



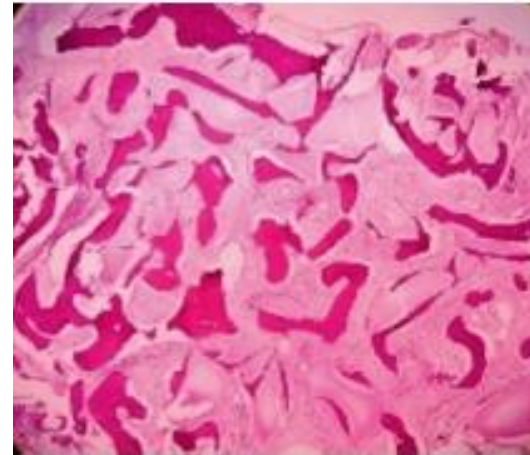
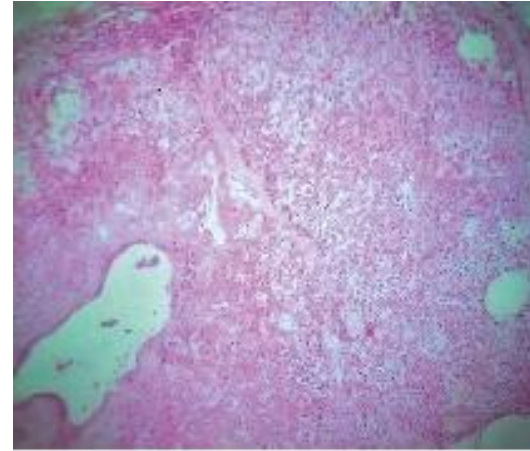
# Oral Surgery, Oral Medicine and Oral Radiology

Ass. Prof. Reda Gaber

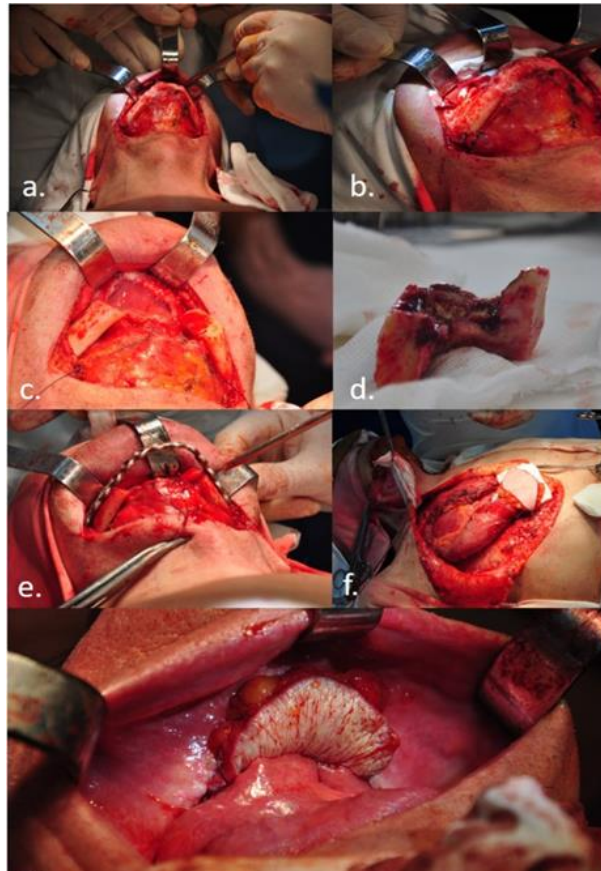
Oral Biology

Oral Surgery  
Oral Medicine  
Oral Radiology

Oral Pathology  
Oral Biology



# Oral Surgery or Oral and Maxillofacial Surgery

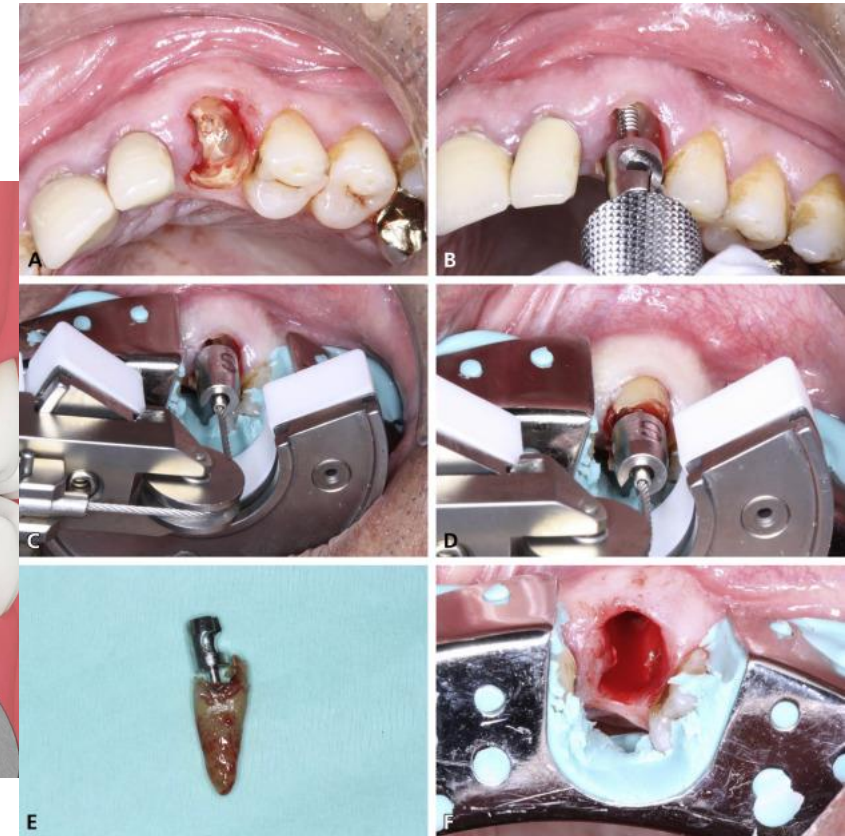


# Definition

**Oral and Maxillofacial surgery is a branch of dentistry, that deals with the art of diagnosis and treatment of various diseases, injuries and defects involving the orofacial region.**



