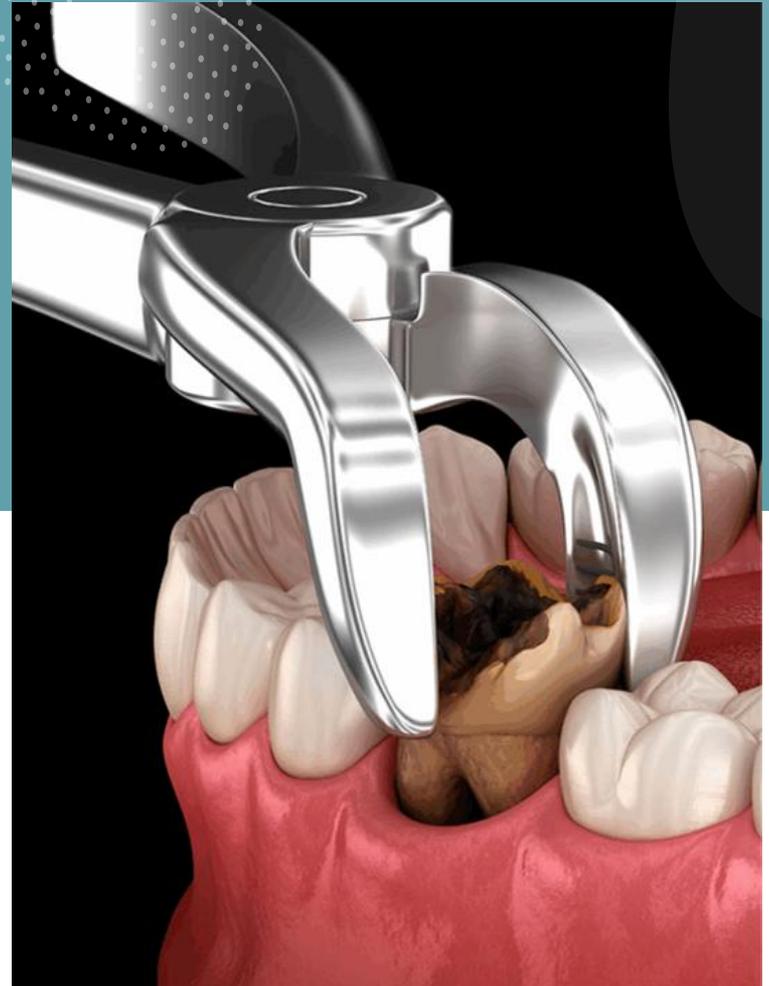


# Introduction to Oral and Maxillofacial Surgery

**Dr. Rabaa Mahmoud**



# Learning Objectives

*By the end of this lecture, the students will be able to:*

- ✓ know the definition and Scope of oral & maxillofacial surgery
- ✓ know the indications and contraindications of tooth extraction
- ✓ Recognize some instruments used in tooth extraction

# Definition

Oral and Maxillofacial Surgery is a surgical specialty that focuses on the **diagnosis**, **surgical** management, and **treatment** of diseases, injuries, and defects.



# Scope of Oral and Maxillofacial Surgery

1. Dentoalveolar Surgery
2. Management of Oral and Facial Trauma
3. Oral Pathology and Tumor Surgery
4. Orthognathic (Corrective Jaw) Surgery
5. Temporomandibular Joint (TMJ) Surgery
6. Craniofacial and Cleft Surgery
7. Implantology and Reconstructive Surgery
8. Maxillofacial Reconstruction
9. Oral Medicine–Surgical Interface
10. Anesthesia and Pain Management

