

# ACCURACY OF BRUSH BIOPSY METHOD IN ORAL MALIGNANCY DETECTION

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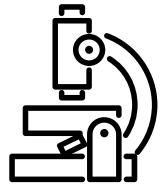
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# AIM



TO DETERMINE ACCURACY, SENSITIVITY AND SPECIFICITY OF THE ORAL EXFOLIATIVE CYTOLOGY PROCEDURE IN DETECTION OF PREMALIGNOUS AND MALIGNANT LESIONS IN COMPARISON WITH THE GOLD STANDARD SURGICAL BIOPSY



# MATERIAL AND METHODS

60 examinees divided into two groups, the first one consisted of 30 patients with a suspicious potentially malignant tissue changes and a second group of 30 patients with a previous history of malignant oral disease, selected under certain inclusion and exclusion criteria.



## Inclusion criteria:

- Have not received antibiotic therapy for the last two months
- If they had not undergone periodontal treatment at least two months ago
- Have not / or have not undergone radiot herapy or chemotherapy in the last three months



## Exclusion criteria:

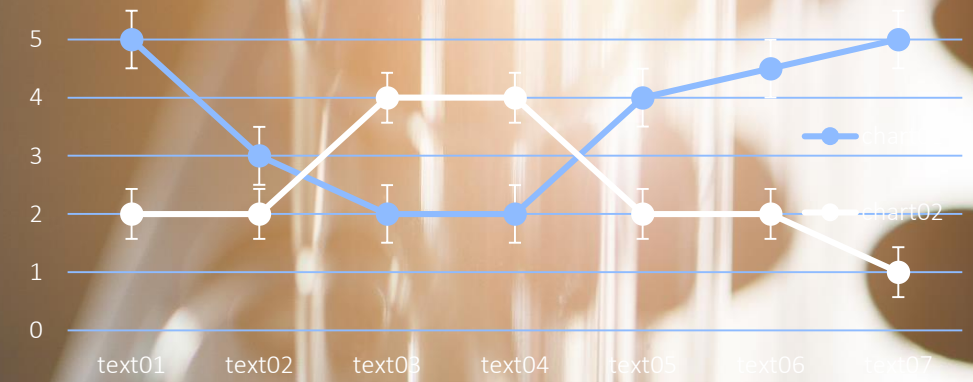
- Inability and reluctance to participate in the study protocol
- Gravity

All respondents who participated in the study signed a consent for voluntary participation in the study



Both, incisional and excisional biopsy were performed under local anesthesia, using scalpel, blade number 15, respecting all necessary preoperative preparations as well the known ratio of 3: 1 (length / width) of the biopsy specimen. The sample was then placed in a medium for fixation (10% neutral formalin solution) which will keep the tissue in shape asunder the action of bacteria would not occur physical or chemical damage. The fixation lasted from 6 to 36 hours, then slices with a thickness of 4-5 $\mu$  were made and stained with standard hematoxylin and eosin (H&E) staining. The results were read on a Leica light microscope.

The data base with results were later statistically analyzed using programs STATISTICA 7.1 and SPSS for Windows ver. 20.