- The field of Oral and Maxillofacial surgery **has evolved through the ages**. From extracting teeth by tying a thread around the tooth to refined techniques of today, the field has come a long way..



# Andre Fouchard

- He is considered to be **the father of Dentistry**
- It was **between 1650 and 1800** that the science of modern dentistry developed.
- And in **1728 Pierre Fauchard**, who was widely acknowledged as the **“Father of Modern Dentistry”**





## Father of oral surgery

James Edmund Garretson



- **James Edmund Garretson** (1829-1895) MB DDS was a professor of Dental college in Philadelphia.
- With his work a treatise on *The Diseases And Surgery Of Mouth Jaws And Associated Parts* first published in 1869, helped to establish Oral & Maxillofacial surgery in U.S
- He is known as the *father of oral surgery*
- He established oral surgery as a branch of medicine and dentistry though distinct from both



# SCOPE of Oral & Maxillofacial Surgery





# AN ORAL AND MAXILLOFACIAL SURGEON'S SPECTRUM



**DENTOALVEOLAR SURGERY**



**IMPLANTOLOGY**



**TMJ SURGERY**



**MAXILLOFACIAL TRAUMA**



**CRANIOFACIAL SURGERY**



**CLEFT LIP AND CLEFT PALATE SURGERY**



**ORTHOGNATHIC SURGERY**



**FACIAL AESTHETIC SURGERY**

**RECONSTRUCTIVE SURGERY**

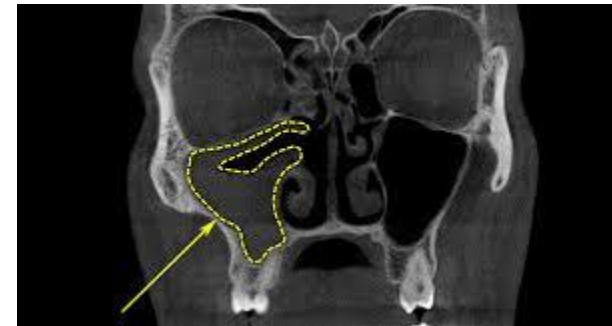


**HEAD AND NECK ONCOSURGERY**



# Oral and Maxillofacial surgery essentially deals with the treatment of the following conditions

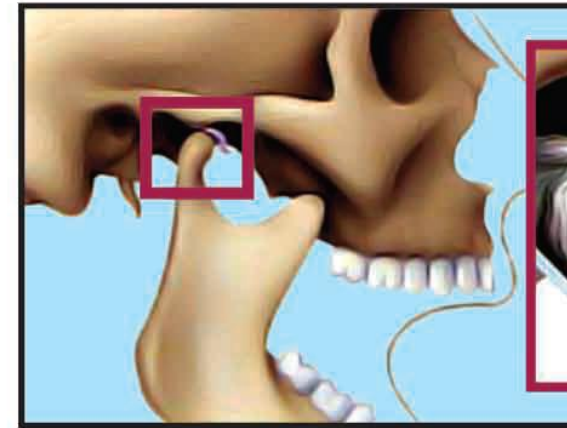
1. Simple and complicated extractions of teeth and related management.
2. Treatment of cysts and tumours of both odontogenic and non odontogenic origin, involving the jaw bones.
3. Management of disorders of maxillary sinuses.



4. Initial and definitive management of traumatic injuries of soft and hard tissues of orofacial region.



5. Temporomandibular joint disorders including internal derangement and ankylosis.



6. Salivary gland diseases and their management.



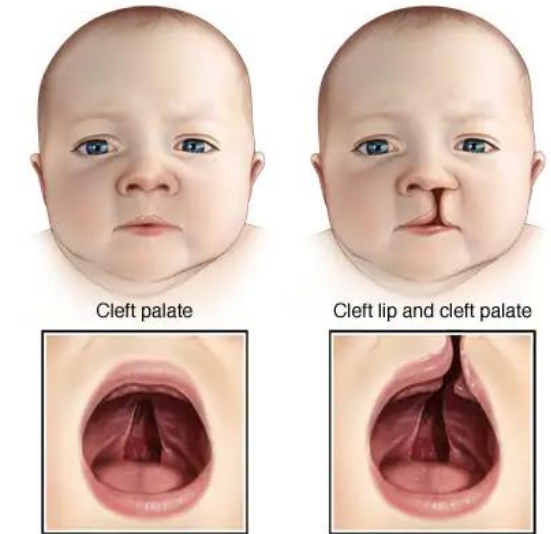
7. Diagnosis and management of Dentofacial deformities, either acquired, developmental or congenital (including clefts of the lip and palate).



