

Core needle biopsy vs. fine needle aspiration in salivary gland tumours: a single institutional experience

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OBJECTIVES

Core needle biopsy (CNB) and fine needle aspiration (FNA) offer great specificity and diagnostic accuracy for salivary gland tumours. Our investigation will focus on the "first line" function of these approaches in salivary gland nodule diagnosis.

METHODS

We evaluated 105 FNA and 42 CNB of salivary gland nodules, for a total of 147 cases, collected at the "Gaetano Martino" University Hospital of Messina in a seven-year period (2017–2023). We used "The Milan System for Reporting Salivary Gland Cytopathology" (MSRGC) to classify these lesions (Fig. 1).

RESULTS

The neoplastic lesions diagnosed with CNB and FNA were, respectively, 66.7% and 59%, while the non-neoplastic lesions were 19% and 21.9%, respectively. Furthermore, at the histopathological examination of surgical samples, the CNB diagnosis was confirmed in 72.2% of cases, while the FNA diagnosis was confirmed in 58.3% of cases, due to the late introduction of MSRGC and the poor performance in some FNA cases (Fig.2).

CONCLUSION

According to our study, despite the low concordance of FNA, these two techniques may be employed in synergy to enhance salivary gland lesion diagnosis in clinical practice.

REFERENCES

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- Kala C, Kala S, Khan L. Milan System for Reporting Salivary Gland Cytopathology: An Experience with the Implication for Risk of Malignancy. *J Cytol.* 2019 Jul-Sep;36(3):160-164. doi: 10.4103/JOC.JOC_165_18.

GRAPHS & TABLES

Diagnostic Category	Risk of Malignancy	Usual Management
Non-Diagnostic	25%	Clinical and radiologic correlation/repeat FNA
Non-Neoplastic	10%	Clinical follow-up and radiologic correlation
Atypia of Undetermined Significance (AUS)	20%	Repeat FNA or surgery
Neoplasm Benign	< 5%	Conservative surgery or clinical follow-up
Salivary Gland Neoplasm of Uncertain Malignant Potential (SUMP)	35%	Conservative surgery*
Suspicious for malignancy	60%	Surgery*
Malignant	> 90%	Surgery* (extent dependent on type and grade of malignancy)

*Intraoperative examination (frozen section) may be helpful to guide the extent of surgery.
FNA indicates fine needle aspiration.

Figure 1. The Milan System for Reporting Salivary Gland Cytopathology.

Salivary gland lesions

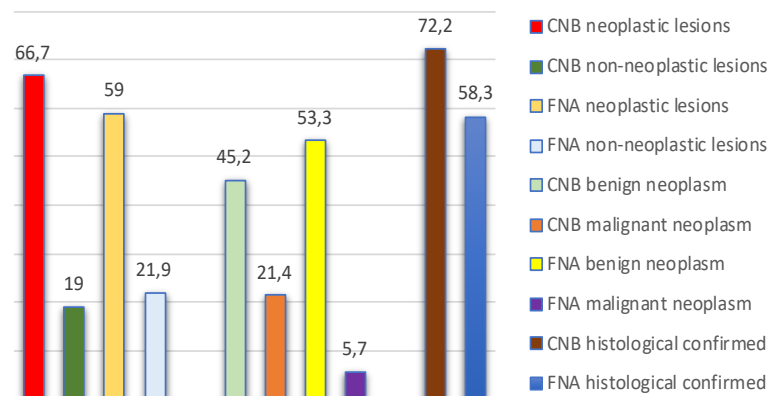


Figure 2. Distributions of neoplastic and non-neoplastic lesions diagnosed with CNB and FNA and percentage of confirmed diagnoses at subsequent histopathological examination.