# ***1. Dentoalveolar Surgery***

## **Procedures involving teeth and surrounding structures:**

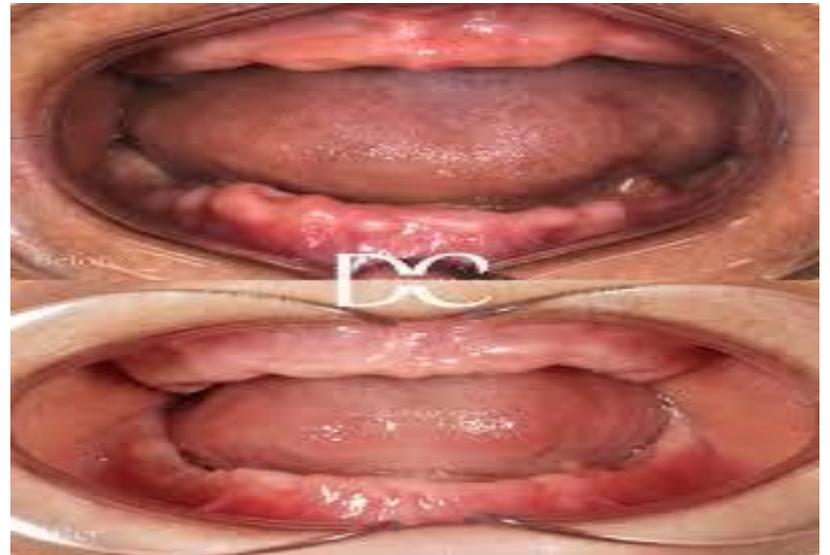
- A. Extraction of unrestorable teeth and retained roots
- B. Surgical extraction of impacted teeth
- C. Pre-prosthetic surgery (ridge correction)
- D. Treatment of odontogenic infections; abscesses



Impaction



Unrestorable  
teeth



Ridge  
correction

## ***2. Management of Oral and Facial Trauma***

### **Diagnosis and treatment of traumatic injuries to the face:**

- A. Fractures of the mandible, maxilla, zygoma, orbit, and nasal bones
- B. Management of soft tissue injuries (laceration)
- C. Emergency airway management in facial trauma
- D. Post-traumatic reconstruction and rehabilitation



Fracture



Post-traumatic reconstruction



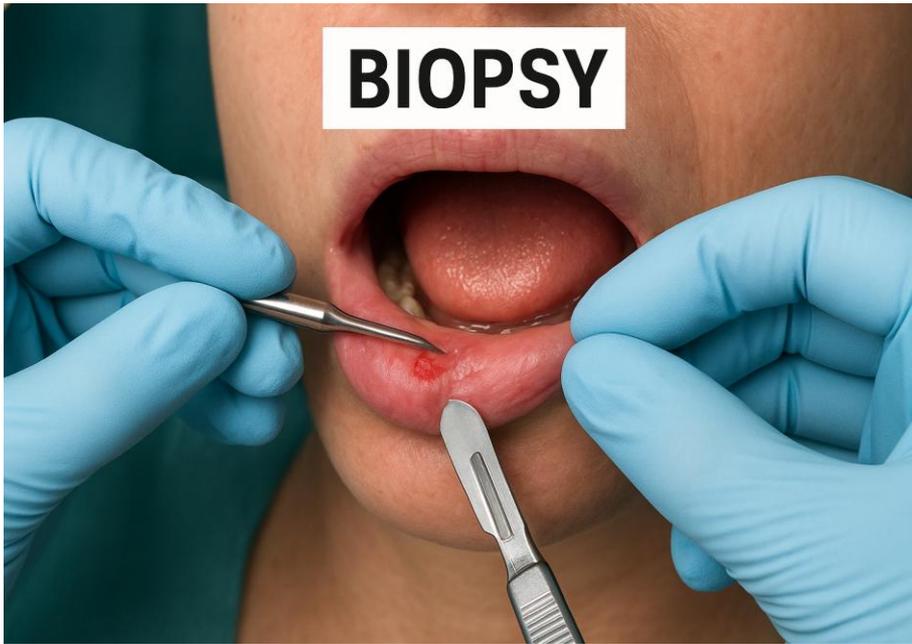
Soft tissue injuries

# 3. Oral Pathology and Tumor Surgery

## Surgical management of benign and malignant tumors:

- A. Biopsy and diagnosis of oral lesions
- B. Resection of benign tumors and cysts
- C. Management of oral cancer and precancerous lesions
- D. Neck dissection for metastatic disease
- E. Reconstruction after tumor resection