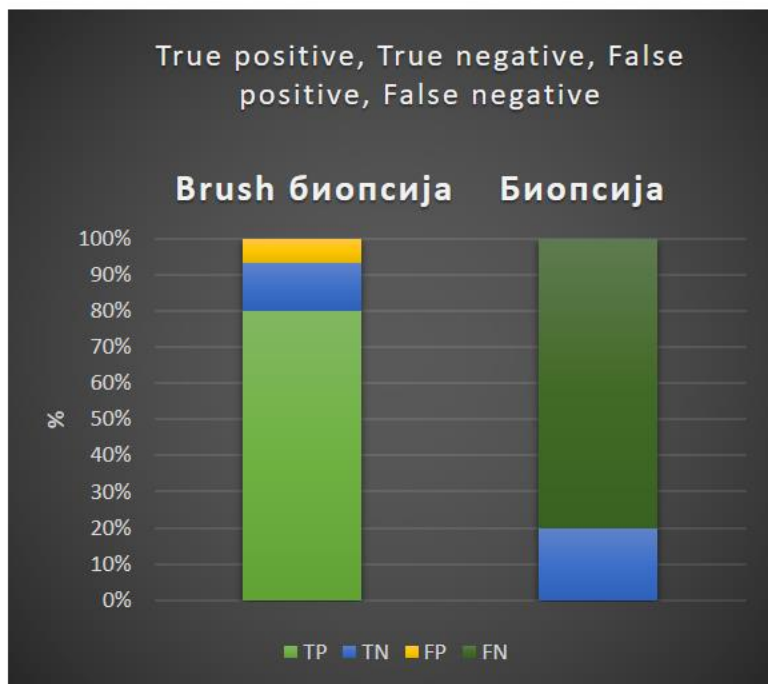


Brush биопсија	Биопсија	
	+	-
+	26	2
-	4	4
<b>Вкупно</b>	<b>30</b>	<b>6</b>

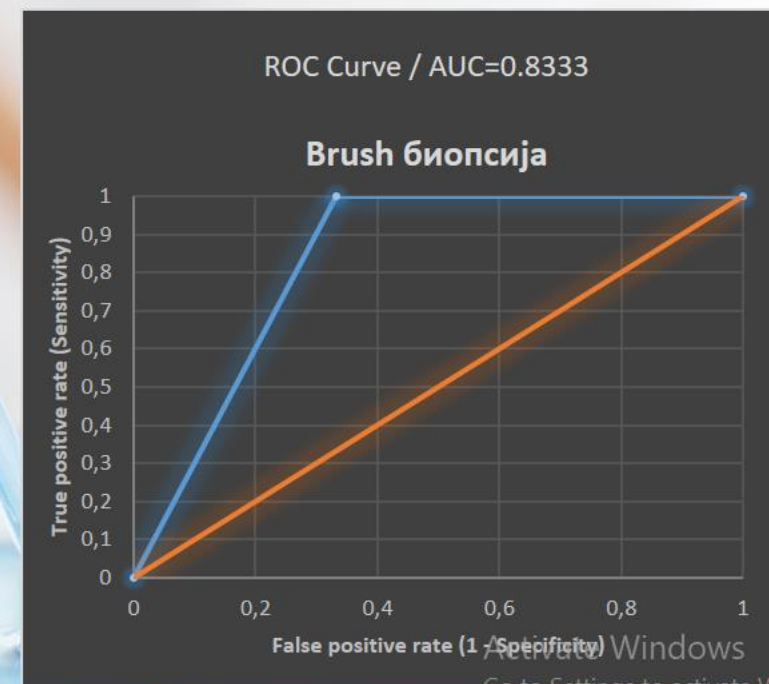
Table 1. Distribution of the examinees with potentially malignant lesions (precancerous) according to the histopathological finding and brush biopsy.

Brush биопсија	вредност	CI = 95%
Se	100%	85.75% to 100%
Sp	66.67%	22.28% to 95.67%
PPV	92.31%	79.47% to 97.38%
NPV	100%	87.75% to 100%
Точност	93.33%	77.93% to 99.18%

Table 2. Sensitivity and specificity of the Brush biopsy method in patient with potentially malignant lesions (N2) group



Graph 2. Distribution of the examinees with potentially malignant lesions (precancerous) according to the histopathological finding and brush biopsy.



Graph 2A. ROC curve - Sensitivity and specificity of the Brush biopsy method in patients with potentially malignant lesions (N1) group





# Conclusions

N1

Se=100%  
Sp=66,67%  
PPV=92,31%  
NPV=100%  
**Acc=93,33%**

N2

Se=100%  
Sp=0%  
PPV=100%  
NPV=0%  
**Acc=100%**

**COE IN COMBINATION WITH THE SCREENING METHOD OF ORAL BRUSH BIOPSY, IS VERY EFFECTIVE IN DIAGNOSIS OF ORAL POTENTIALLY MALIGNANT LESIONS – PRECANCEROSIS AND LESIONS WITH PREVIOUS HISTORY OF MALIGNANCY.**