



Introduction

- Lymph node yield (LNY) has been shown to be a predictor of survival outcomes in mucosal head and neck squamous cell carcinoma (SCC) and has been proposed as a possible quality metric in head and neck cancer care.¹⁻⁴
- The impact of LNY and optimal LNY threshold in patients undergoing neck dissection for cutaneous SCC has not been investigated.

Materials and Methods

- A retrospective chart review of two academic medical centers was performed of patients with cutaneous SCC of the head and neck who underwent a wide local excision with concurrent neck dissection between 2010 and 2020.
- Main outcome measures were two-year overall survival (OS) and disease-free survival (DFS).
- LNY was analyzed as a binary variable (<18, ≥18) based on previous studies.¹⁻⁴
- LNY was also analyzed based on pathologic submission by separate neck levels vs. single specimen.
- Data was analyzed using Fisher's exact test and t-tests for categorical and continuous variables, respectively.

Figure 1. Mean LNY submitted to pathology comparing lymph nodes separated by neck level vs. combined in a single packet

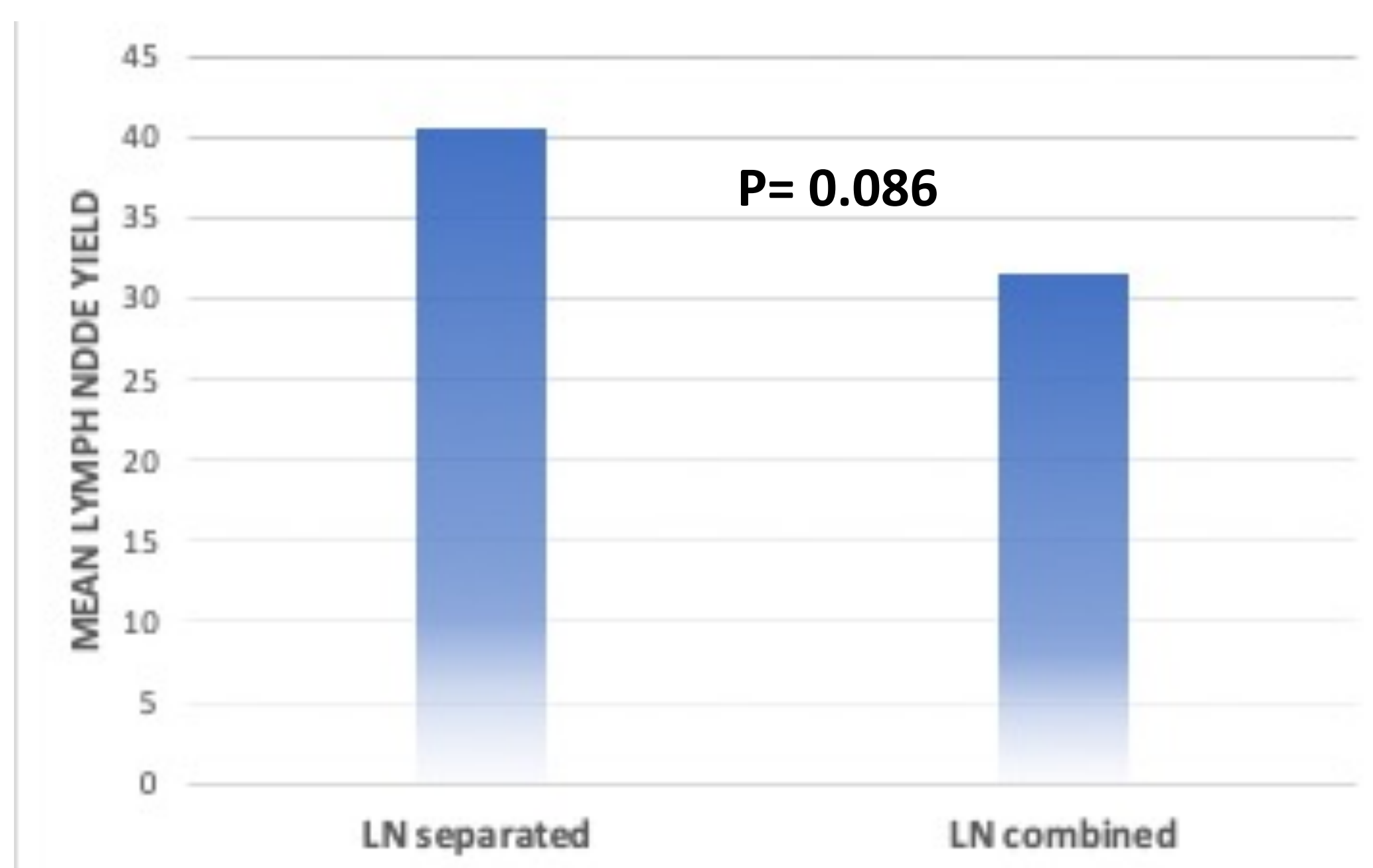
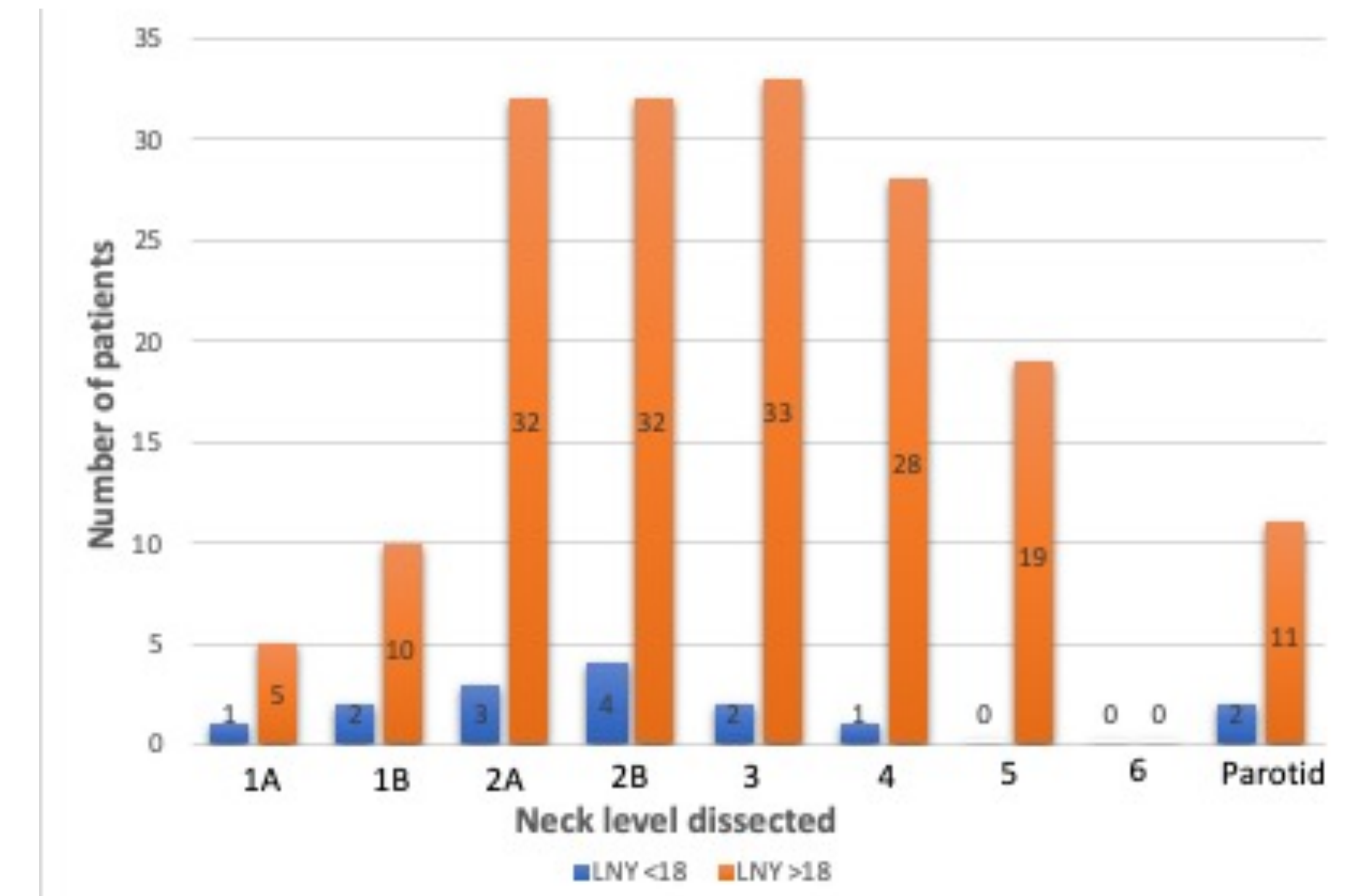