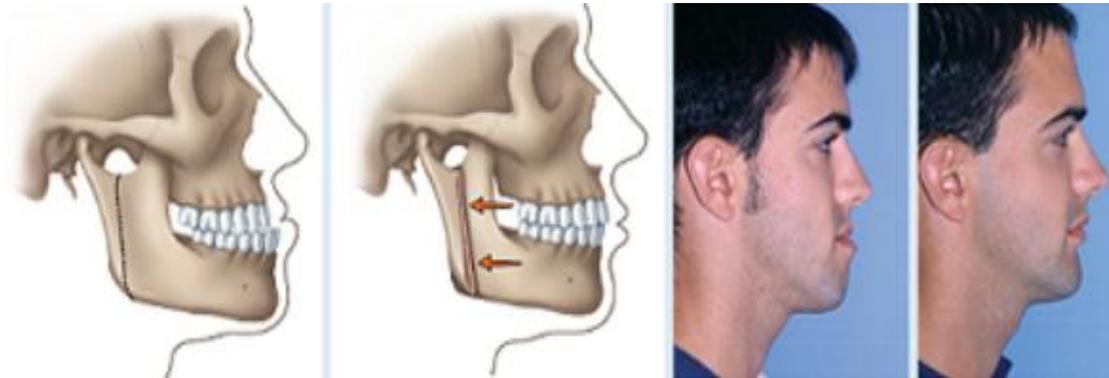
# BIOPSY



# 4. Orthognathic (Corrective Jaw) Surgery

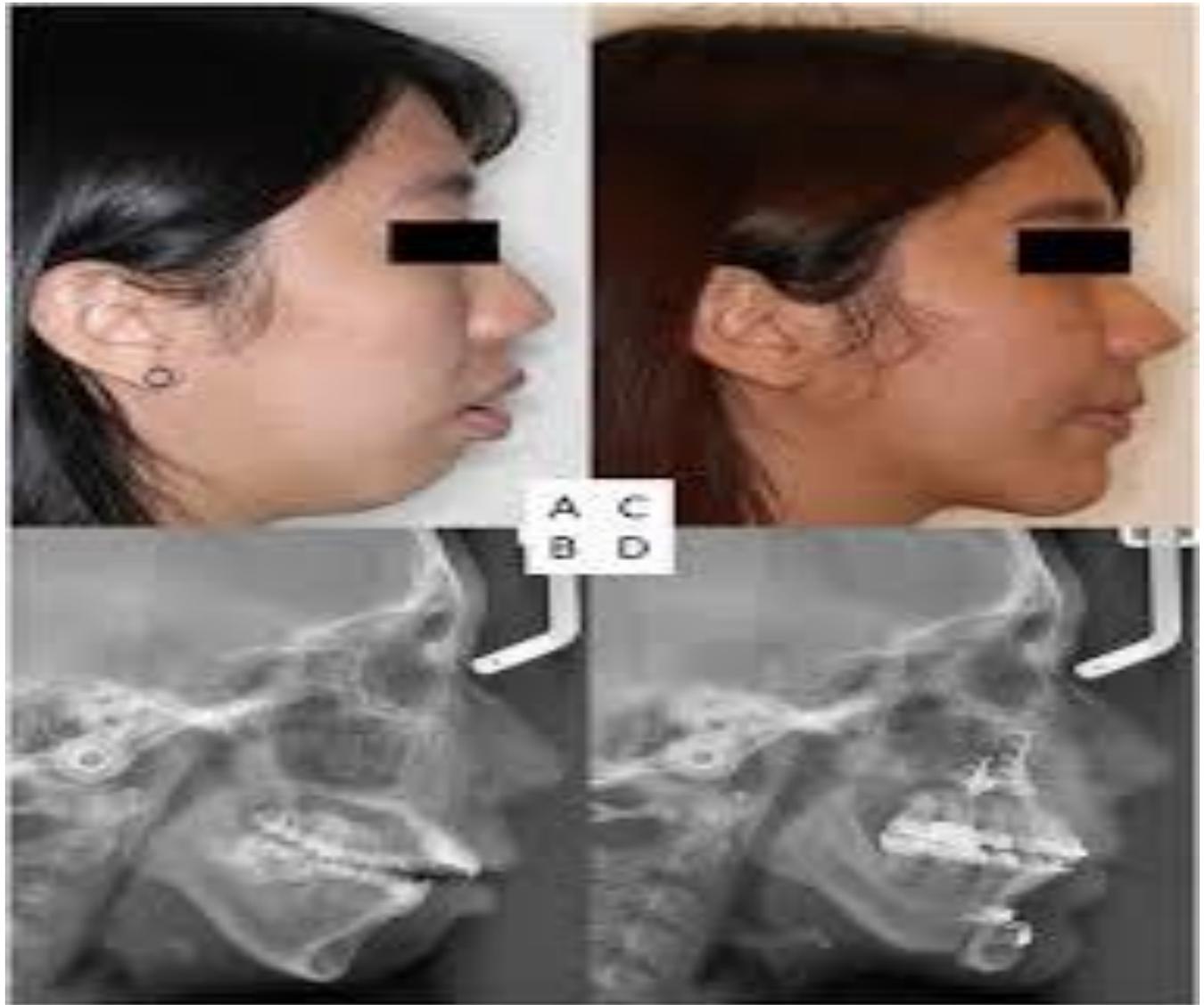
## Correction of facial skeletal deformities:

- A. Mandibular advancement or setback
- B. Maxillary osteotomy
- C. Correction of facial asymmetry
- D. Surgery for obstructive sleep apnea



**Mandibular setback**

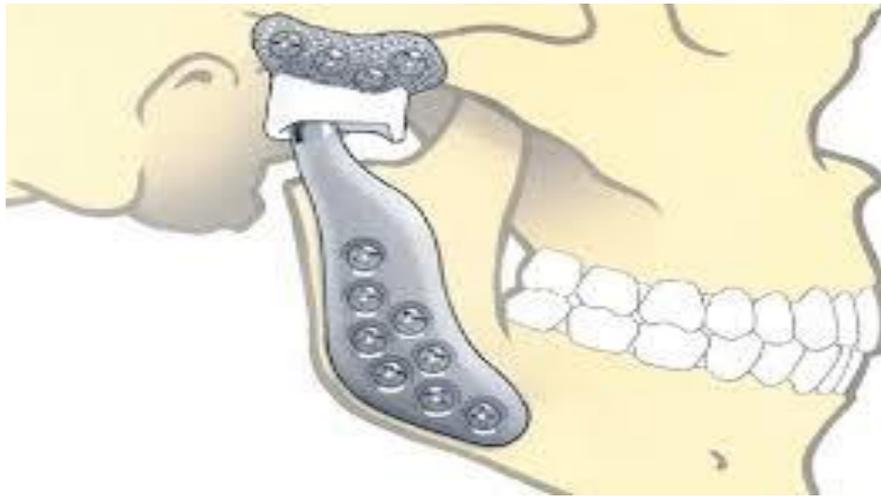
**Maxillary  
osteotomy**



# 5. Temporomandibular Joint (TMJ) Surgery

## Treatment of TMJ disorders:

- A. TMJ reconstruction using grafts or prostheses

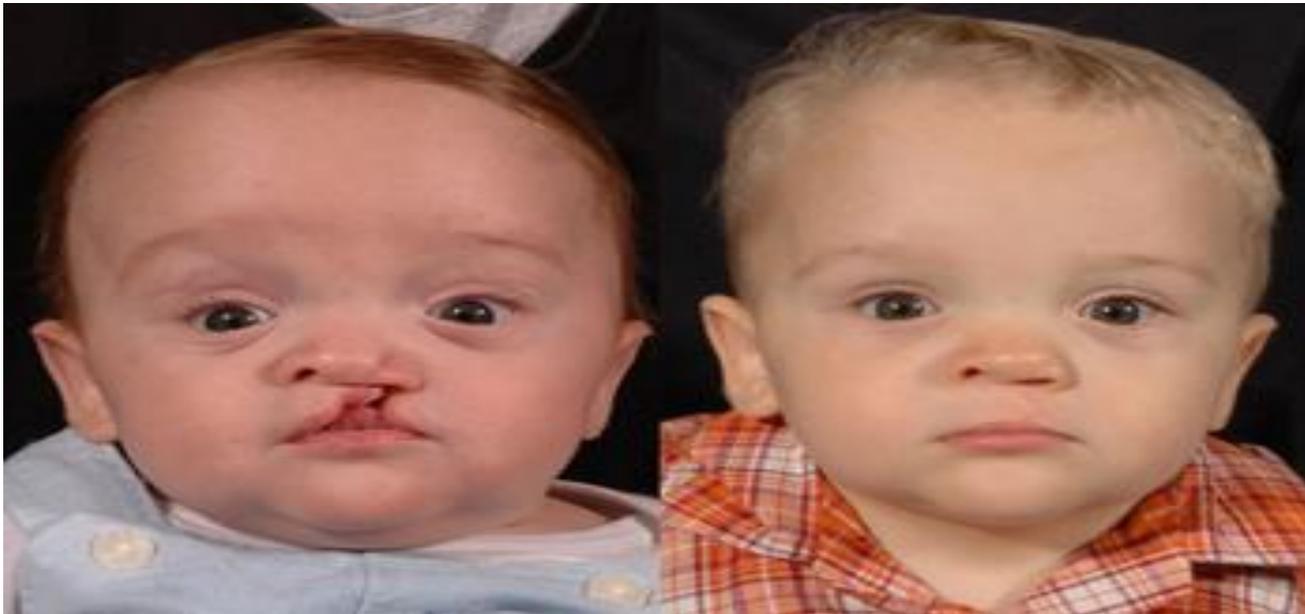


