



BC Cancer Agency

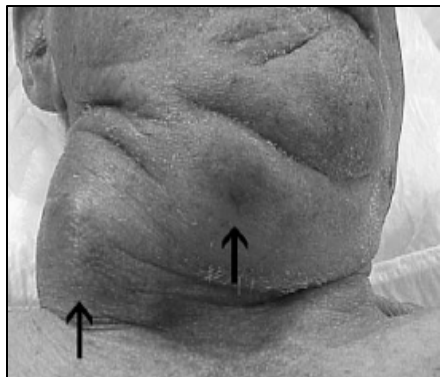
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Narrow Time Window Between Tumor Resection and Regional Failure: Can We Salvage the Necks and Lives?

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AGENDA

- 1. Introduction**
- 2. Objectives**
- 3. Methodology**
- 4. Results**
- 5. Conclusions**



ORAL CANCER AND REGIONAL DISEASE

➤ **Oral squamous cell carcinoma (OSCC)**

- Diagnosed late
- Aggressive
- Poor prognosis
- 62% of 5-year survival
- High incidence of local-regional recurrence

➤ **Regional Nodal Disease**

- Occurs in 6% to 46% of OSCCs

PROBLEMS

First Diagnosis



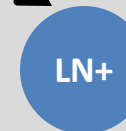
Radical Neck Dissection

Follow-up

Survival

- Pathological Prognostic Markers
- Preoperative Imaging

Health professionals' clinical judgment



Elective Neck Dissection

Yes	Cost QoL Morbidity	Survival
No	Survival	Poor outcome QoL Mortality



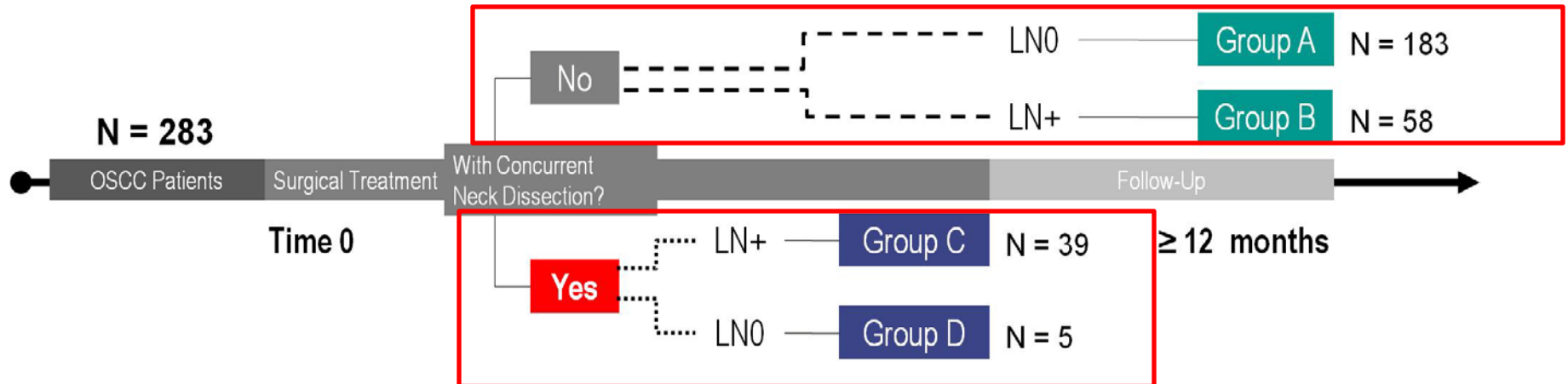
OBJECTIVES

- **Identify markers that can better predict tumor behaviour at the time of diagnosis**
 - To review demographics and clinicopathological information
 - To categorize patients according to their nodal status at and after surgery
 - To determine the impact of nodal status and survival

METHODOLOGY

Patient: 1) Diagnosed between 1995 to 2008
 2) Received intent-to-cure surgery
 3) 12-month follow-up

- Demographics
- Risk factors
- Primary tumor site
- Nodal status at/post-surgery
- Disease free survival
- Concurrent neck dissection
- Nodal status at and post-surgery