8. Management of orofacial infections involving the soft and hard tissues.



9. Pre-prosthetic surgical procedures including implantology.



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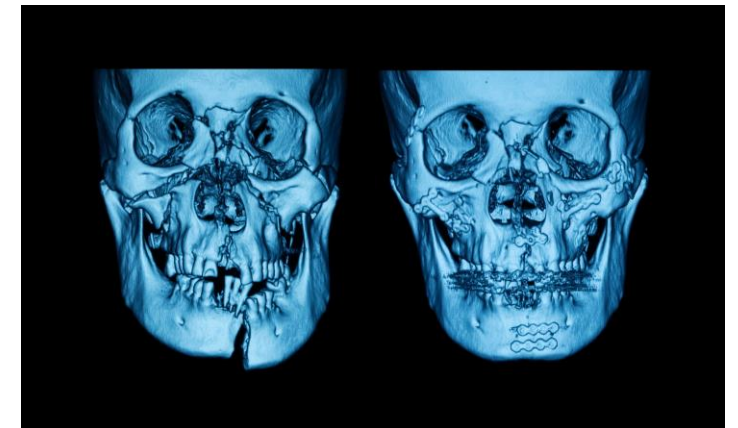
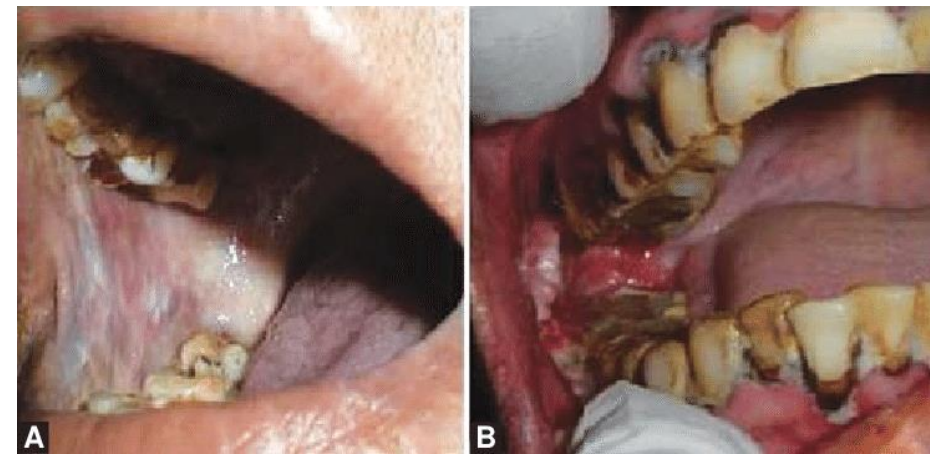
10. Precancerous lesions such as, oral submucous fibrosis and leukoplakia.

11. Detection and management of oral cancer.

12. Management of orofacial pain.

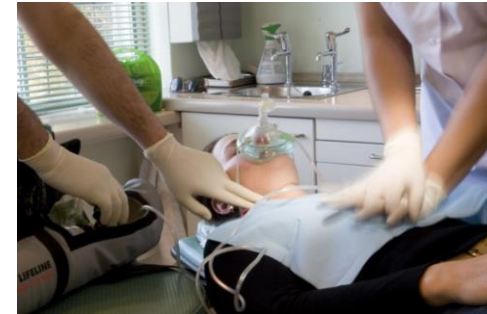
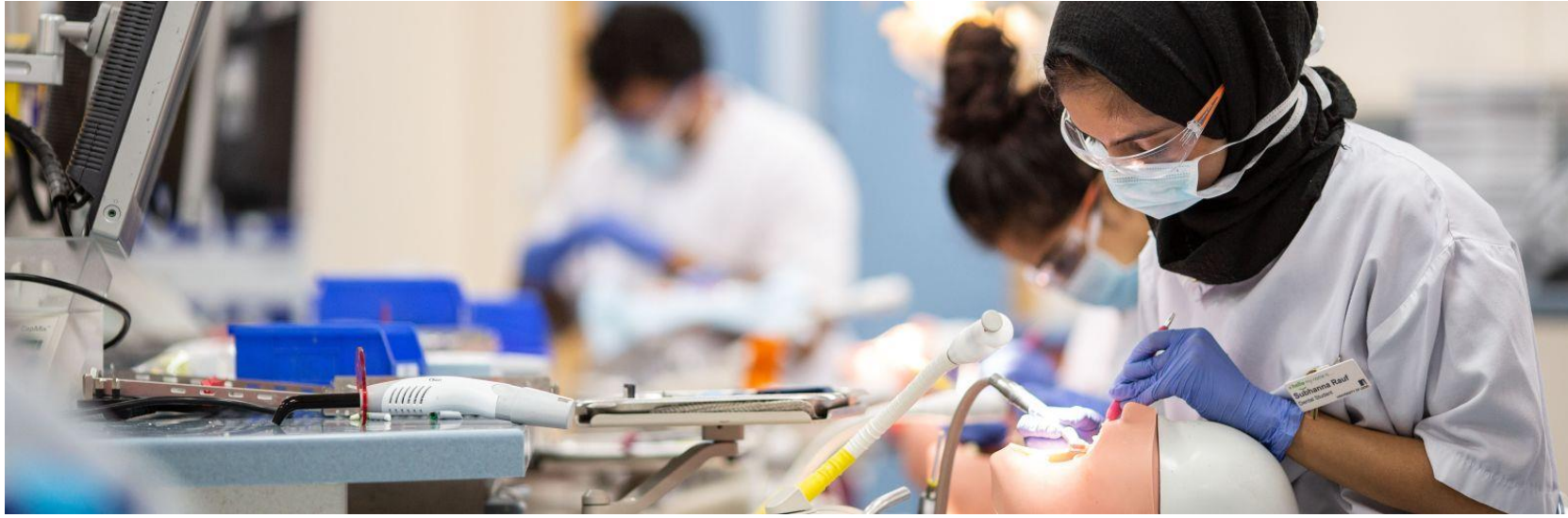
13. Reconstruction of missing portion of jaw bones with bone graft/distraction osteogenesis.