Table 1. Univariate analysis of demographic, clinical, and pathology data stratified by nodal processing

Variable	Categories	All (n=38)	LN separated (n=19)	LN combined (n=19)	p-value*
Age	Mean (std)	75 (9.6)	77 (7.6)	73 (11.5)	0.142
Sex	Male	31 (81.6%)	17 (89.5%)	14 (73.7%)	0.209
	Female	7 (18.4%)	2 (10.5%)	5 (26.3%)	
BMI (kg/m ²)	Mean (std)	29.5 (5.4)	29.0 (4.8)	30.0 (6.0)	0.597
Smoking History	Current	5 (13.2%)	1 (5.3%)	4 (21.1%)	0.301
	Former	18 (47.4%)	9 (27.4%)	9 (47.4%)	
	Never	15 (39.5%)	9 (47.4%)	6 (31.6%)	
Alcohol History	Current	11 (28.9%)	4 (21.1%)	7 (36.8%)	0.29
	Former	10 (26.3%)	7 (36.8%)	3 (15.8%)	
Immunosuppression	No	28 (73.7%)	14 (73.7%)	14 (73.7%)	1
	Yes	10 (26.3%)	5 (26.3%)	5 (26.3%)	
History of Head and Neck Radiation	No	30 (78.9%)	17 (89.5%)	13 (68.4%)	0.111
	Yes	8 (21.1%)	2 (10.5%)	6 (31.6%)	
Clinical T stage	T1	5 (13.2%)	3 (15.8%)	2 (10.5%)	0.656
	T2	22 (57.9%)	10 (52.6%)	12 (63.2%)	
	T3	4 (10.5%)	1 (5.3%)	3 (15.8%)	
	T4	4 (10.5%)	3 (15.8%)	1 (5.3%)	
	Unknown	3 (7.9%)	2 (10.5%)	1 (5.3%)	
Clinical N stage	N0	22 (57.9%)	9 (47.4%)	13 (68.4%)	0.073
	N1	5 (13.2%)	5 (26.3%)	0 (0%)	
	N2	6 (15.8%)	2 (10.5%)	4 (21.1%)	
	N3	1 (2.6%)	1 (5.3%)	0 (0%)	
Type of Neck Dissection	Unilateral	35 (92.1%)	17 (89.5%)	18 (94.7%)	0.547
	Bilateral	3 (7.9%)	2 (10.5%)	1 (5.3%)	
	Scalp	5 (13.2%)	5 (15.6%)	0 (0%)	
Primary cutaneous site	Forehead/temple	3 (7.9%)	1 (5.3%)	2 (10.5%)	0.234
	Cheek	11 (28.9%)	6 (31.6%)	5 (26.3%)	
	Ear/preauricular	7 (18.4%)	3 (15.8%)	4 (21.1%)	
	Neck	5 (13.2%)	1 (5.3%)	4 (21.1%)	
	Periocular	1 (2.6%)	0 (0%)	1 (5.3%)	
	Lip	2 (5.3%)	1 (5.3%)	1 (5.3%)	
	postauricular	3 (7.9%)	2 (10.5%)	1 (5.3%)	
Lymph node yield (per side)	Mean (std)	36.2 (16.1)	40.6 (15.5)	31.5 (15.8)	0.086
Total Positive Nodes	Range	3-70	4-70	3-60	0.367
	Mean (std)	2.4 (4.5)	2.2 (3.2)	2.7 (5.7)	
Margins	Negative	36 (92.3)	19 (100%)	17 (89.5%)	0.487
	Positive	1 (2.6%)	0 (0%)	1 (5.3%)	
	Unknown	1 (2.6%)	0 (0%)	1 (5.3%)	
Extranodal extension (ENE)	Yes	13 (34.2%)	8 (42.1%)	5 (15.6%)	0.656
	No	20 (52.6%)	9 (47.4%)	11 (57.9%)	
	Unknown	5 (13.2%)	2 (10.5%)	3 (15.8%)	
Lymphovascular invasion (LVI)	Yes	6 (7.9%)	1 (5.3%)	5 (15.6%)	0.264
	No	28 (73.7%)	16 (84.2%)	12 (63.2%)	
	Unknown	4 (10.5%)	2 (10.5%)	2 (10.5%)	
Perineural invasion (PNI)	Yes	13 (34.2%)	7 (36.8%)	6 (31.6%)	1.0
	No	21 (55.3%)	10 (52.6%)	11 (57.9%)	
	Unknown	4 (10.5%)	2 (10.5%)	2 (10.5%)	
Adjuvant Treatment	None	16 (42.1%)	8 (42.1%)	8 (42.1%)	0.835
	Chemotherapy	1 (2.6%)	0 (0%)	1 (5.3%)	
	Radiotherapy	13 (34.2%)	6 (31.6%)	7 (36.8%)	
	CRT	8 (21.1%)	5 (15.6%)	3 (15.8%)	

Figure 2. Frequency of neck level dissected comparing patients with a LNY < 18 or ≥ 18



Results

- Thirty-eight patients met inclusion criteria.
- The most frequent anatomic site was the cheek (n=11, 28.9%).
- 33 patients (86.8%) had ≥ 18 LNY.
- There were no differences observed among age, sex, BMI, smoking and alcohol history, immunosuppression, history of head and neck radiation, number of neck levels dissected, and clinical T and N stage.
- Lymph nodes (LNs) were separated by neck level in 19 patients (50%), whereas 19 (50%) had LNs submitted as a single specimen to pathology.
 - There was a trend towards patients who had their LN packet separated having a higher mean LNY (40.6 vs. 31.5, P = 0.086).
- Two-year OS and DFS was 80% and 100% among patients with LNY < 18 and 57.6% and 60.6% among patients with LNY ≥ 18.

Conclusion

Preliminary results suggest that LNY may not be predictive of OS and DFS in patients undergoing neck dissection for cutaneous SCC. Submitting nodal packets as separate specimens by neck level may increase LNY.

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