1. Patient Demographics and Nodal Status

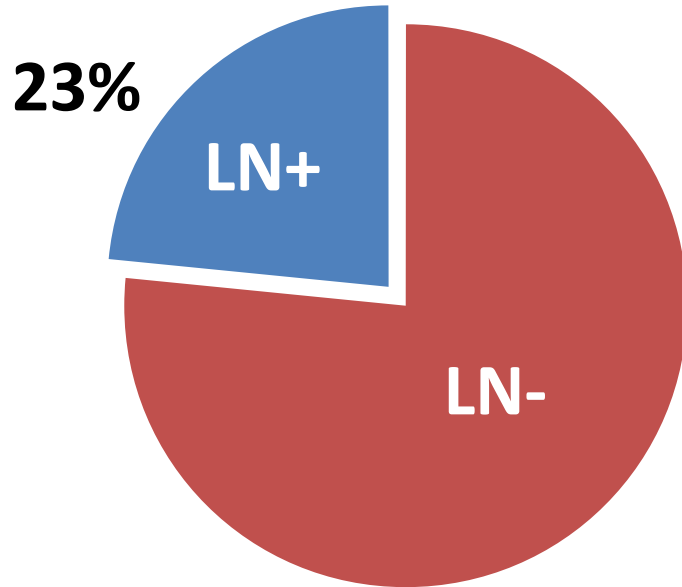
Patient demographics and clinicopathological values.

	Total	Group A	Group B	Group C	Group D	P value
No. of Patients, n (%)	283	183 (65)	56 (20)	39 (14)	5 (2)	
Gender, n (%)						
Male	179 (63)	112 (61)	35 (63)	29 (74)	3 (60)	0.4868
Female	104 (37)	71 (39)	21 (38)	10 (26)	2 (40)	
Age (yr), (n (%))						
<45	39 (14)	27 (15)	4 (7)	6 (15)	2 (40)	0.1299
45-60	89 (31)	56 (55)	17 (31)	16 (41)	-	
>60	157 (55)	100 (30)	35 (62)	19 (49)	3 (60)	
Smoking Habit, n (%)						
Non-Smoker	82 (29)	53 (29)	17 (30)	9 (23)	3 (60)	0.3840
Ever-Smoker	201 (71)	130 (71)	39 (70)	30 (77)	2 (40)	
Primary Tumor Site*, n (%)						
High Risk	181 (64)	110 (60)	38 (68)	30 (77)	3 (60)	0.3341
Intermediate Risk	35 (12)	23 (13)	8 (14)	4 (10)	-	
Low Risk	67 (24)	50 (27)	10 (18)	5 (39)	2 (40)	

Categorical variables analyzed by Fisher's exact test. Continuous variables analyzed by *t*-test. $P \leq 0.05$ was considered significant (two-sided).