14. Detection and management of facial neuropathy



- The scope of Oral and Maxillofacial surgery **depends on** the qualifications and capabilities of the person.
- There is a definite distinction in **the case selection** for
  1. An **undergraduate** trained in oral surgery
  2. A **postgraduate** trained in Oral and Maxillofacial surgery
  3. Cases that require multidisciplinary approach.

- An **undergraduate trained in oral surgery** is expected to deal with:



1. Simple **exodontia**
2. **Complications** arising from **routine extractions** like, **tooth/ root fractures, tissue laceration, post extraction bleeding, minor post extraction infections**
3. Immediate management of **medical emergencies** in the dental office
4. **Minor surgical** procedures like **apicoectomy** and **alveoloplasty**.

- A postgraduate student in Oral and Maxillofacial surgery deals with:

1. Complicated exodontia
2. Capable of handling the various pathologies of the face and the jaw bones





# Multidisciplinary Team Approach



# Cleft Lip and Palate

- The oral and maxillofacial surgeon forms an important part of **the cleft lip and palate management team**, that comprises of

1. The plastic surgeon
2. The paediatric surgeon
3. The orthodontist
4. The pedodontist
5. The speech therapist.



Unilateral Cleft Lip



Bilateral Cleft Lip

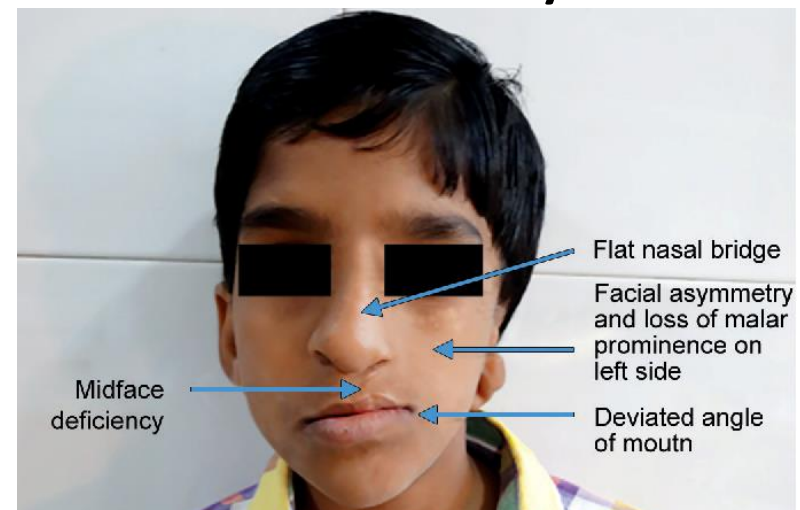


Cleft Palate

- The oral and maxillofacial surgeon **plays an important role in :**
  - a) **Primary as well as secondary closure of the palate**
  - b) Correction of residual deformities of the maxilla and the mandible at a later stage.

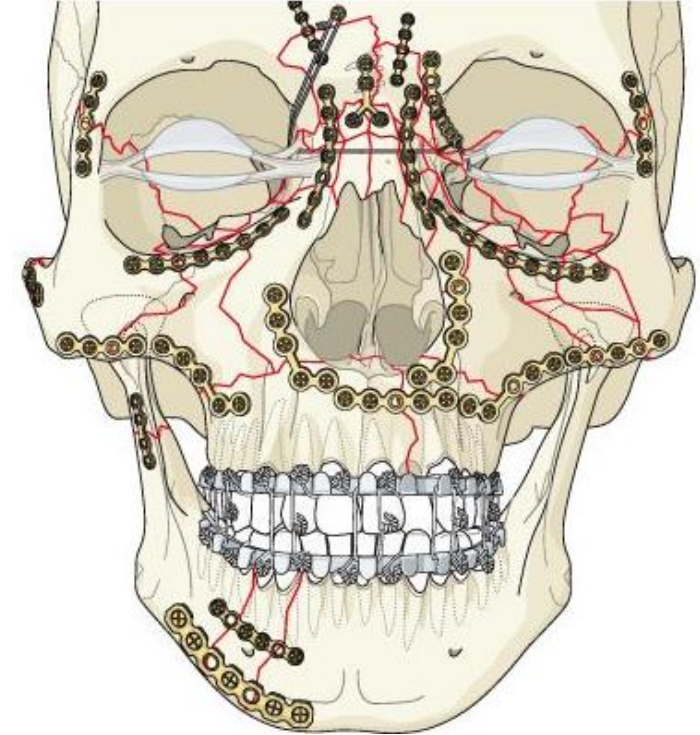
# Craniofacial Syndromes

- The oral and maxillofacial surgeon also forms a part of the core group, consisting of
  1. Neurosurgeon
  2. Plastic surgeon
  3. ENT surgeon
- involved in treating craniofacial abnormalities, especially syndromal, like Crouzon's syndrome or Goldenhar syndrome etc.



