

DISSECTION OF THE PARATRACHEAL NODES IN ADVANCED LARYNGEAL CANCER: DOES IT MAKE A DIFFERENCE

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ABSTRACT

Background: Advanced laryngeal cancer treated with surgery and postoperative radiotherapy (RT) has a higher cure and survival rate compared to the non-surgical modality alone. Neck nodes are the most important single prognostic factor for survival.

Aim of the Study: To compare two groups of patients treated with surgery and postoperative RT in years 1996-2003 and 2004-2010 and impact of paratracheal node dissection on loco regional recurrence and survival.

Methods: Retrospective review of the medical documentation and National Cancer Registry was done for patients with advanced laryngeal cancer treated with surgery and postoperative radiation at University Medical Center Maribor. Two cohorts of patients were compared: those treated from 1996 to 2003 (group A) and those treated between 2004 and 2010 (group B). From 2006 on postoperative chemotherapy was available in indicated.

In a group A 67 patients and in group B 83 patients were analysed.

Results: Overall 64% of patients in group 1 were treated with total laryngectomy and 36% with partial laryngectomy compared to 62% of patients who were treated with total laryngectomy and 38% with partial laryngectomy in group 2. In 16% of the patients with advanced disease, thyroidectomy and paratracheal node dissection was performed in group 1. On the other hand in group 2 thyroidectomy with paratracheal node dissection was done in 30% of patients. An overall 5 year survival was 50% in group 1 and 65% in group 2. 10 year overall survival was 34% in group 1 and 43% in group 2. Five-year disease specific survival was 78% and 94% and 10 year specific survival was 75% and 88% for group 1 and group 2 respectively. The main cause for locoregional failure was peristomal recurrence with incidence 12% vs. 3.6% for group 1 and 2 respectively.

Conclusion: There is a significant difference in specific survival between two groups (78% vs 94% at 5 years). Lymph node metastasis are the single most important factor for survival in Cox regression model (p<0.05). Addressing paratracheal nodes in advanced laryngeal cancer is important in decreasing the peristomal recurrence rate.

