



# **BIOPSY AND HEALING OF THE BIOPSY WOUND**

**Department of Oral Pathology & Microbiology**

# Purpose Statement

At the end of the lecture the student should be able to-

- Define the biopsy.
- Enlist Types of biopsy
- Portray Indications & Contra-indications



# Contents

- Introduction
- Contraindication
- Methods of biopsy
- Incisional and Excisional biopsy
- Exfoliative cytology
- Punch biopsy

- GREEK

**BIO-** LIVING, LIFE      **OPSIS-** TO VIEW

- It is the removal of tissue from the living organism for the purpose of microscopic examination and diagnosis.

## TYPES OF BIOPSY -

1. **Excisional Biopsy** – Total excision of a small lesion for microscopic study
2. **Incisional Biopsy** - a small section of a large lesion removed for microscopic study

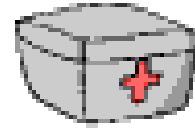
# Contraindications

- There are no absolute contraindications for biopsy.
- The relative contraindication for biopsy are
  - Pigmented lesions
  - Vascular lesions
  - Uncontrolled diabetes
  - Lesions prone for infections

# Methods of Biopsy

1. Surgical excision by scalpel
2. Surgical removal by cautery or a high frequency cutting knife
3. Removal by biopsy forceps or biopsy punch
4. Aspiration through a needle with a large lumen
5. Exfoliative cytology

# Incisional Biopsy



- Biopsy that samples only a particular portion or representative part of a lesion.
- If a lesion is large or has different characteristics in various locations more than one area may need to be sampled.

# Indications:

- Indicated in larger lesions for diagnosis (i.e. larger than 1cm in diameter).
- Lesions in hazardous location.
- Indicated for tumors of the soft tissues to distinguish benign conditions from malignant.



**Erythroplakia**



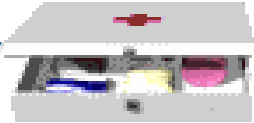
**Nodular Leukoplakia**



**Squamous cell carcinoma**



# EXCISIONAL BIOPSY



- Total excision of a small lesion for microscopic study is called excisional biopsy.
- It is preferred if the size of the lesion is small enough ( $< 1$  cm), such that it may be removed along with the margins of normal tissue and wound can be closed primarily.

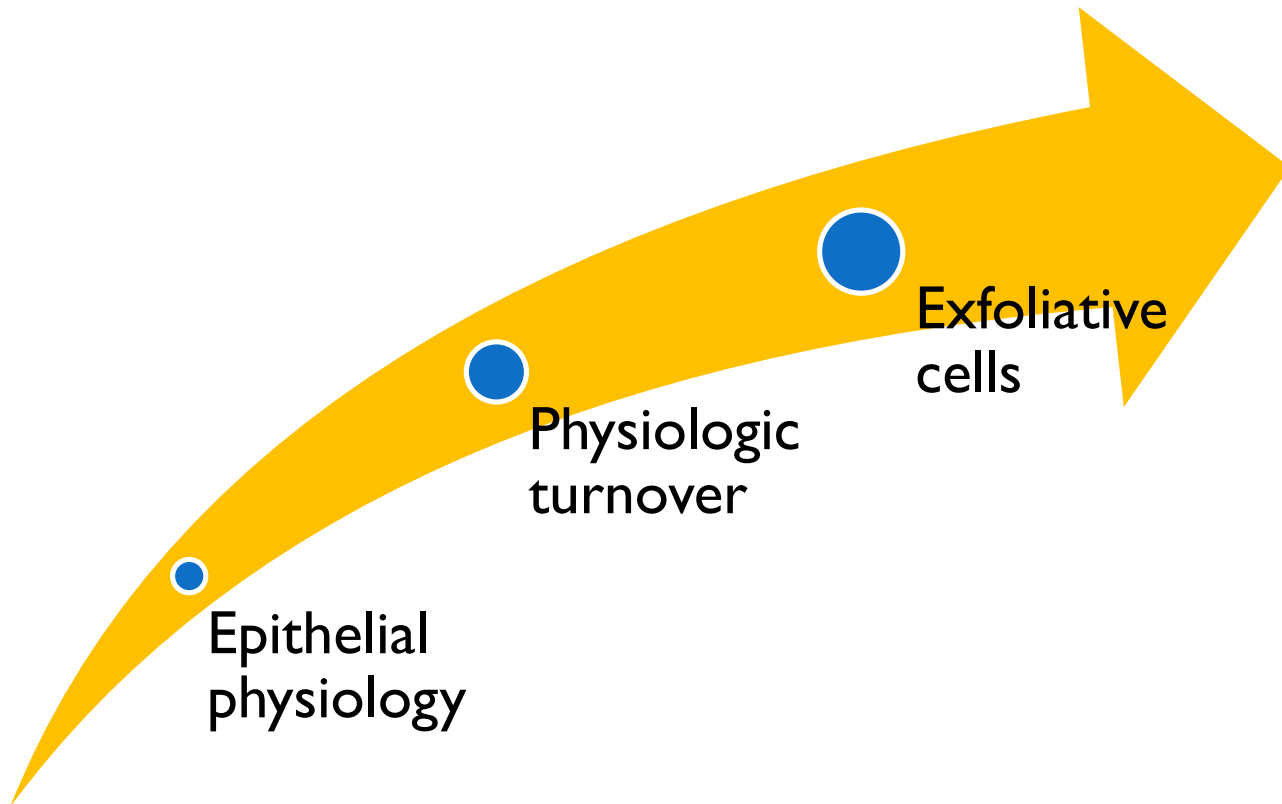
# Indications:

- Lesions smaller than 1 cm.
- If excision does not risk any vital structure.
- If clinical impression is that of benign lesion.
- If excision can be curative.




# Exfoliative cytology


- It is the study of cells which exfoliate from the body surfaces




# Methodology

- Surface of the lesion is wiped with sponge material which is then sectioned, or scraped.
- Scrape the surface of lesion vigorously with moistened tongue blade or cytobrush, smeared on a microscopic slide and fixed with 90% alcohol.

- 
- It is studied by the cytopathologist for presence of atypical or diagnostic cells
  - The cytopathologist may classify the smear into following classes

- 
- **Class I** – Normal – normal cells are present
  - **Class II** – Atypical – minor atypia but no evidence of malignant changes
  - **Class III** – intermediate- wider atypia that suggest cancer, but is not clear cut and represent precancerous lesions- ca in situ- **Biopsy is recommended**

- 
- **Class IV** - suggestive of cancer- few cells with malignant characteristics or with many cells with borderline characteristics- **Biopsy is mandatory**
  - **Class V** - positive of cancer cells are obviously malignant- **Biopsy is mandatory**

# PUNCH BIOPSY



- Removal of a small disk-shaped sample of tissue.
- Used in difficult to access areas like retromolar trigone, maxillary tuberosity.
- Indicated in patients with trismus.



# Summary

- Definition of biopsy, the indications and contra-indications of biopsy.
- Exfoliative cytology, Punch biopsy.

# BIBLIOGRAPHY

- Text book of oral pathology Shafer's, 5 & 6<sup>th</sup> edition
- Color Atlas of Oral Diseases Cawson, R. 2<sup>nd</sup> edition
- Oral and Maxillofacial Pathology Neville, Brad W. 2<sup>nd</sup>
- Lucas's Pathology Of Tumor's of the Oral Tissues
- Cawson, R.A., Bennie, W. H 5<sup>th</sup> edition



**THANK YOU**