# Trauma Unit

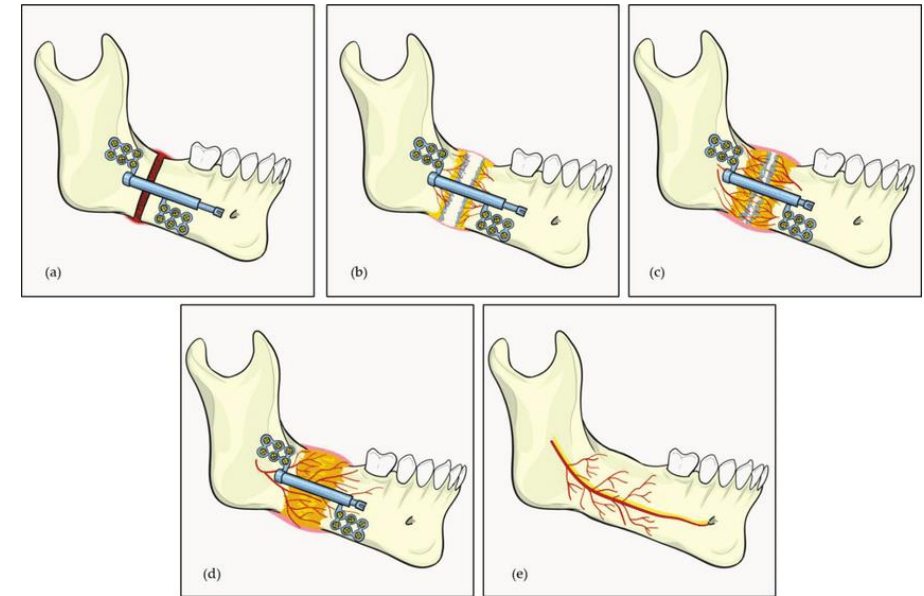
- The oral and maxillofacial surgeon is also involved in the trauma unit along with
  1. Orthopaedic surgeon
  2. General surgeon
  3. Plastic surgeon



- The oral surgeon, thus, forms an important link between the various specialities in the treatment of craniofacial pathologies.

# Newer Advances

- The field is constantly evolving and adapting newer techniques, to refine the surgical procedures, and to achieve precision with minimally invasive techniques. One such technique that has revolutionized the treatment of facial deformities is **Distraction Osteogenesis**.
- The technique deals with the elongation of the bone by gradual callus distraction.



- **The students are advised to keep themselves updated with new literature on the subject.**

# Oral medicine

Oral medicine is the specialty of dentistry that is concerned With:

- The diagnosis and management of disorders or condition affecting the oral and maxillofacial region
- The oral health care of medically compromised patients



# Oral Medicine field

related to four major areas:

- (1) diseases of the oral mucosa,
- (2) diseases or disorders of the orofacial region
- (3) salivary gland
- (4) orofacial pain

# 1- Diseases of the oral mucous





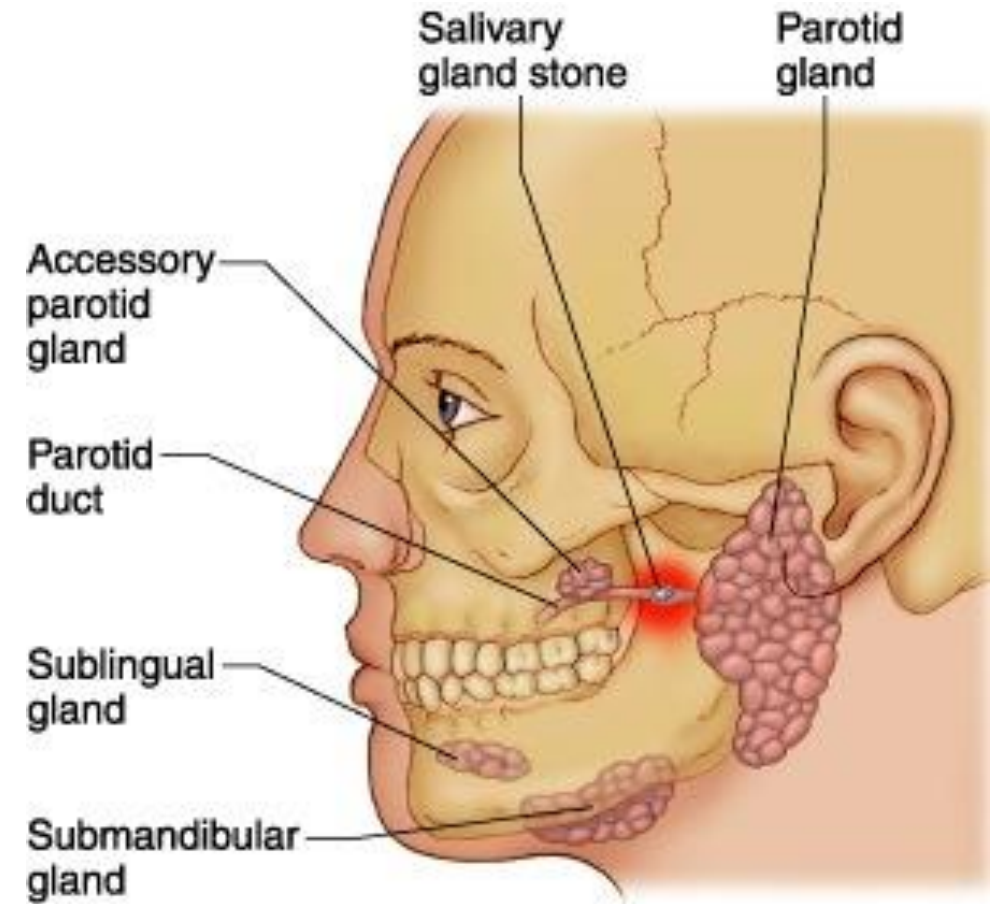
## 2. Diseases or disorders of the orofacial region and maxillofacial area