- B. Management of ankylosis

# 6. Craniofacial and Cleft Surgery

**Surgical correction of congenital deformities:**

A. Cleft lip and palate surgery



B. Craniofacial growth disorders

# 7. Implantology and Reconstructive Surgery

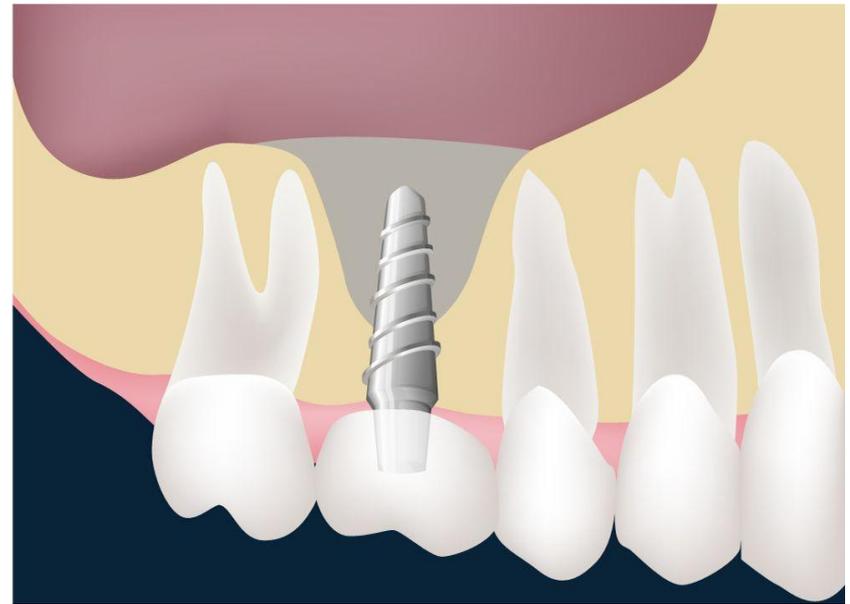
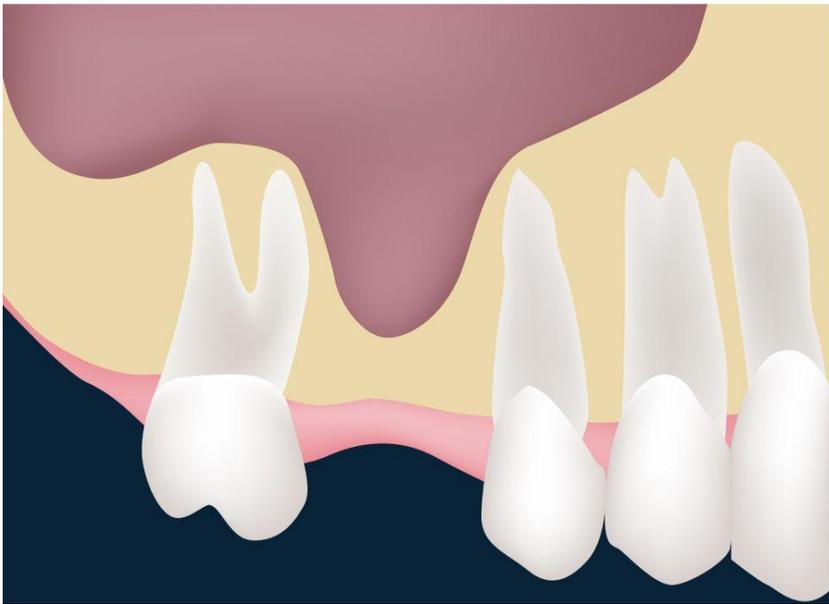
## Placement of implants and related bone/soft tissue surgeries:

- Dental implant placement
- Sinus lifting and bone grafting
- Ridge augmentation and regeneration





Implant



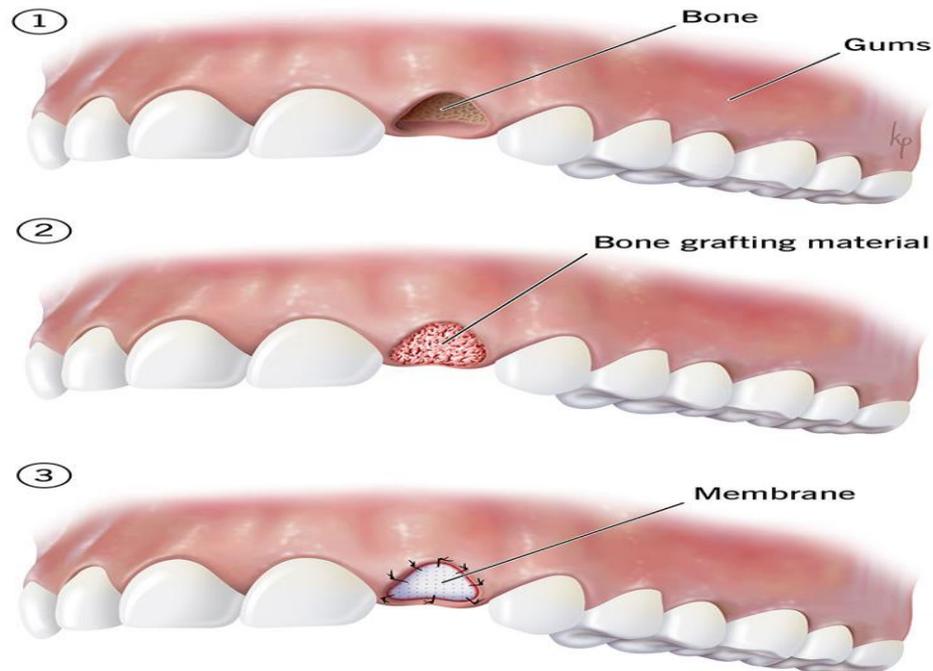
Sinus lifting and bone grafting

# 8. Maxillofacial Reconstruction

## Rehabilitation of hard and soft tissue defects:

- A. Bone grafting (intraoral and extraoral sites)
- B. Reconstruction following trauma or oncologic surgery

