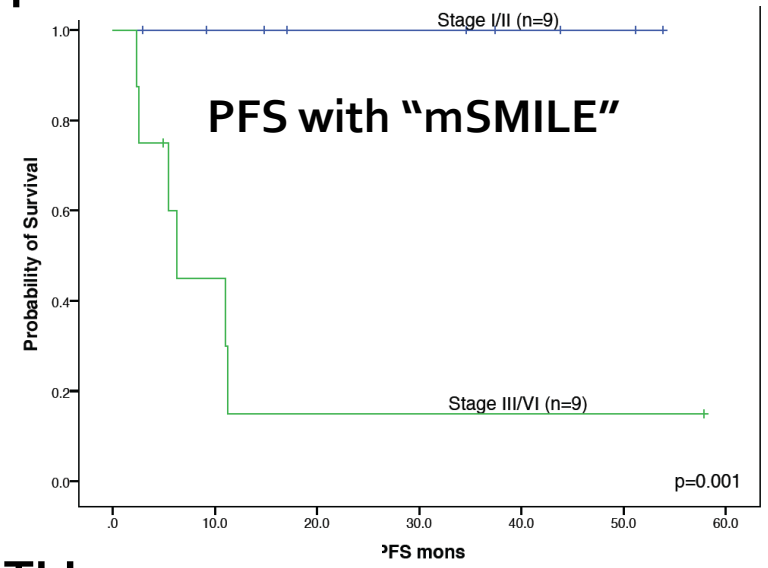


Vose JM, et al. *J Clin Oncol.* 2008;26:4124-4130
Savage, K.J., et al.. Ann Oncol,2004.**15**(10): 1467-75.
Foss, F.M., et al., Blood, 2012. **120**(21).

