

# Encouraging experience in the treatment of nasal type extranodal NK/T-cell lymphoma in a non-Asian population

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## Objectives:

Extranodal NK/T-cell lymphoma, nasal type (EN-NK/TCL-NT) is rare in the Western world while prevalent in the Far East (1,2). Previous analyses of Caucasian patients with EN-NK/TCL-NT showed poor prognosis (3,4), markedly worse than outcomes of patients with localized disease reported from the Far East (5-7). We launch the current EN-NK/TCL-NT retrospective study at MSKCC to give a better understanding in an uncommon area of its current presentation and treatment outcome.

## Methods:

We retrospectively collected data of consecutive EN-NK/TCL-NT patients (pts) diagnosed and treated at MSKCC from January 1996 to the end of 2014. 43 pts were identified, including 10 (23%) Asian and 33 (76%) Caucasian or other non-Asians pts. The majority of pts (65%) presented an upper aerodigestive tract lesion.

## Results:

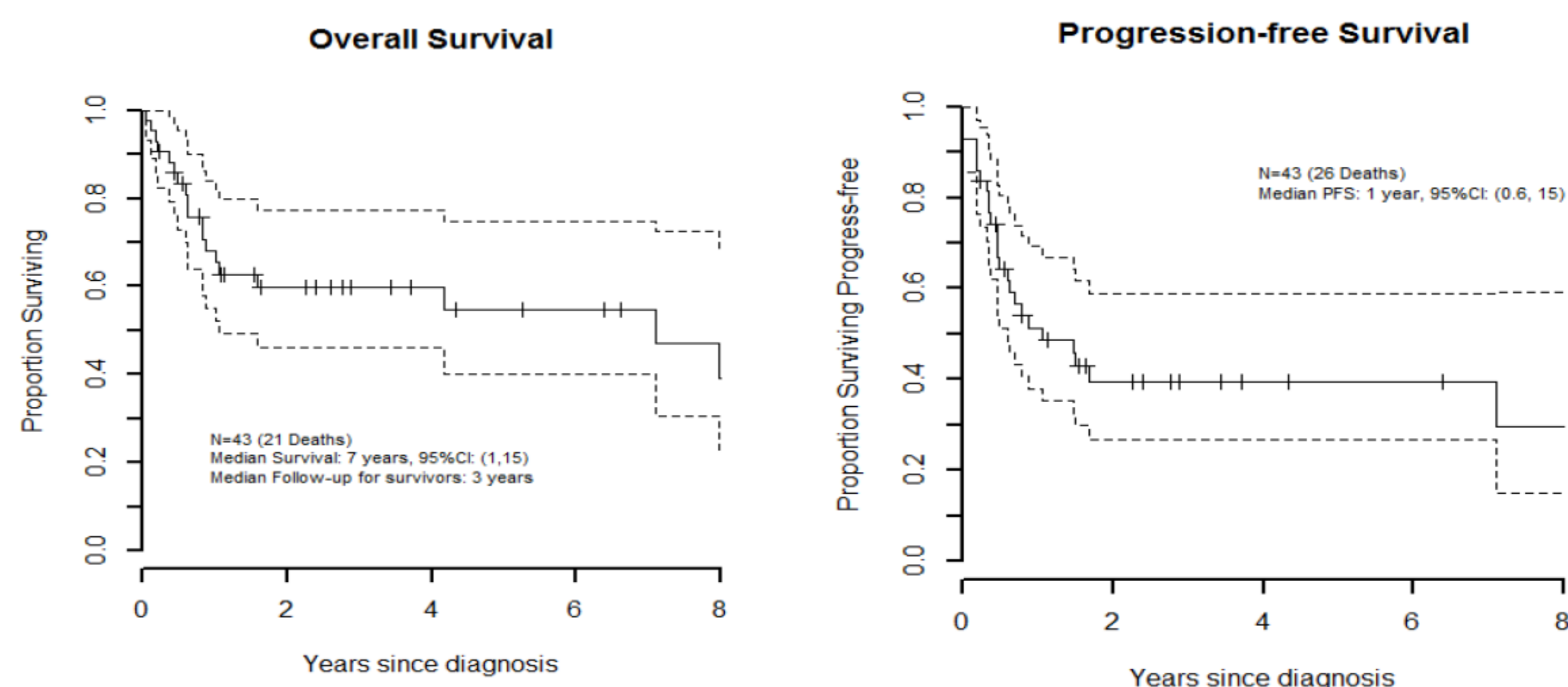
26 (60%) were at an early-stage and of those, 20 received accelerated CHOP or modified-SMILE (m-SMILE) chemotherapy followed by involved site radiotherapy (ISRT). 17 pts (40%) presented at an advanced-stage, and of those, 10 received chemotherapy alone, 4 were given combined modality treatment, 7 also received stem cell transplantation (SCT). After 1-3 cycles of chemotherapy, 19/37 pts (51%) were in CR and 11/37 (30%) in PR. With additional chemotherapy (11 cases), 2 PR pts converted to CR, while 3 PR pts had disease progression. CR rate was significantly higher in the m-SMILE group than in the acc-CHOP group (80% vs. 30%, p= 0.015). Only 2 (7%) among 30 irradiated pts developed an in-field failure; another 3 pts (10%) had disease failures at adjacent sites. With a 2.7-year median follow-up among survivors (range, 0.2-11), the 2-year OS and PFS were 60% and 40% respectively. Those with localized disease had significantly higher 2y-OS (87% vs. 21%, p<0.0001) and 2y-PFS (56% vs. 18%, p=0.0004) than those with advanced-stage. 80% of disease progressions occurred within 1 year after diagnosis. Early stage, negative bone marrow biopsy, IPI risk scores of 0 or 1, and ECOG PS of 0 or 1 were significantly associated with improved OS and PFS. Ethnicity (Asian vs. Caucasian) had no prognostic difference.