### Bone grafting



# 9. Oral Medicine and Surgical Interface

## Management of medically complex patients:

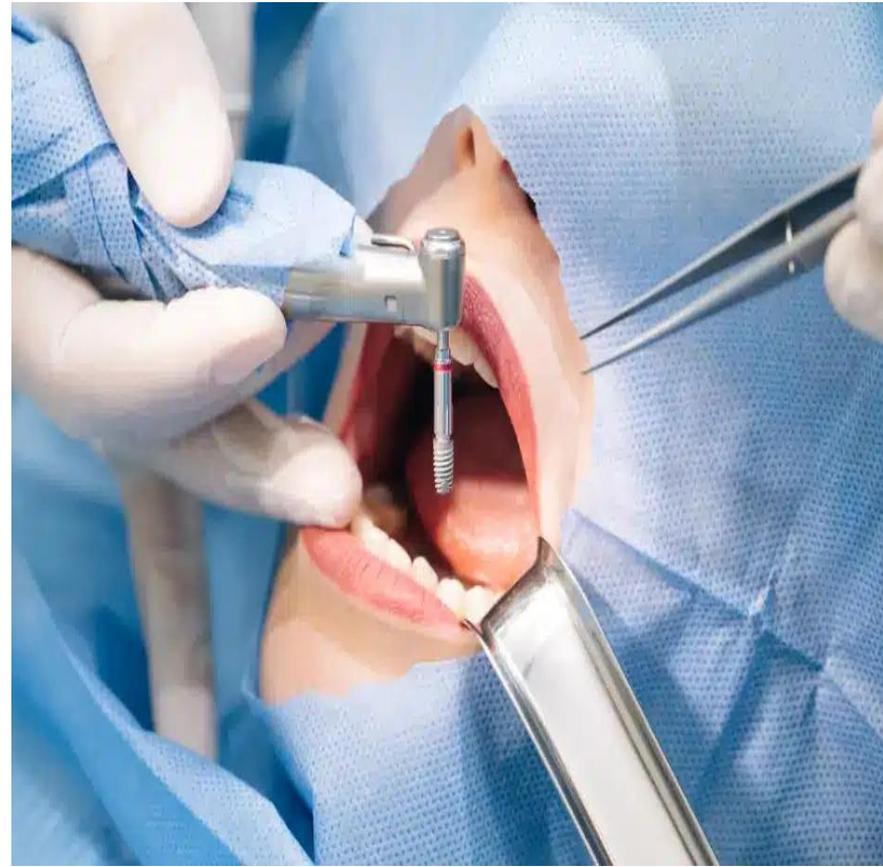
- A. Surgical care for patients with systemic conditions
- B. Management of oral manifestations of systemic diseases

# 10. Anesthesia and Pain Management

**OMFS specialists are trained in:**

- A. Local anesthesia
- B. Conscious sedation
- C. General anesthesia (GA) administration

## Local anesthesia



## General anesthesia

# Dental (Tooth) Extraction

**Dental Extraction is defined as :**

- “The **removal of a tooth from the oral cavity** by means of elevators and forceps”.
- Also referred to as “**Exodontia**”.



# Indications Of Extraction

- **Severe caries or failed root canal treatment**
- **Advanced periodontal disease** with bone loss and mobility
- **Orthodontic needs**, such as crowding or mispositioned or supernumerary teeth.
- **Impacted teeth** causing pain, infection, or pathology
- **Trauma** leading to non-restorable fractures
- **Prosthetic reasons**, when teeth interfere with denture design
- **Pathology**, including teeth associated with cysts or tumors
- **Medical considerations**, such as before radiotherapy
- **Functional or aesthetic issues**, including severely malaligned teeth