"Less Common" Subtypes of TCL

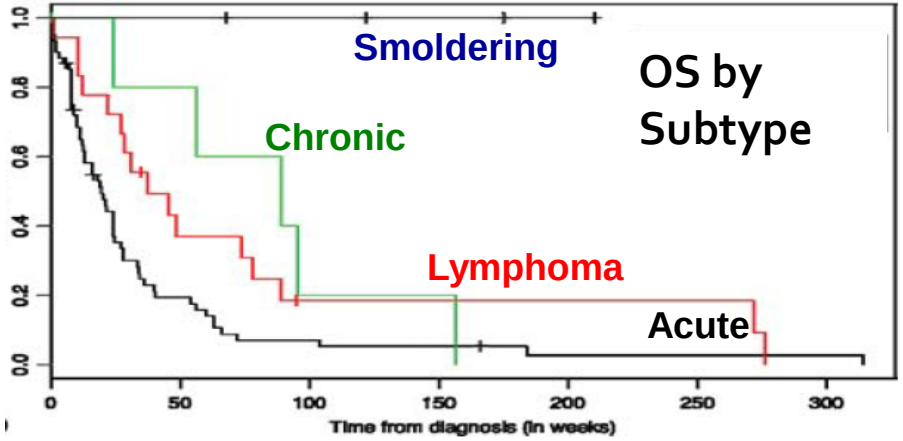
NK/T-cell Lymphoma

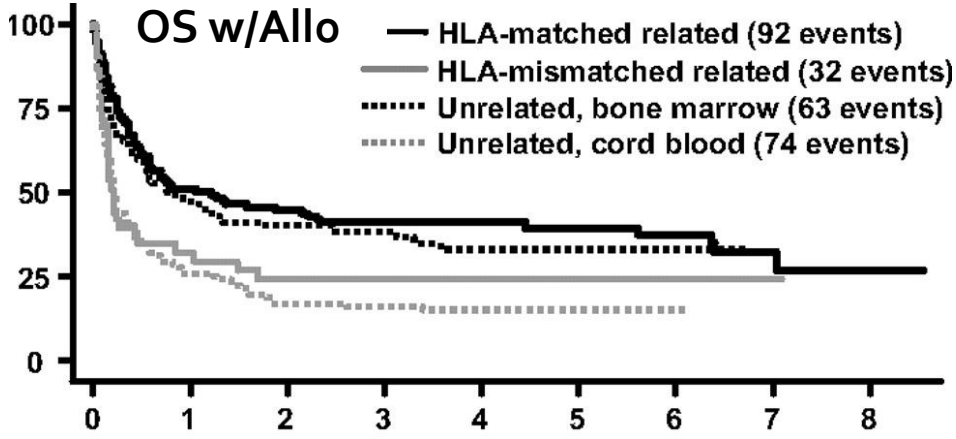




2/3-3/4 are Stage I/II

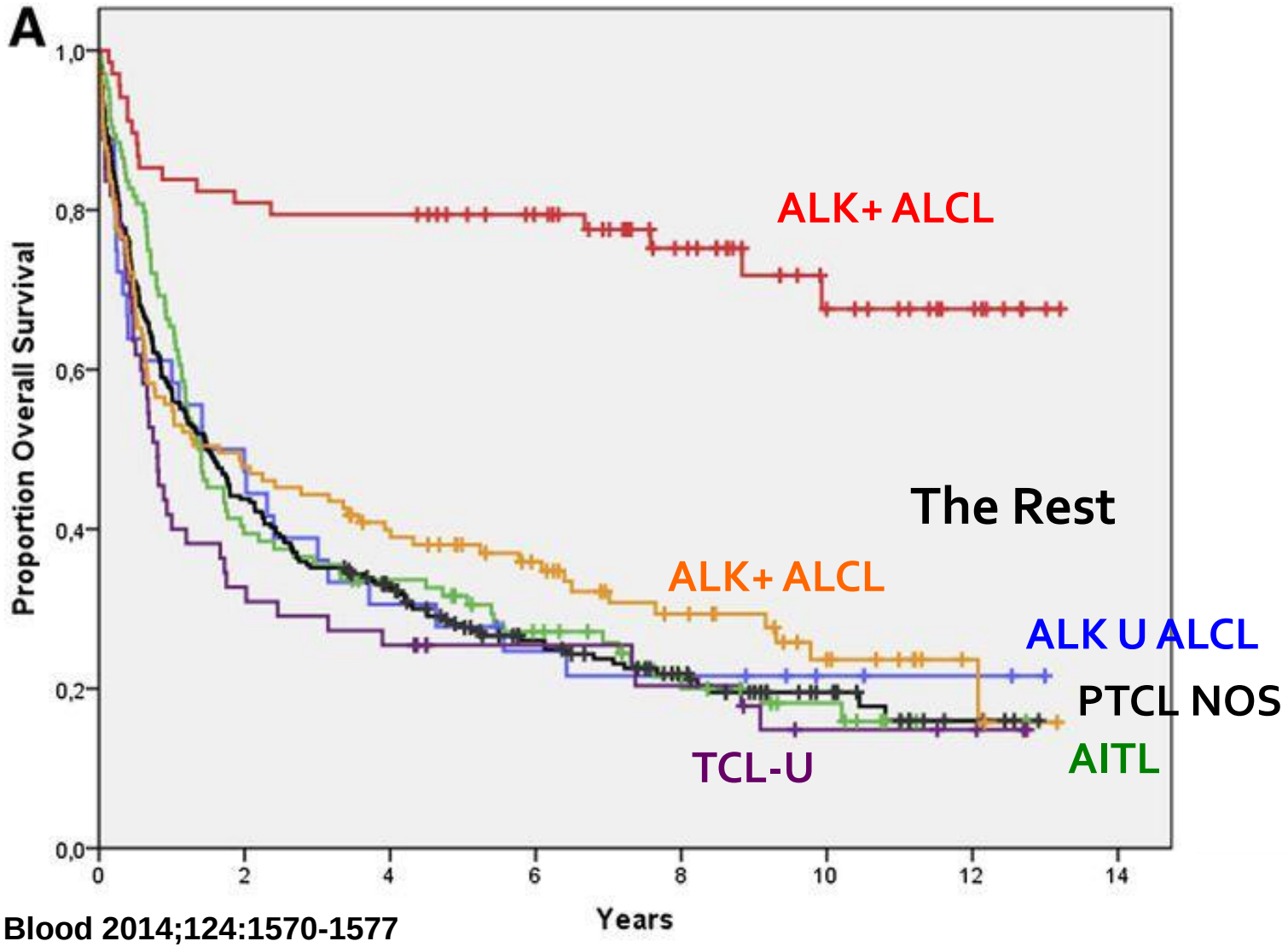
ATLL





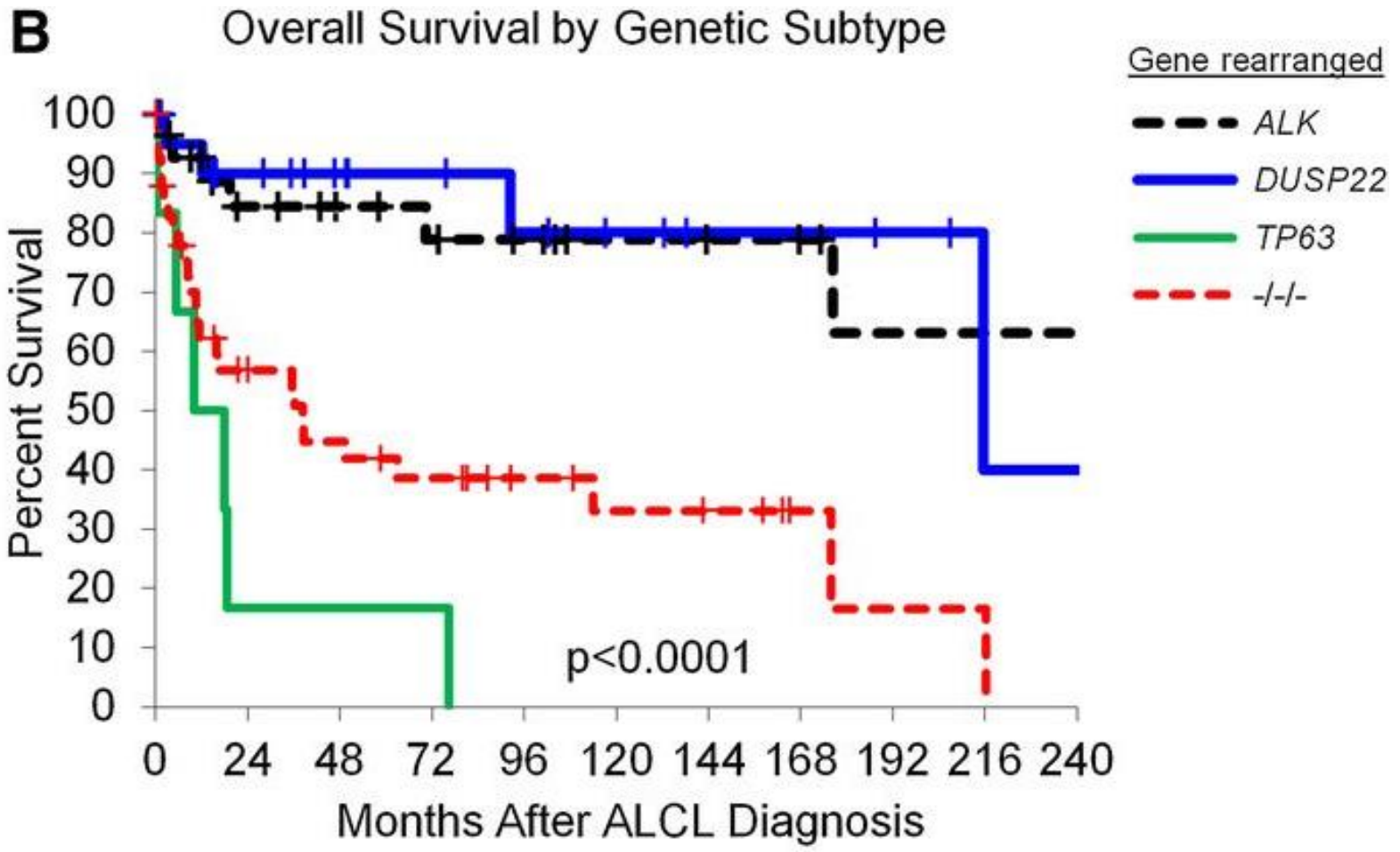
Kim et al, JCO 2000, Lunning et al (MSKCC), Phillips, A et al, Cancer 2010, Hishizawa M et al. Blood 2010

