



Guidelines for Prescribing Radiographs

by Dr. Areej Ahmed

Prescription of radiograph

- Done only by a **DENTIST**
- Only after a clinical examination has been performed to determine which projections are required to give the maximum diagnostic information.
- information.



- **Patient imaging needs are determined by:**
 1. **Dental history**
 2. **Clinical examination**
 3. **Age and general health.**
 4. **Cost of the examination and the radiation dose**



Caries

- Buccal, lingual and occlusal caries can be seen clinically.
- The rate of caries varies from person to person.
- The rate of caries progression is more rapid in deciduous teeth.
- In carious prone patients radiograph should be taken every 6 - 12 months; in non-caries prone patients every 18 - 24 months is adequate.

“

- The best radiographic view for visualizing both interproximal caries and periodontal bone height is bite-wing radiographs.

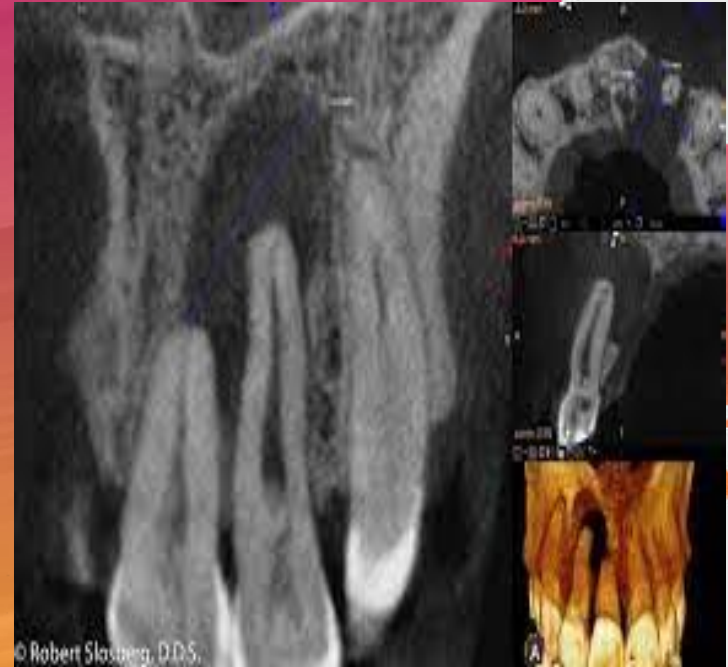


PERIAPICAL INFLAMMATORY DISEASE

- patient presents with **toothache, deep caries, or large or deep restoration**, the likelihood of an **inflammatory lesion** of pulpal origin occurring at the tooth apex increased.
- Clinical examination combined with **periapical radiograph** is sufficient to make diagnosis

In some cases with:

1. complex root canal anatomy
2. Failed endodontic treatment
3. Intra or postoperative complications
4. Periapical radiograph doesn't provide adequate information therefore high resolution, limited volume **CBCT** may be required.



PERIODONTAL DISEASES

To determine the amount of periodontal involvement.

To shows the amount and type of bone loss and also whether it is localized or generalized.

After treatment, follow-up radiographs are important to monitor the progression of the condition.

A combination of **periapical and bitewing** images is required

DENTAL ANOMALIES

- A **panoramic radiograph** is the best view for anatomic anomalies
- But there is no need for this before the age of about 10 years.
- Should there be a missing tooth, a periapical or an occlusal view of that area may be required.



GROWTH, DEVELOPMENT AND MALOCCLUSION

A radiographic examination can vary from:

- **periapicals, occlusal, CBCT, panoramic, and a lateral skull** for orthodontics.
- Sinus involvement could require an **Occipito-mental**
- non symmetrical growth of the mandible
- could require a **PA** [postero-anterior].
- A **panoramic** radiograph is required at the age of about 17 - 20 years of age for general examination, while **CBCT** required for evaluation of roots relation with inferior alveolar nerve.

JAW PATHOLOGY

For small lesions of the jaws, **periapical** or **panoramic** radiographs.

If clinical evidence exists of swelling, some type of radiograph at **90 degrees to the original plane (often occlusal image)** should be made to detect evidence of expansion of the jaw and **perforation** of the buccal or lingual cortical bone.

If lesions are too large to fit on standard dental films, **CBCT or CT** is required.

TMJ

A wide variety of diseases affect the TMJ.

The goal of TMJ imaging should be to obtain new information that will influence patient care.

Radiologic examination may not be needed for all patients particularly if no treatment is contemplated.

information about the status of the osseous tissues can be obtained from **panoramic radiographs, CBCT, CT**. while investigation of soft tissue component (disc), magnetic resonance imaging (**MRI**) is used.



IMPLANTS

Preoperative planning is important to ensure success of the implants.

The dentist must evaluate the adequacy of the height and thickness of bone for the desired implant; the quality of the bone, the location of anatomic structures such as the mandibular canal or maxillary sinus; and the presence of structural abnormalities such as undercuts that may affect placement or angulation of the implant.

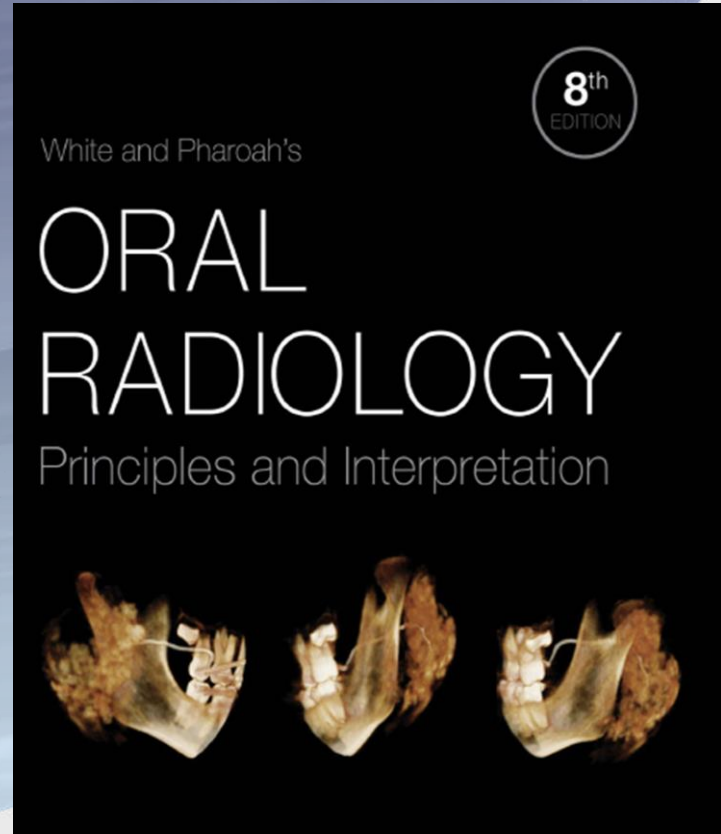
Standard **periapical and panoramic** radiographs can supply information regarding the vertical dimensions of the bone. However, some type of cross-sectional imaging, like **CBCT** is recommended

Standard **periapical** and **panoramic** radiographs can supply information regarding the vertical dimensions of the bone. However, some type of cross-sectional imaging, like **CBCT** is recommended.

- **periapical and/or panoramic** radiographs for tooth & root fracture.
- **CBCT** may be useful.
- Fractures of the mandible can frequently be detected with **panoramic radiographs**, **supplemented** by images at **90 degrees** such as a **posteroanterior or reverse Towne's** view.
- Trauma to the maxilla and midface may require **CBCT or CT**

TRAUMA

Reference of lecture





THANKS!

Any questions?