

An evaluation of the definition of close margin in squamous cell carcinoma of the oral tongue and its possible prognostic significance

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Background

- Fundamental aim of treatment of squamous cell carcinoma of the oral tongue (SCCOT): complete surgical resection with adequate margins. However: still no consensus on what constitutes an optimal negative margin.
- Royal College of Pathologists & National Comprehensive Cancer Network :
 - Free margin: > 5.0 mm - Close margin: 1.0 – 5.0 mm - Positive margin: <1.0 mm
- Tendency in recent studies: revising optimal margin cut-off from 5 mm to 2-3 mm.

Objective

To analyse our own data to define the optimal margin cut-off for oral tongue carcinoma's and validate the margin cut-off between 2 and 3 mm.

Methods

- Retrospective cohort, 165 patients, Netherlands Cancer Institute 1998-2015.
- Treated with primary surgery for SCCOT
- Uni- and multivariate Cox Proportional Hazards Regression analysis
 - All available margin cut-off's
 - Three groups based on original margin status (0.1-2.0 mm vs 2.1 – 5.0 mm vs ≥ 5.1 mm)

Results

- Of 165 patients: 35% (n=56): margin >5.0mm
- Using all available margin cut-offs in a cox-proportional hazard model: 2mm is the only significant margin cut-off in the univariate analysis. In multivariate analysis: not significant.
- Kaplan-Meier analysis:
 - Significant correlation between a margin of 0.01 – 2.0mm and local recurrence, compared to margin >2.1mm (p=0.023) (figure 1)
 - Using the predefined cutoffs of 2.0 and 5.0mm: significant benefit in LRFS for group 2.1-5.0mm compared to group with margins 0.01-2.0mm (p=0.015). (figure 2).

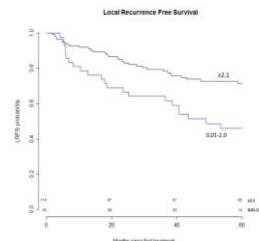


Figure 1 - Local Recurrence Free Survival (LRFS) by Margin Status in two groups (<2.1 mm vs > 2.1mm)

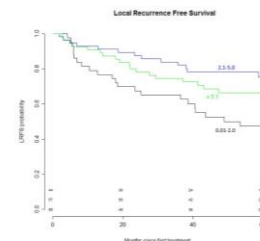


Figure 2 - Local Recurrence Free Survival (LRFS) by Margin Status in two groups (<2.1 mm vs > 2.1mm)

- Adjusting for adjuvant therapy and size tumor: patients with margins 2.1.-5.0mm margins: similar findings when compared with the univariate analysis.

Conclusion

- Our data suggest that the optimal margin cut-off associated with local recurrence is probably 2.0 mm.
- Margin from 0.1 to 2.0 mm is strongly associated with higher rate of local recurrence, however: It is not an independent predictor of LRFS.

This study underlines the increasing evidence suggesting to readjust the margin of 5.0mm to 2.0mm.