# 3- salivary gland diseases

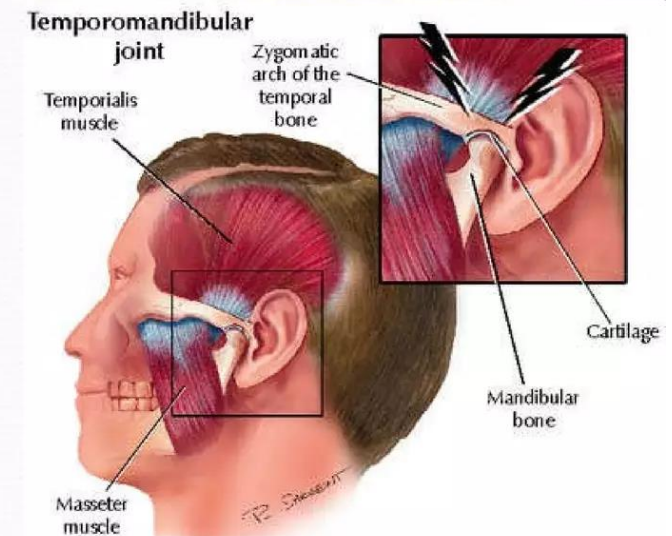
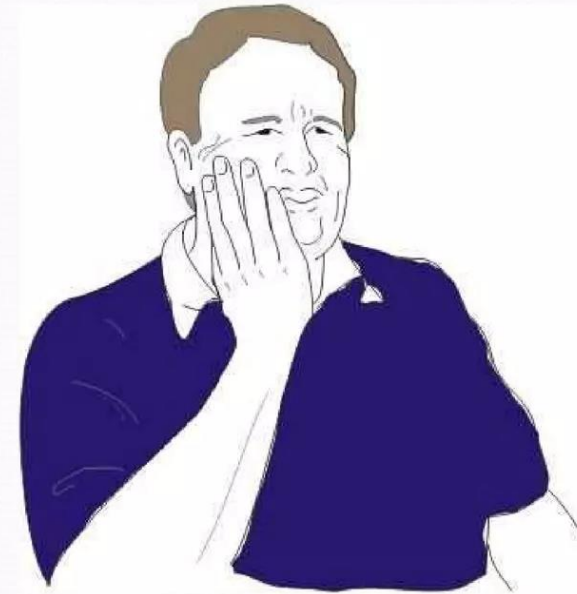
## Common Types of Salivary Gland Disorders:

- Benign Tumors
- Cysts
- Malignant Tumors
- Sialadenitis
- Sialadenosis
- Sialolithiasis
- Sjorgen's Syndrome
- Viral Infections



## 4. Orofacial pain and Temporomandibular disorders

- The specialty of Orofacial Pain focuses on the prevention, evaluation, diagnosis, treatment and rehabilitation of chronic orofacial pain disorders and jaw dysfunction.



# Oral Diagnosis



# Oral Diagnosis

- Oral diagnosis is that branch of dentistry dealt with the identification of oral disease whether of local or systemic origin.



## **QUALITIES OF A GOOD DOCTOR**

**The Good diagnostic is the Good doctor**

# Oral Diagnosis

- The clinician's ability to arrive at an accurate diagnosis involves several skills

Using these skills, the practitioner can gather data in an orderly and concise way

- The power of observation
- Knowledge
- The ability to listen

# How to Diagnose a case?

## Case History



**Clinical examination  
Extraoral, Intraoral**



**Review of data**

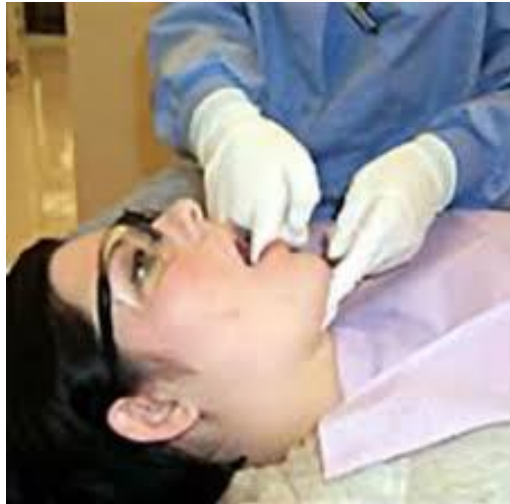


**Differential Diagnosis**

**Clinical tests, Laboratory tests, Imaging Studies**



**Definite Diagnosis**





# *Historical Perspectives of Diagnostic Radiology*



# *Wilhelm Conrad Roentgen*



- *1845-1923 (Bavarian physicist).*
- *Discover x-rays in November 8-1895*

# *First Radiograph*

- *December 22, 1895*
- *Radiograph of Mrs. Bertha Roentgen's hand*



# *Importance of radiographic examination*

- 1-Necessary component for comprehensive patient diagnosis.
- 2-Identify conditions that may otherwise go undetected clinically.
- 3-Provide a wealth of information about the teeth and supporting structures.



**N.B** Early diagnosis saves lives.

Without diagnosis there can be no treatment, there can be no cure.