METHODS

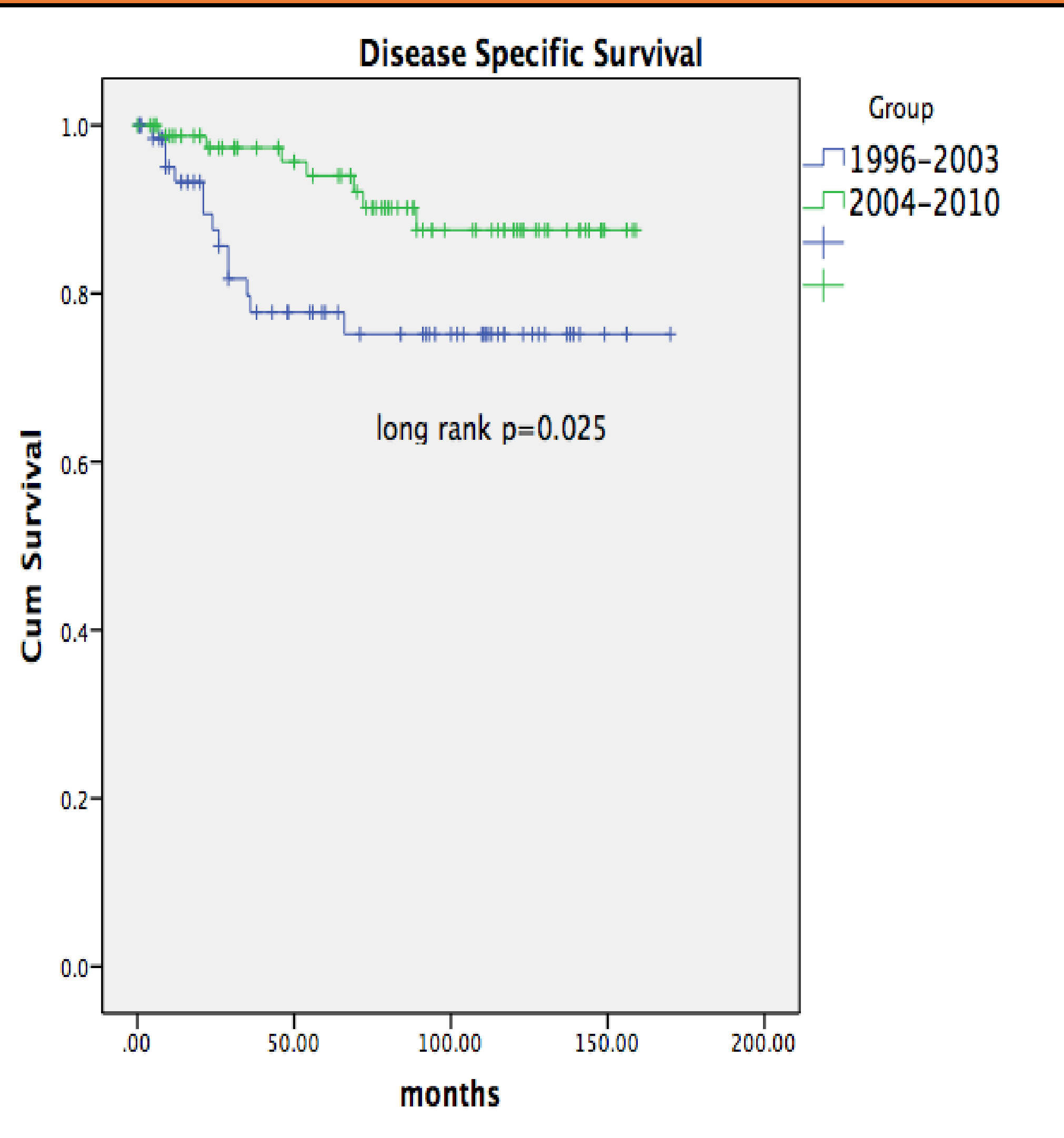
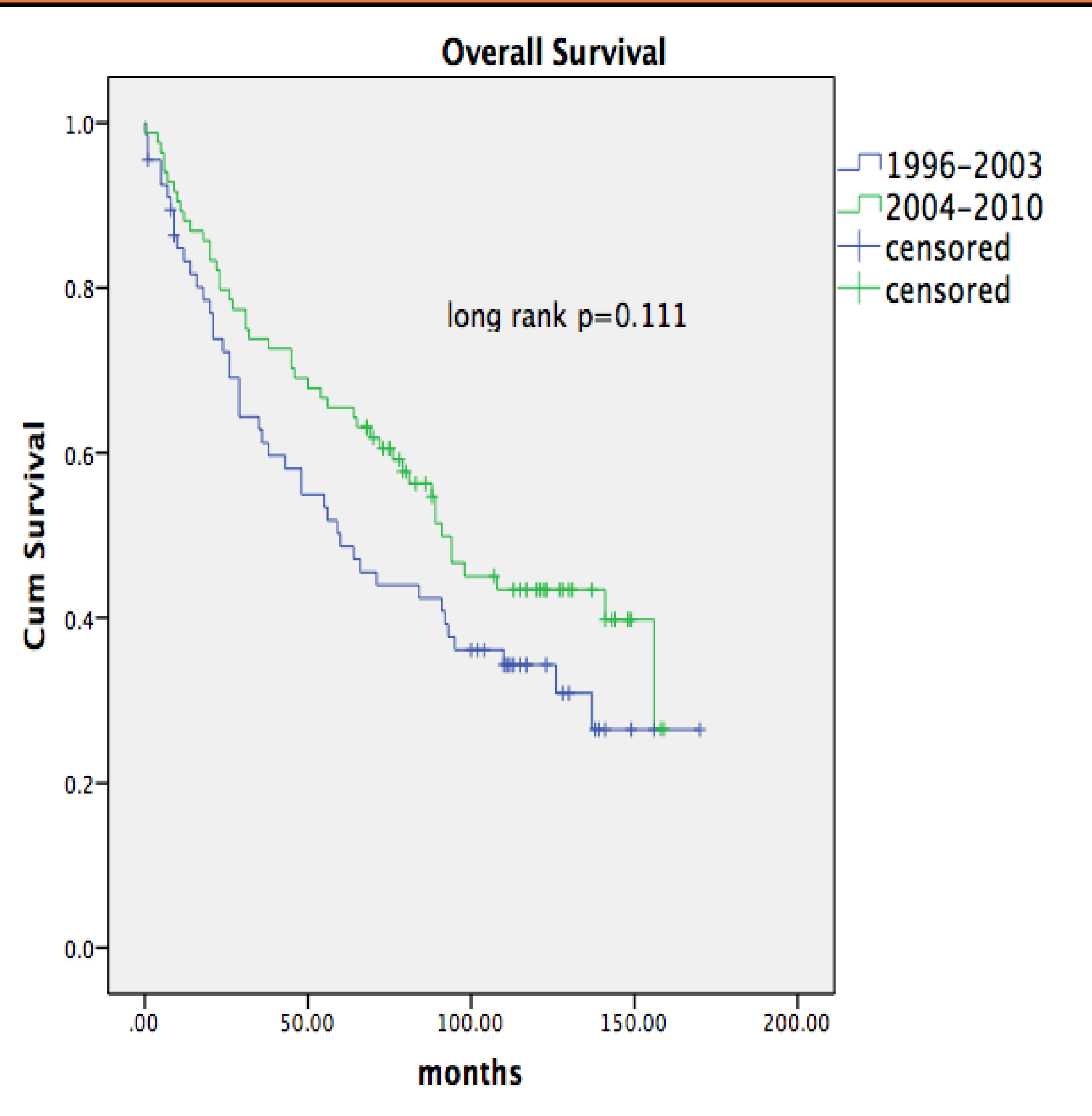
We retrospectively reviewed charts of patients admitted to ENT Head and Neck Surgery department in University Medical Center Maribor with histologically confirmed laryngeal cancer from January 1996 to December 2010. All patients were offered surgical option except those with T1 glottic cancer, who were unfit for surgery, who refused surgery, with inoperable loco-regional disease and/or distant metastases. Postoperative radiation was given if indicated. From 2006 on postoperative chemotherapy was available in indicated individuals.