TCL: Overall Survival
Swedish National Registry



Ellin F et al. Blood 2014;124:1570-1577

ALCL OS based on genetic subtype



Parrilla Castellar E R et al. Blood 2014;124:1473-1480

PTCL: Outcomes by Subtype and IPI

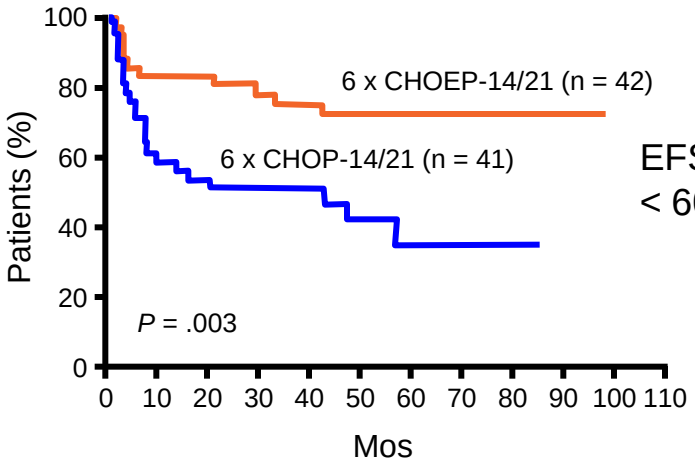
PTCL subtype	5-year OS*	5-year FFS*	5-year OS by IPI	
			0-1	4-5
PTCL-NOS				
IPTCL (1990-2002)	32%	20%	50%	11%
BCCA (1981-2000)	35%	29%	64%	22%
AITL				
IPTCL	32%	18%	56%	25%
BCCA	36%	13%	NR	NR
ALCL ALK–				
IPTCL	49%	36%	74%	13%
BCCA	34%	28%†	66%†	25%†
ALCL ALK+				
IPTCL	70%	60%	90%	33%
BCCA	58%	28%†	66%†	25%†

Savage et al Annals of Oncology 15: 1467–1475, 2004

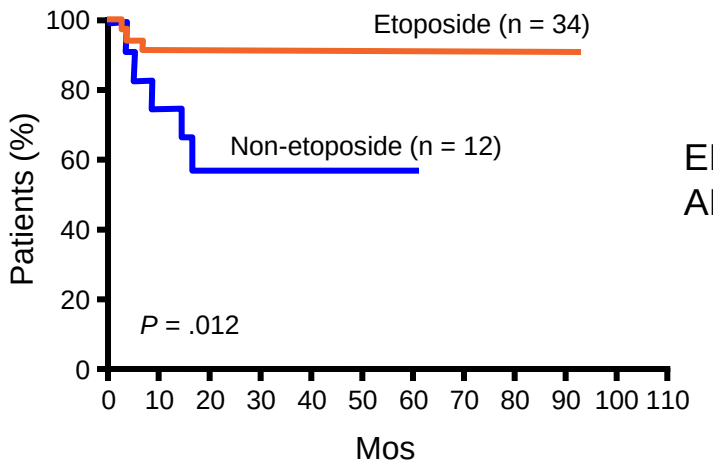
Today, how many PTCL patients are cured?

- For some subtypes many or most
  - Localized NK/T
  - ALK+ ALCL/ ALK- with DUSP22 rearranged?
- For some subtypes very few
  - ATLL
- For the most common subtypes
  - About 20-30% with CHOP

Adding Etoposide to CHOP: German Prospective High-Grade NHL Studies

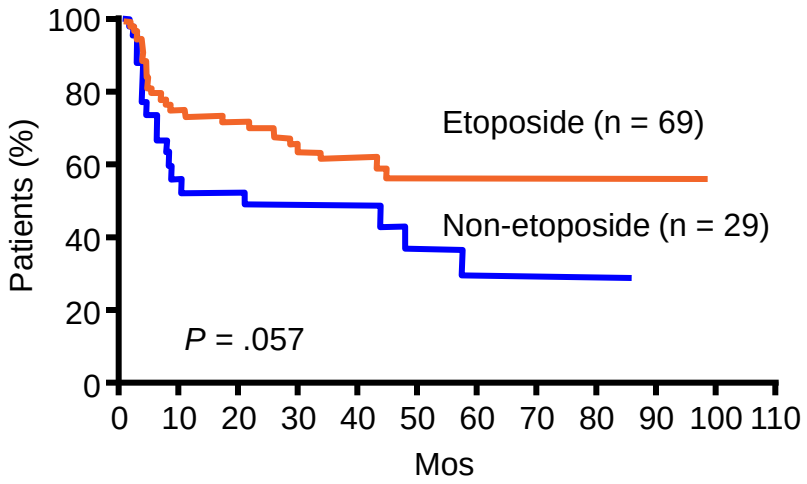


EFS, aged < 60 yrs



EFS, ALCL, ALK+

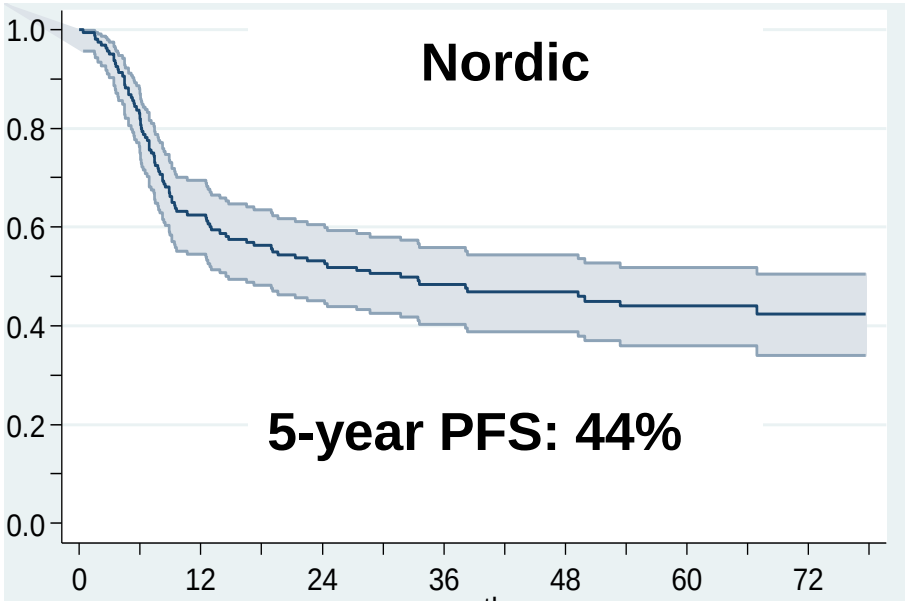
PTCL Subtype	n
ALCL, ALK+	78
ALCL, ALK-	113
PTCL-NOS	70
AITL	28
Other	31
Total	320