# *Oral and Maxillofacial Radiology*

- *Radiology*: A branch of medical science that deals with the use of x-rays, radioactive substance and other forms of radiant energy in the diagnosis and treatment of diseases.
- *X-ray*: Wave type of energy that produced by special device called x-ray machine.

# Oral and Maxillofacial Radiology

- **Dental radiography:** the production of image of teeth and adjacent structures by exposing a film to x-ray .A radiograph may also called 'radiogramme' ,roentgenogramme ,roentgenograph.

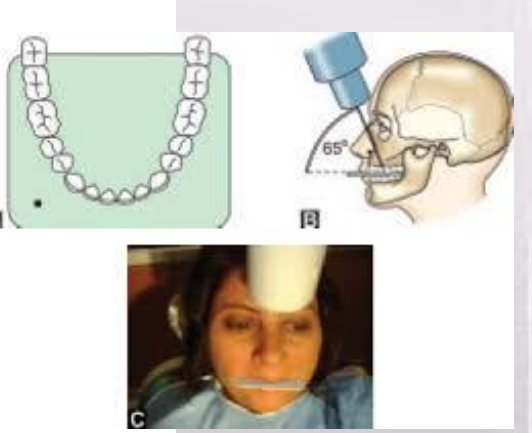


- **Dental radiographer:** Any person who positions, exposes, and processes dental x-ray films