# Indications for Extraction



**Root resorption  
&  
Pulp necrosis**



**Unrestorable teeth**



**Periodontal disease**



**Fracture**



**Trauma**



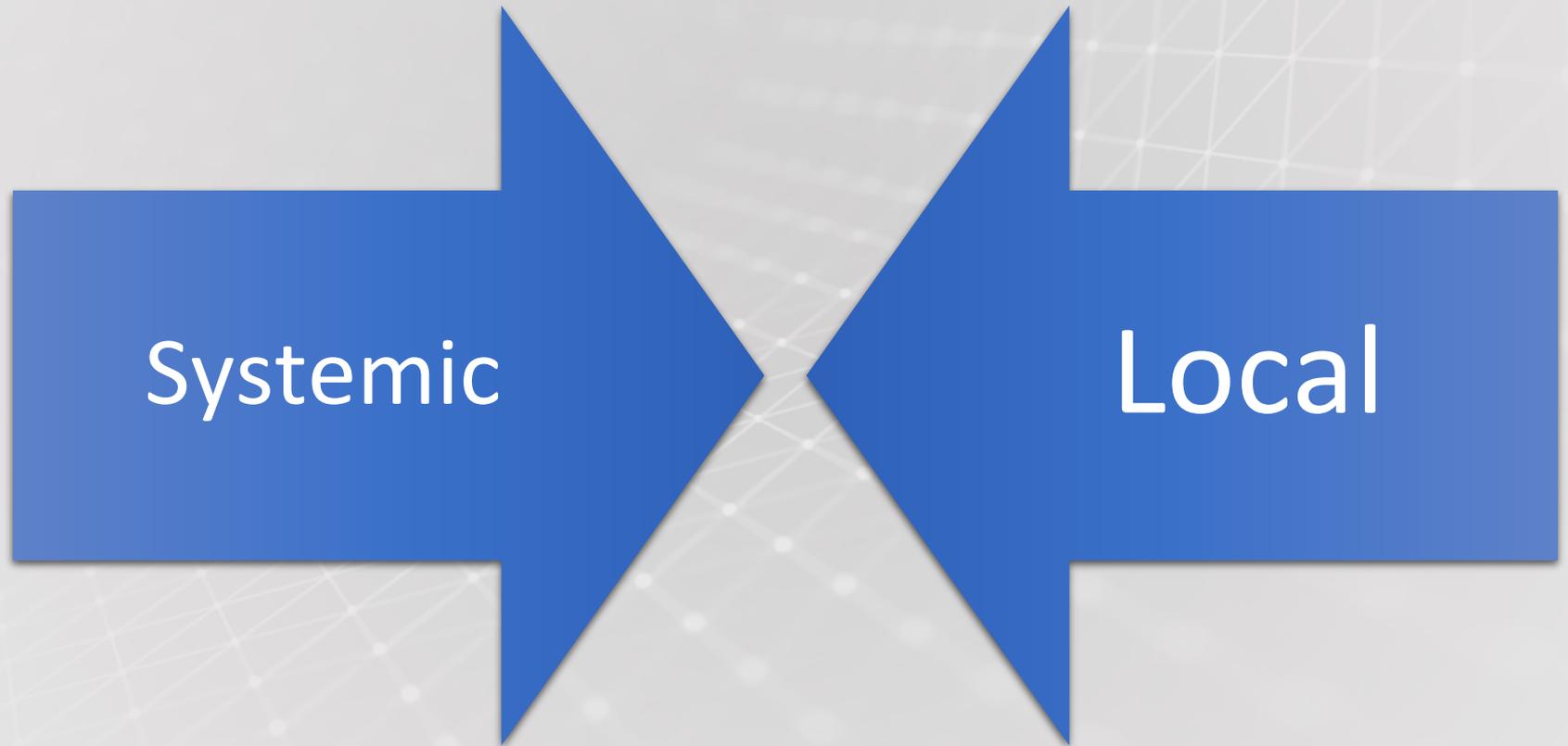
**Impacted teeth**

# Indications for Extraction



**Supernumerary teeth**

# Contraindications Of Extraction



# Contraindications Of Tooth Extraction

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## A. Systemic Contraindications:

1. Uncontrollable metabolic disease, e.g., Diabetes.
2. Uncontrollable leukemia and lymphomas.
3. Uncontrollable cardiac diseases.
4. Uncontrolled hypertension.
5. Bleeding disorder: Hemophilia.
6. Pregnancy: 1<sup>st</sup> and 3<sup>rd</sup> Trimester.

# Contraindications Of Tooth Extraction

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## B. Local Contraindications:

1. Therapeutic irradiation; osteoradionecrosis.
2. Teeth in the area of a malignant tumor.
3. Severe pericoronitis.
4. Acute dento-alveolar abscess.



## Specialized Instruments used in OMFS



**Forceps** are the primary instruments used to remove a tooth from its socket.

**Elevator:** Used to apply leverage against the tooth to loosen it from the periodontal ligament and ease the extraction.



# *References*

1. Miloro M, Ghali GE, Larsen P, Waite P. Peterson's principles of oral and maxillofacial surgery. 3rd ed. PMPH-USA; 2014.
2. Hupp JR, Ellis E, Tucker MR. Contemporary oral and maxillofacial surgery. 7th ed. Elsevier; 2018.

- **Thanks**