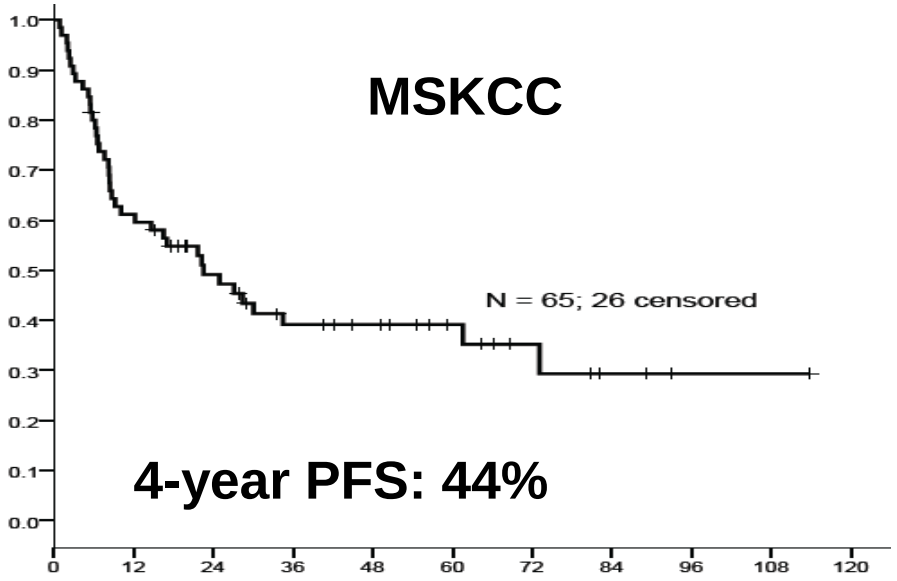


EFS, other subtypes

Schmitz N, et al. Blood. 2010;116:3418-3425.