Table 1: Demographic and clinical characteristics

	N=43	N (%)
Age at diagnosis		
Median years (Range)	53	(24-81)
Gender		
Male	24	(56%)
Female	19	(44%)
Race		
Asian	10	(23%)
Non-Asian	33	(76%)
Primary Site		
Nasal Cavity	23	(53%)
Waldeyer's Ring	5	(12%)
Other	15	(35%)
B-symptoms at diagnosis		
Not present	35	(81%)
Present	6	(14%)
No information	2	(5%)
BM biopsy		
Negative	35	(81%)
Positive	3	(7%)
Not done or N/A	5	(12%)
Stage		
I-II	26	(61%)
III-IV	17	(39%)
ECOG PS		
PS 0	15	(35%)
PS 1	22	(51%)
PS ≥2	6	(14%)
Elevated LDH		
Normal	22	(51%)
Elevated	10	(23%)
Unknown	11	(26%)
IPI score		
0	17	(40%)
1	11	(26%)
2	5	(12%)
3	6	(14%)
4	4	(9%)

Table 2: Prognostic factors for OS and PFS

Characteristic	Overall Survival			Progression-Free Survival			
	Total	Number Died	2-year OS	Logrank p	Number Progressed or Died	2-year PFS	Logrank p
Race							
Asian	10	4	66%	0.76	6	35%	0.80
Non-Asian	33	17	58%		20	41%	
Age at diagnosis							
less than 55	25	13	52%	0.48	14	41%	0.90
55 or older	18	8	72%		12	39%	
Gender							
Male	24	11	60%	0.41	13	52%	0.23
Female	19	10	61%		13	22%	
Stage							
I, II	26	8	87%	<.0001	12	56%	0.0004
III, IV	17	13	21%		14	18%	
Bsymptoms at diagnosis							
Not present/ No information available	37	19	59%	0.74	24	36%	0.34
Present	6	2	63%		2	67%	
Bone Marrow Biopsy							
Negative	35	15	69%	<.0001	20	44%	<.0001
Positive	3	3	0%		3	0%	
Primary Site							
UADT	28	11	73%	0.25	13	51%	0.006
Other	15	10	36%		13	18%	
IPI score							
0 or 1 risk score	28	10	79%	0.0006	14	50%	0.005
2 or higher	15	11	27%		12	20%	
Elevated LDH							
Normal	22	8	69%	0.07	12	45%	0.31
Elevated	10	6	34%		6	35%	
ECOG PS							
PS 0 or 1	37	16	67%	<.0001	20	46%	<.0001
PS 2 or higher	6	5	17%		6	0%	



## Conclusions:

EN-NK/TCL-NT in non-Asians shared similar disease characteristics and treatment outcomes with pts of Asian origin. Short course m-SMILE chemotherapy induced a high response rate. ISRT of 45Gy administered immediately following chemotherapy demonstrated excellent local control and was well-tolerated. Most early-stage pts have achieved durable remissions. However, advanced-stage disease still remains challenging even with current regimens, with frequent progression and high mortality.

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