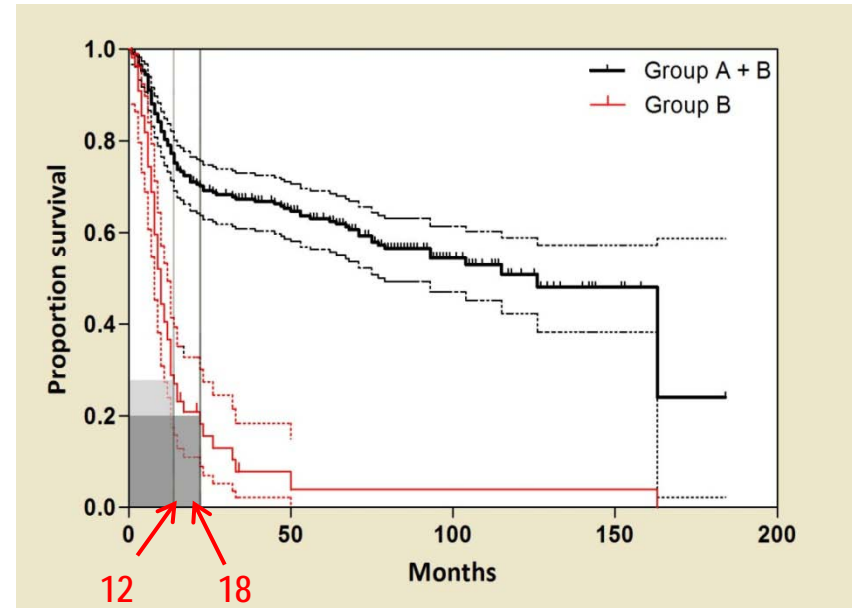
2. Cervical lymph node disease



Total, n = 239

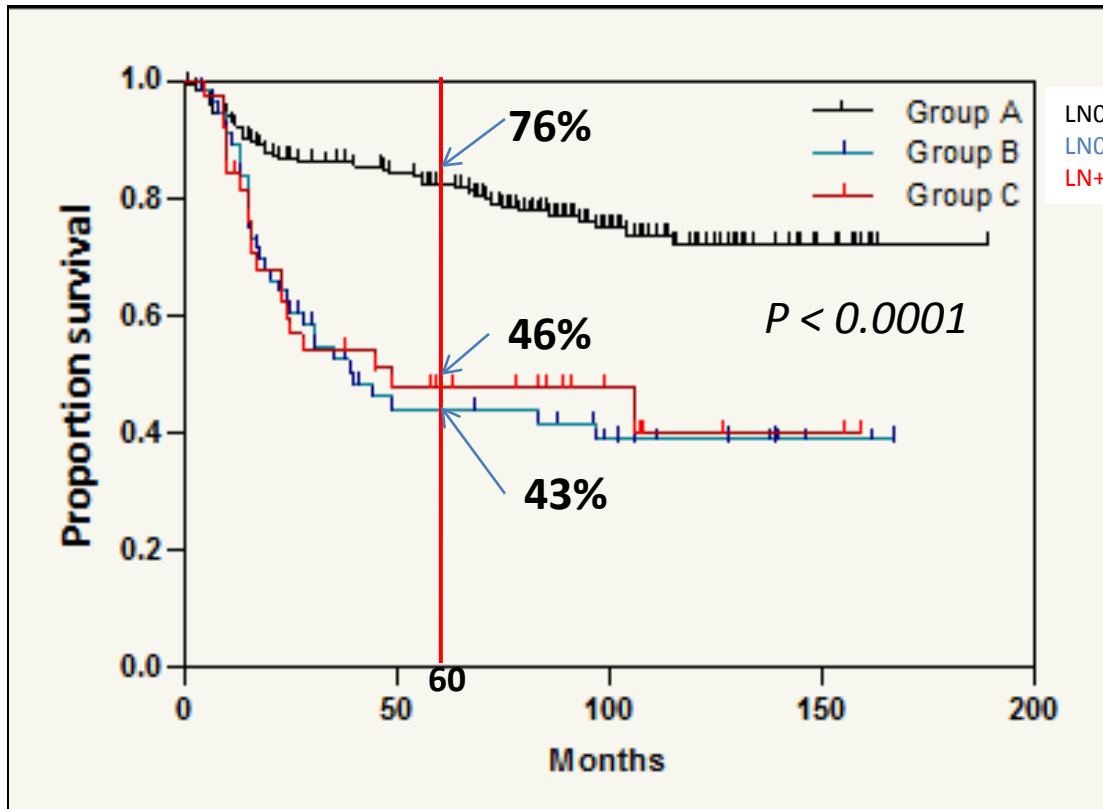
LN-, n = 183

LN+, n = 56



Time-to-regional disease in LN0 groups (A and B). Analyzed by Kaplan Meier method. Differences in time to-event analyzed by log-rank test.

3. Nodal Status vs. Survival (Time-to-Death or Last Follow-Up)



LNO at / post-surgery, no neck dissection, LNO
LNO at surgery, no neck dissection, LN+
LN+ at surgery, neck dissection, LNO

Time-to-survival in the three LNO-at-surgery groups. Analyzed by Kaplan Meier method. Differences in time to-event analyzed by log-rank test.



CONCLUSIONS

- **Nodal status is highly associated with patients' survival disregarding its timing during the progression of the disease.**
- **A subgroup of LN0 at surgery develops regional failure at follow-up within a short time-frame after surgery.**



FUTURE STUDIES

➤ **Histopathological prognostic factors**

- Tumor size, depth of invasion, pattern of invasion, quantitative pathology

➤ **Genomic Studies**

- Copy number alteration: amplification and deletion
- Methylation and gene expression profiles

➤ **In situ validation in tissue microarray using IHC and FISH**



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