Autologous stem cell transplantation as first-line therapy in PTCL





Swedish Registry

	Auto-SCT ITT (n = 128)	Non–auto-SCT (n = 124)
5 yr OS	48%	26%
5 yr PFS	41%	20%

1 D'Amore, et al. *J Clin Oncol.* 2012;30(25):3093-3099

2 Mehta et al. CLLM 2013 Dec;13(6):664-70

3 Ellin F et al. Blood 2014;124:1570-1577

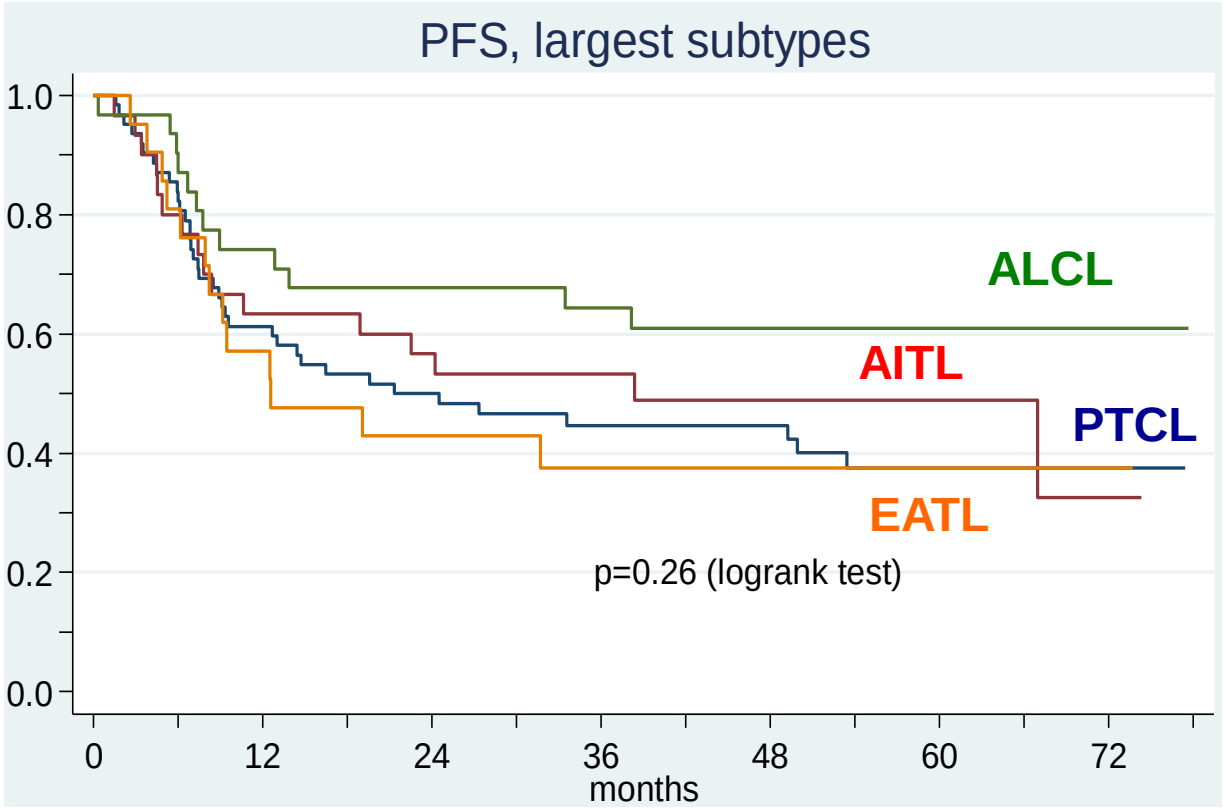
CHOEP-ASCT Nordic Lymphoma Group

ND PTCL, N = 166
Med Age-57 years
ALK+/ALCL excluded

→ **CHOEP x 4-6** →

CR
PR

→ **HDT/ASCT**
N = 115
90 CR 3-month post



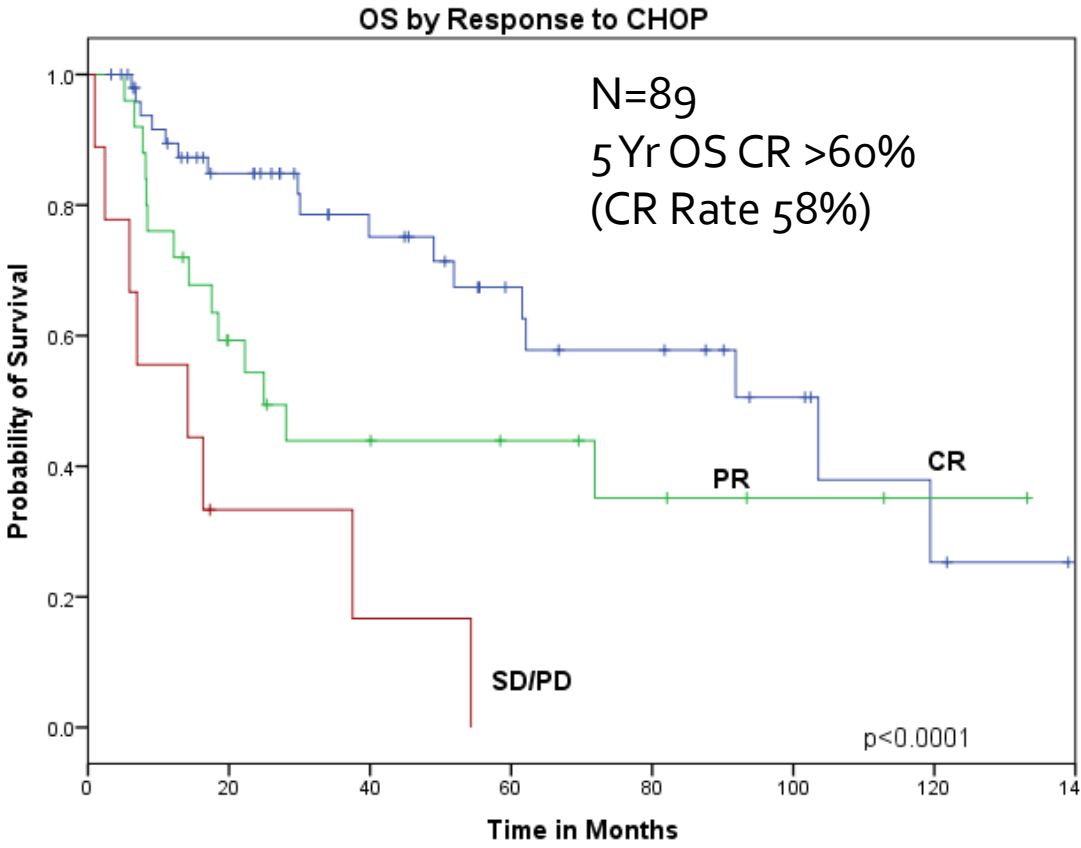
Subtype	5 yr PFS	5 yr OS
ALCL -	61	70
AITL	47	52
PTCL	38	49
EATL	38	48

D'Amore et al. JCO 2012 Sep 1;30(25):3093-9

Survival: Intent to Transplant: By Response to CHOP/CHOEP

PFS by Interim PET

N=61	% EFS		
	2 yrs	3 yrs	5 yrs
CR – IPI 0-2	**78.9**	**66.2**	**66.2**
CR – IPI >2	**52.7**	**52.7**	**52.7**
No CR IPI 0-2	**32.3**	**21.5**	**21.5**
No CR - High IPI >2	**26.7**	**10.0**	**10.0**



Mehta et al. Clin Leuk Lym 2013 Dec;13(6):664-70
Updated MSKCC 2015

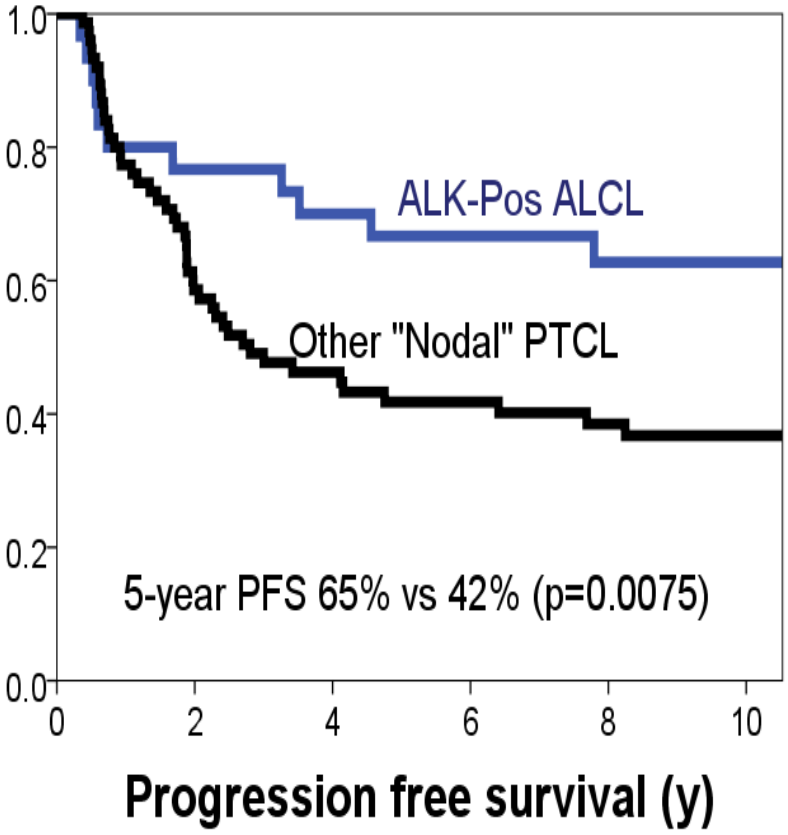
BCCA CHOP for PTCL, Analysis of Subjects with CR

	BCCA	MSKCC
Clinical Features	N=75	N=65
Age > 60 **Median Age (years)**	56.5 (23-67)	58 (22-75)
Male sex	61%	65%
IPI Risk Group **0-1 Low** **2-3** **4-5 High**	 20 (27%) 42 (56%) 13(17%)	 11 (17%) 45 (69%) 9 (14%)

Lavoie et al. J Clin Oncol 32:5s, 2014 a8555
Mehta et al. Clin Leuk Lym 2013 Dec;13(6):664-70

PFS According to Response

BCCA, CR by CT



MSKCC, PFS by Interim PET

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Lavoie et al. J Clin Oncol 32:5s, 2014 a8555
Mehta et al. Clin Leuk Lym 2013 Dec;13(6):664-70

Prospective multicenter studies in PTCL CHOP vs CHOEP

	CHOP[1]	CHOEP[2]
N	83	118
PTCL	39%	39%
AITL	33%	19%
ALCL	16%	19%
IPI		
1	14%	28%
2	35%	32%
3	45%	19%
4-5	6%	21%
Med Age	47	57
ORR	**79%**	**82%**
CR	**39%**	**51%**

1)Reimer, P. et al et al. JCO vol 27, Jan 2009
2)D'Amore, et al. *J Clin Oncol.* 2012;30(25):3093-3099

Today, how many PTCL patients are cured?

- For the most common subtypes
  - About 20-30% with CHOP
  - Maybe 40+% with more aggressive strategies
  - As high as 60% in CR1 pts with consolidation

- For the most common subtypes
  - How many are "eligible" for aggressive approaches?

Today, how many PTCL patients are cured?

- MSKCC
  - Approximately 2/3 of newly dx PTCL treated with intent to consolidate with ASCT
  - CR Rate 58%

- Swedish Registry report
  - Subset analysis: age <70, the most common subtypes
  - Approximately 50% treated with with intent to consolidate with ASCT

- More real world?