# TYPES OF DENTAL X-RAYS



**Periapical**



**Interproximal**



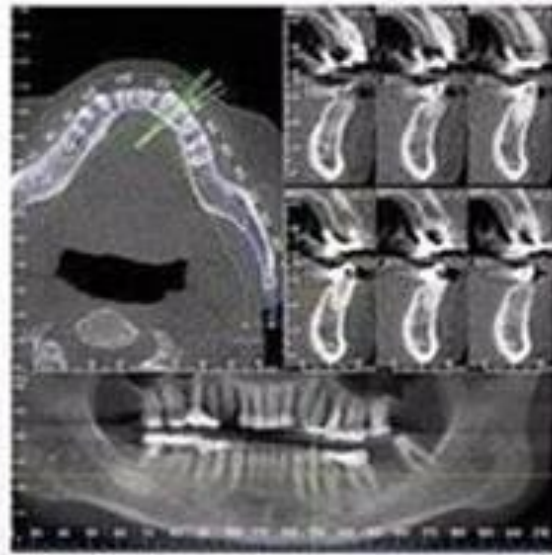
**Panoramic**



**Occlusal**



**Cephalometric**



**CBCT**

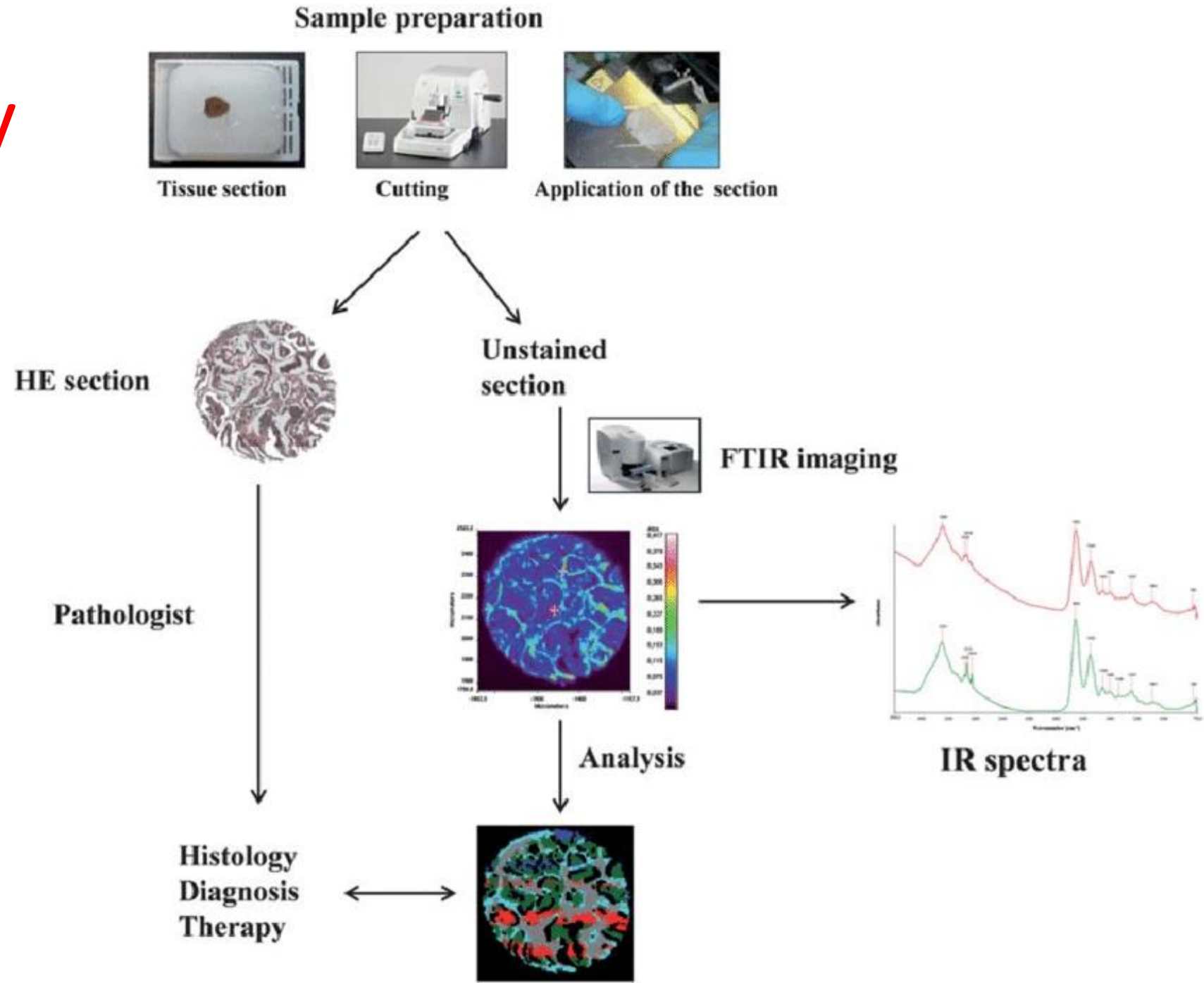


# Laboratory investigation

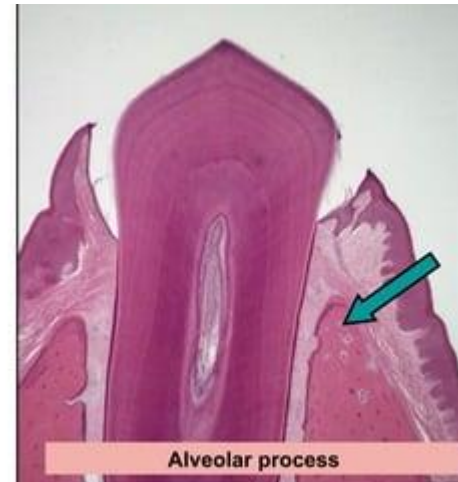
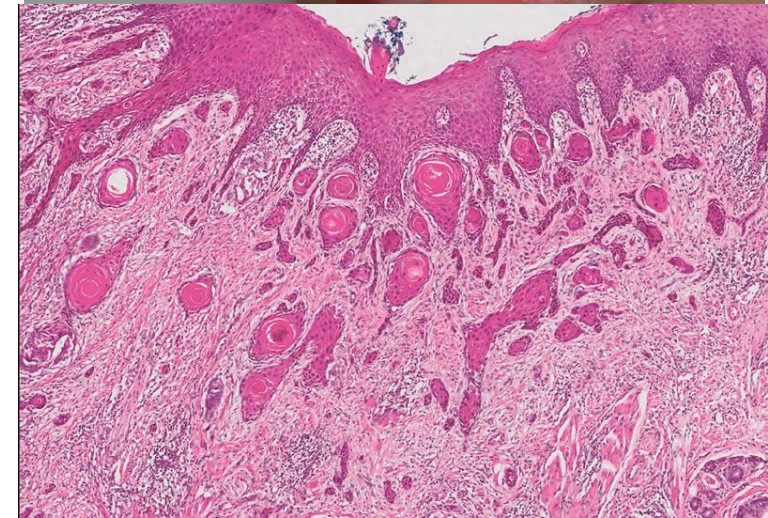
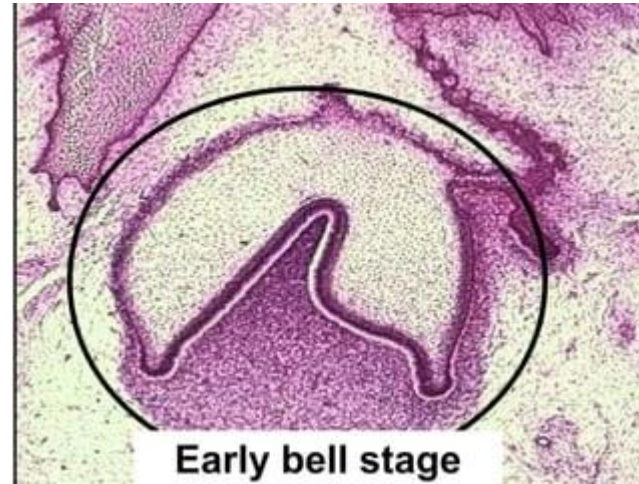
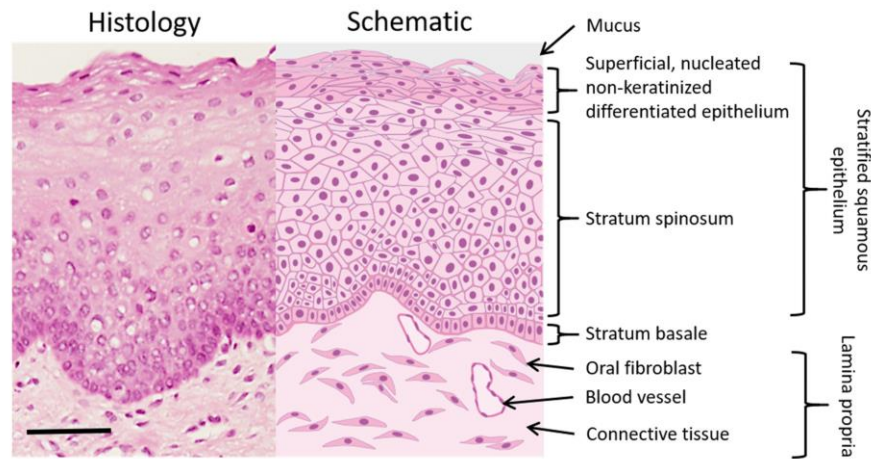




# Oral Pathology



# Oral Biology



THANK YOU

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