

## Introduction

Fine needle aspiration cytology is a widely recognized and yet sensitive technique in which a fine needle is introduced into a mass, cellular material is aspirated, and a cytological diagnosis is made. It provides diagnosis for palpable masses in head and neck, enabling appropriate management plans for individual patients to be made, it separates reactive and inflammatory processes that do not require surgical intervention from neoplasm, and benign from malignant tumors.

## Objective

To study the value of fine needle aspiration (FNA) in the diagnosis of palpable non-thyroidal neck masses in Dammam Medical Complex.

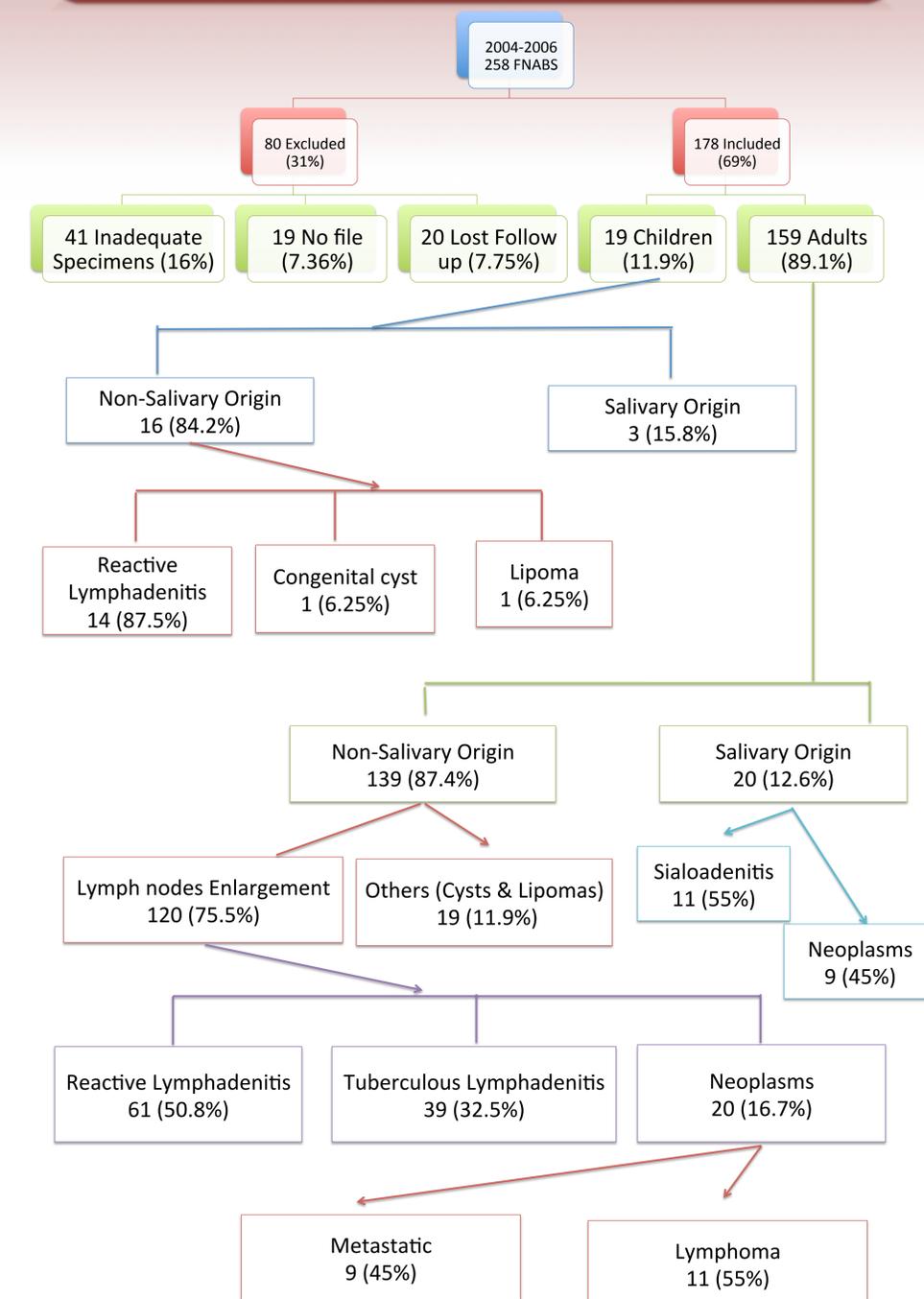
## Method

Retrospective study of all patients (adult and children) presented with non-thyroidal masses and had FNAB. Source of data from the patient medical records and the histopathology report, We included demographic data, and the provisional diagnosis. Patients with neck masses of thyroid origin, inadequate histopathology specimen, missing medical files and those who lost follow-up were also excluded from our study.

Statistical Methods;

- 2 X 2 table.
- Sensitivity
- Specificity
- Accuracy

## Results



2 X 2 Table

	Disease	No Disease	
Positive Test	120	3	PPV = 97.6%
Negative Test	4	35	NPV = 89.7%
	Sensitivity = 96.8%	Specificity = 92.1%	Accuracy = 95.7%

## Discussion

Fine needle aspiration and biopsy are typically indicated when no cause for neck mass is found on the initial evaluation. It is recommended as first line to investigate palpable head and neck masses. Accuracy of FNAB is dependent on obtaining an adequate specimen to be examined by the cytopathologist. In our study 16% of all aspirates were considered inadequate, as compared to the literature, it can reach nearly one fifth of aspirates. Through out literature, FNA accuracy, in differentiating inflammatory (Figure 1) from neoplastic lesions (Figure 2) ranges from 80 to 97% as in our study, we had FNA accuracy of 95.68%. The accuracy is dependent on operator experience. Interpretation of FNAC from the salivary glands is, however, a difficult cytopathological technique with many problems and pitfalls (Figure 3).

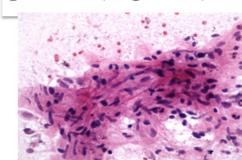


Figure 1

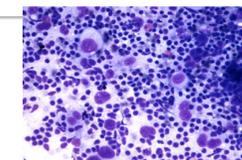


Figure 2

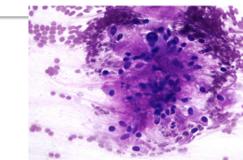


Figure 3

Figure 1; A case of Tuberculosis lymphadenitis showing presence of epithelioid cell cluster in a background caseous necrosis.  
Figure 2; Hodgkin Lymphoma showing presence of binuclear Reed-Sternberg cells & mono-nuclear variants, in a background of mostly small lymphocytes and eosinophils.  
Figure 3: Pleomorphic adenoma; Myxoid stromal tissue with fine fibrillar structure and a few epithelial cells

## Conclusion

Neck mass is very common presenting symptom to otolaryngologist, general surgeon, and family physician, it can affect any age group. Evaluation of these patients is crucial in order to reach definitive diagnosis, to avoid unnecessary surgical intervention and facilitate the patient's referral to higher centers if needed. Fine needle aspiration is an excellent first line method to investigate any neck lump, FNA of head and neck masses is a simple, cost effective, and yet very effective diagnostic tool in separating inflammatory from neoplastic lesions.

## References

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