Histologic subtype distribution

according to LOCAL/CENTRAL DIAGNOSIS*

** if review not possible or not yet done local diagnosis is reported*

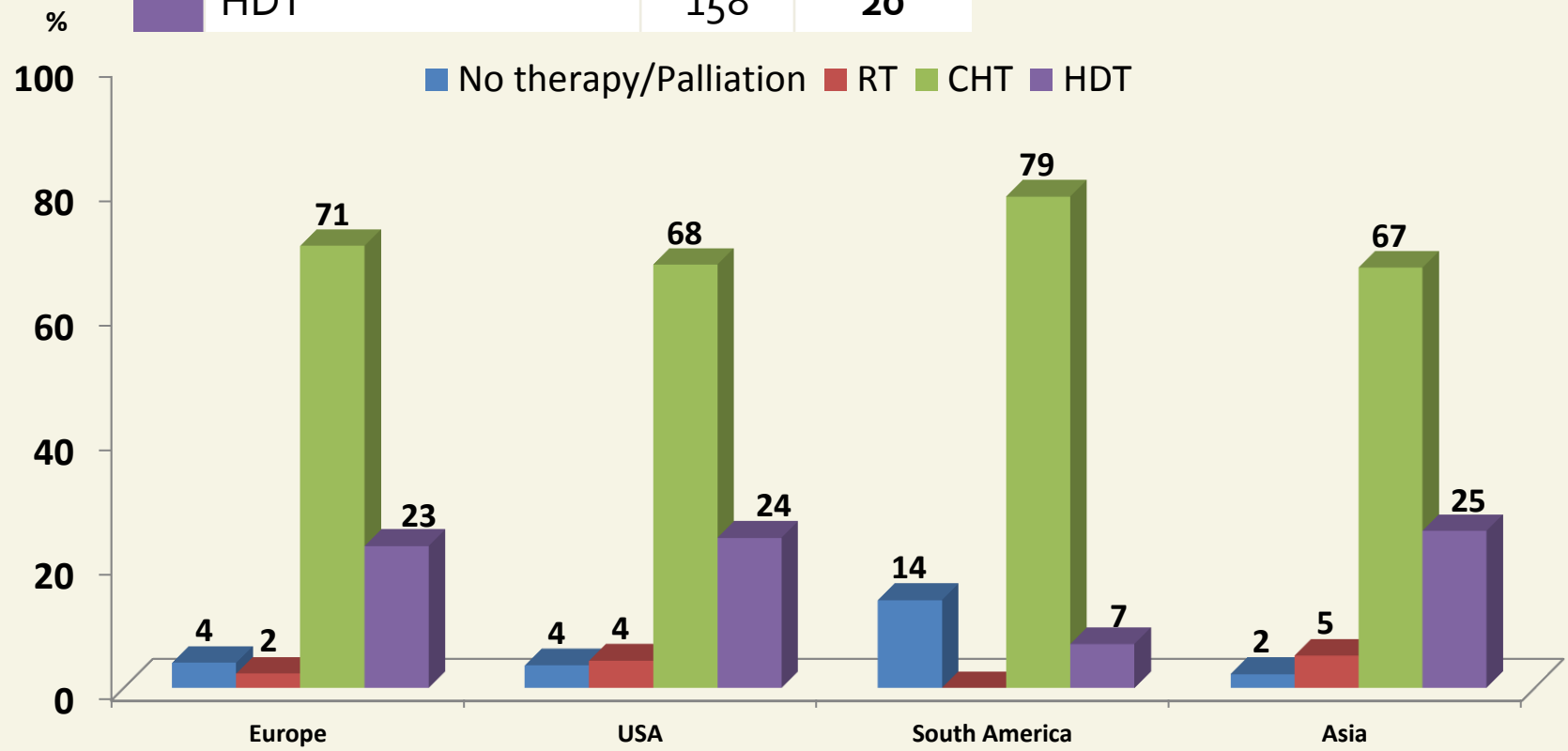
	N	%
PTCL-NOS	347	37
AITL	164	17
ALCL, ALK-	140	15
ALCL, ALK+	70	7
NKTCL	102	11
Enteropathy- type T-cell lymphoma	44	5
Hepatosplenic T-cell lymphoma	16	2
Subcutaneous panniculitis-like T-cell lymphoma	17	2
Peripheral gamma-delta T-cell lymphoma	10	1
Unclassifiable NK/T-cell	33	3
	943	100

Courtesy of Monica Bellei and Massimo Federico

Type of Therapy by Region

	N	%
No Tx/palliation	46	6
RT	21	3
CHT	564	71
HDT	158	20

★ Includes
- ALL subtypes
- Tx in CR1/PR1 + Relapse



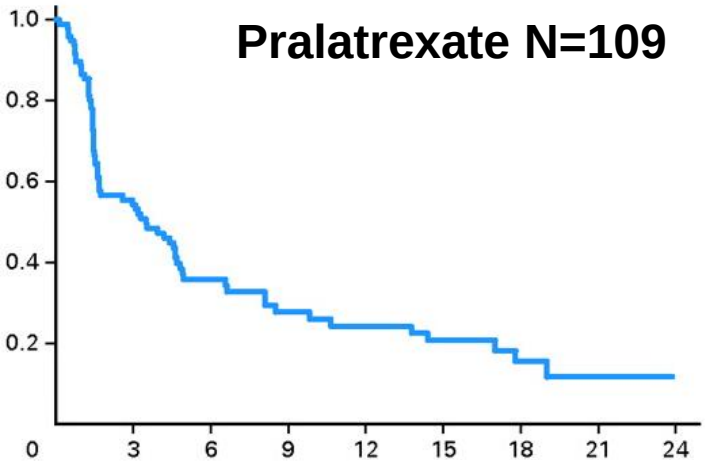
Courtesy of Monica Bellei and Massimo Federico

Today, how many PTCL patients are cured?