Two cohorts of patients were compared: those treated from 1996 to 2003 (group A) and those treated between 2004 and 2010 (group B). We analysed 150 patients, 67 in group A and 83 in group B.

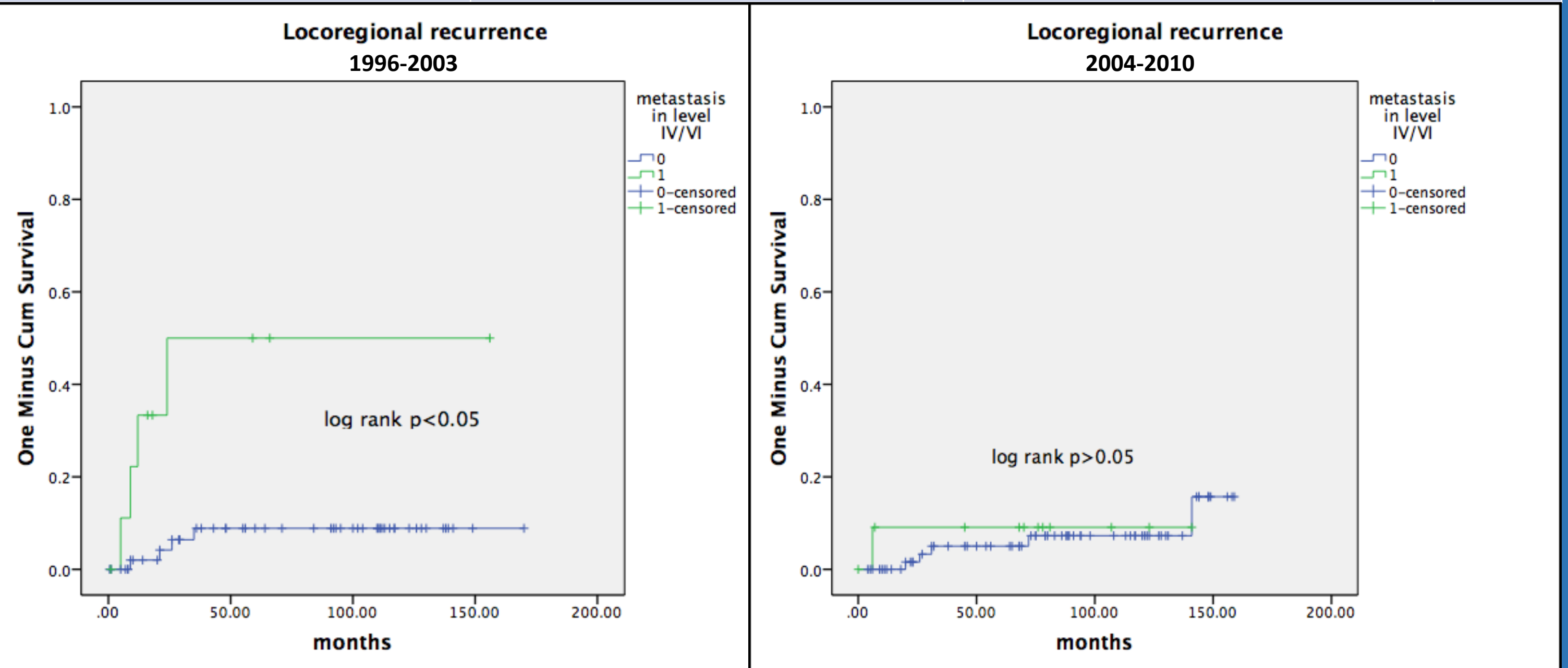
We included the following risk factors: lymph node in regions IV and VI, lymph node larger than 2cm, extracapsular spread, perineural spread, preoperative tracheotomy.

RESULTS

Overall 64% of patients in group 1 were treated with total laryngectomy and 36% with partial laryngectomy compared to 62% of patients who were treated with total laryngectomy and 38% with partial laryngectomy in group 2. In 16% of the patients with advanced disease, thyroidectomy and paratracheal node dissection was performed in group 1. On the other hand in group 2 thyroidectomy with paratracheal node dissection was done in 30% of patients. An overall 5 year survival was 50% in group 1 and 65% in group 2. 10 year overall survival was 34% in group 1 and 43% in group 2. Five-year disease specific survival was 78% and 94% and 10 year specific survival was 75% and 88% for group 1 and group 2 respectively. The main cause for locoregional failure was peristomal recurrence with incidence 12% vs. 3.6% for group 1 and 2 respectively.



Factor impacting survival	1996-2003 12/67 pts died of disease	2004-2010 7/83 pts died of disease	p
Locoregional Recurrence	10/67 pts (15%)	6/83 pts (7%)	ns
Peristomal Recurrence	8/10 pts (12% overall)	3/6 pts (3.6% overall)	<0.05
Local Recurrence	2/10 pts (3% overall)	0	
Distant Metastases	2 patients	1 patients	
Second Primary	7 (10%)	8 (9%)	



Risk factor	1996-2003 (p=)	2004-2010 (p=)
ECS	0.318	0.174
Preop. tracheotomy	0.028	0.421
Metastasis in level IV/VI	0.016	0.741
Perineural Spread	0.221	0.608
Lymph Node > 20 mm	0.422	0.989

CONCLUSION

There is a significant difference in specific survival in the two groups (78% vs 94% at 5 yrs). Peristomal regional recurrence contributed to the lower specific survival rate in group 1996-2003. In second group higher (16% vs 30%) dissection of the paratracheal nodes and thyroidectomy (with preop-tracheotomy). Lymph node metastasis are the single most important factor for survival. Lower level metastases are a statistically significant factor determining LR control in regression model. There is a statistically sig. increase in survival during the second period, but no single factor could be identified.