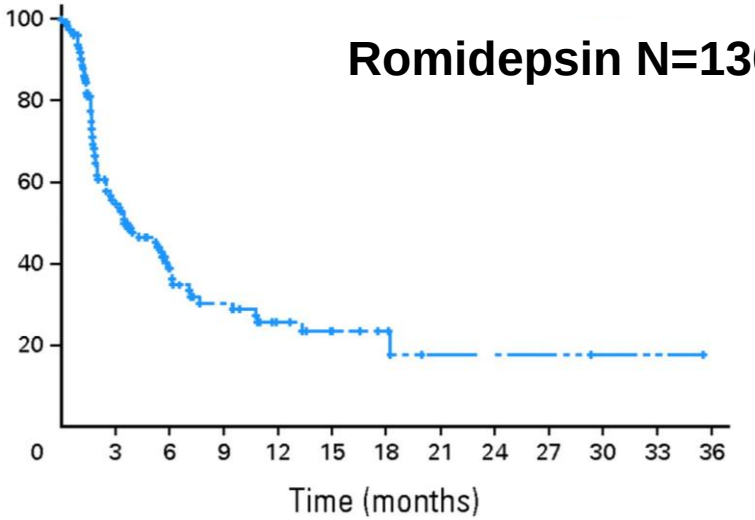
- For the most common subtypes
  - How many are "eligible" for aggressive approaches?
- In a motivated referral center->50%
- In the "real" world-maybe only 20% or less?
- Are patients cured at relapse?

Progression Free Survival: Relapsed/Refractory PTCL

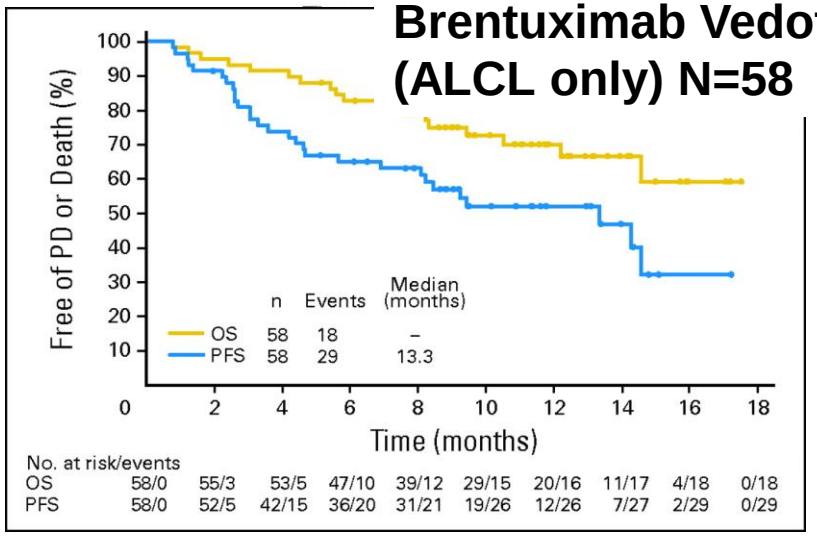
Pralatrexate N=109



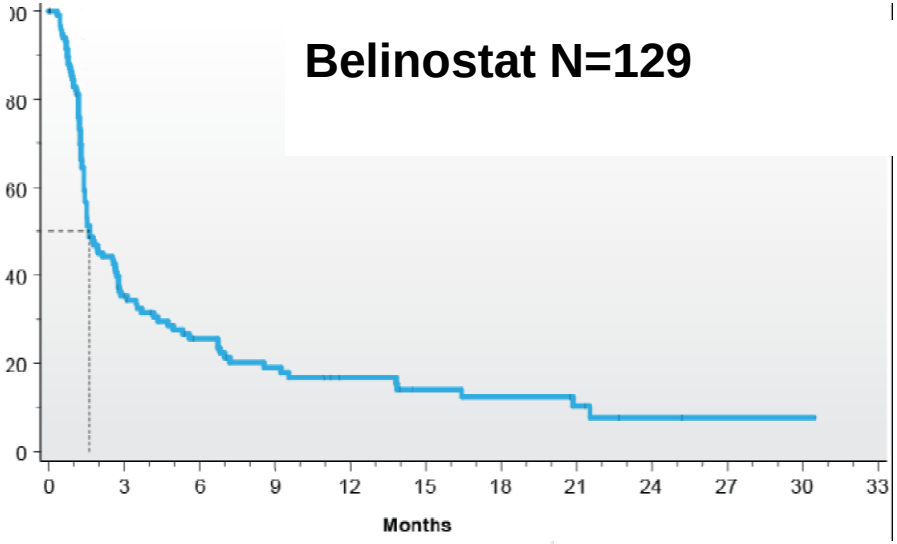
Romidepsin N=130



Brentuximab Vedotin (ALCL only) N=58



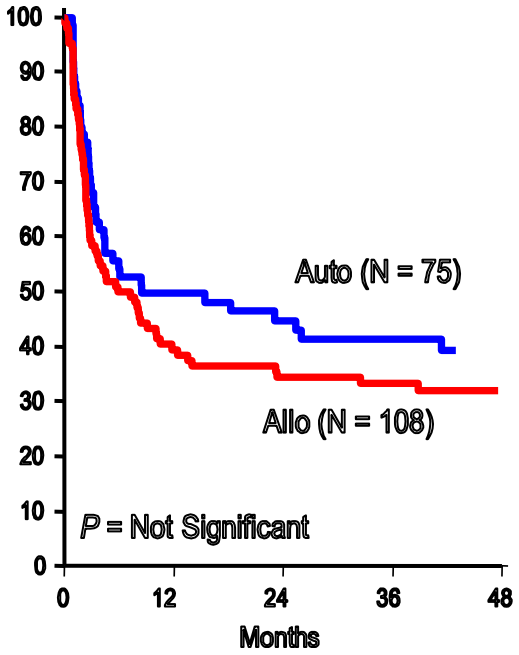
Belinostat N=129



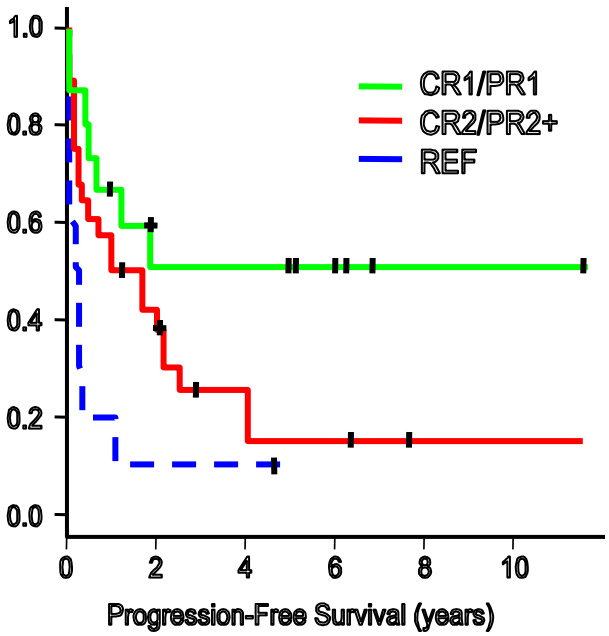
O'Connor OA, et al. *J Clin Oncol*. 2011;29:1182-1189, Pro B et al. JCO 2012;30:2190-2196
Coiffier B, et al. *J Clin Oncol*. 2012;30 :631-636, O'Connor OA et al ASCO 2013

Autologous Transplantation in Relapsed PTCL

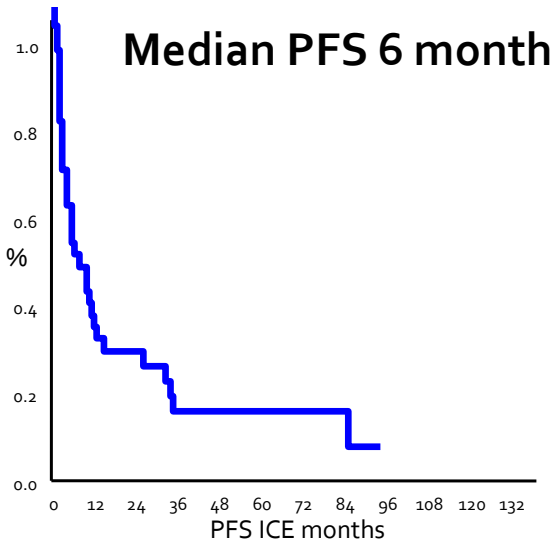
CIBMTR: PFS excluding pt in CR1 (Most patients ALCL)



The Stanford Experience Auto



MSKCC



Response to ICE 70% (28/40)

Received ASCT 68% (27/40)

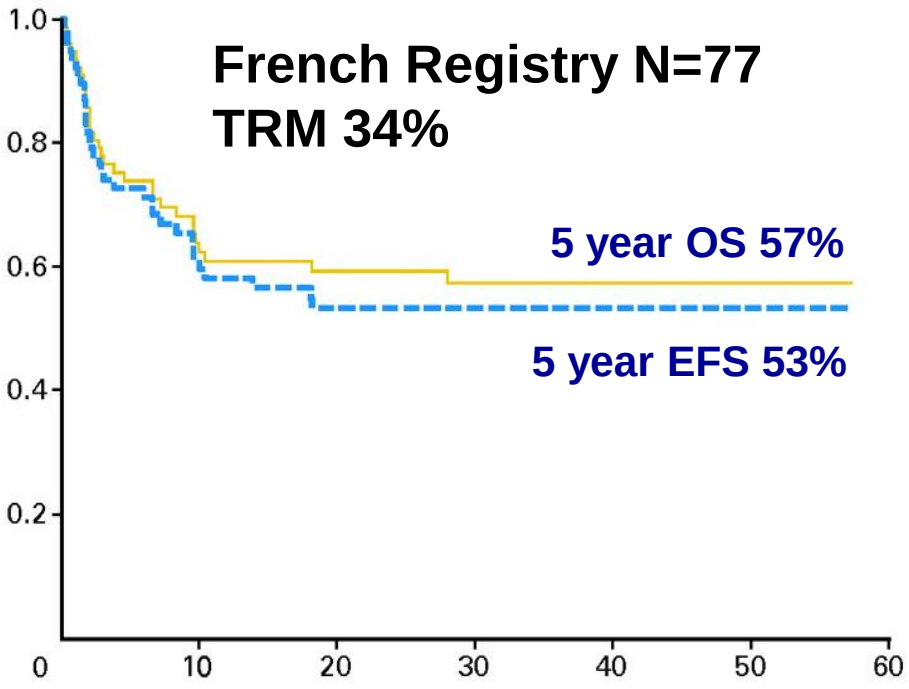
- Benefits are unclear. Most single institution studies show low PFS rates while registry data suggests better outcomes

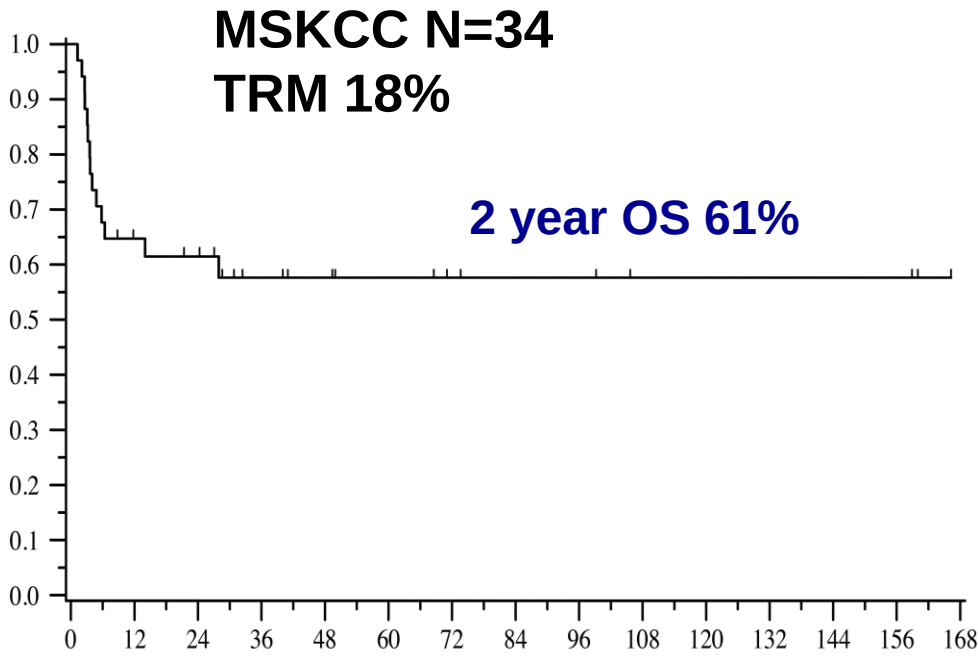
Smith S, et al. JCO September 1, 2013 vol. 31 no. 25 3100-3109

Chen AI, et al. *Biol Blood Marrow Transplant.* 2008;14(7):741-747.

Horwitz et al, ASH Annual Meeting Abstracts 2005;106:2679.

Retrospective Analyses of Allogeneic Stem-cell Transplantation for PTCL





Le Gouill, S. et al. J Clin Oncol; 26:2264-2271 2008
Goldberg J. et al. Leuk Lymphoma. 2012 Jan 31

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  - Localized NK/T
  - ALK+ ALCL, ?DUSP22 rearranged ALK-
- For some subtypes very few
  - ATLL
- For the most common subtypes
  - About 20-30% with CHOP
  - Maybe 40+% with more aggressive strategies
  - As many as 60% of those who achieve a CR?
- At Relapse
  - Some, but not too many