

## **ST. CATHARINES ORAL SURGERY**

### **CBCT IMAGING PROTOCOL FOR ST. CATHARINES ORAL SURGERY**

#### Selection Criteria:

- **Does the patient need a scan?** This is determined from our assessment of the referral reason from the dentist and from our clinical/medical history of the patient.
  
- **Is the patient pregnant?** The horizontal trajectory of the CBCT beam through the patient's jaw suggests that the patient's fetus would not be subjected to any direct radiation, and the only exposure the fetus would receive would be from scattered radiation through the patient's torso (which would be minimal). Dosimetry studies have suggested the effective dose to a patient's reproductive organs is negligible. Therefore, pregnancy is not considered an absolute contraindication to a CBCT scan. However, elective scanning of a pregnant patient should be delayed.
  
- **Is the patient a child?** Children are more radiosensitive; we have implemented the following rules regarding CBCT scans for anyone younger than 17:
  - **Use lower scanning parameters for kV and mA in proportion to the patient's size.** The smaller the patient, the lower the kV and mA settings should be. Rotograph EVO 3D scanner allows for adjustment based on the patient size. Use the smallest FOV possible.
  
  - **Scans are always limited to a small Field of View.**
  
  - **Accept lower quality scans as they pertain to clarity and patient movement. Do not repeat scans due to poor quality unless the image is non-diagnostic.**
  
  - **If it is apparent that the patient will not be able to remain motionless for the duration of the scan, consider declining imaging. One criterion for a CBCT scan is a motionless patient.**

#### Order of Operations:

In order to ensure that we are doing the right thing, we need to follow the following order of operations for every patient. Do not skip any step or do any step in the incorrect order:

- **Patient Check-In:** Every referred patient should walk in with a referral form. The front desk staff checks in every patient. If any information on the referral form is missing, contact the referring dental office to fill in the blanks. If the patient walks in without a referral form, get the referring dental office to fax us a referral form. Ask the referring office for any relevant recent radiographs if available. CT referrals must include the following information:

1. Patient's name, address, and DOB
  2. Referring dentist's name
  3. Clinical information and reason for CT
  4. Copies of written reports or any recent radiographs in the area of interest
  5. The prescribing dentist must complete his / her own patient history and examination prior to prescribing CT scan
- **Medical History:** Patients must fill medical history form. During review of the medical history, confirm the patient's referral information and personal information. Women of childbearing age must be screened for pregnancy.
  - **Obtain Consent.**
  - Review **dental history** related to CT scan request (e.g. implants. Impacted teeth). The prescribing dentist will determine a CT scan is warranted or not. Always choose the smallest scan that will adequately capture the region of interest. Follow the ALARA principle.
  - **Photos.** If any soft tissue lumps or bumps or discolouration are present, take a photo or two. This helps with the diagnosis.
  - **Perform imaging.** Support staff may set up the patient in the scanner. The actual position confirmation and acquisition must be done by the licensed doctor.
  - **Image quality assessment.** Prior to dismissing any patient, the scan quality must be assessed. If the region of interest is incompletely captured, or unacceptable movement artifacts are present, the licensed doctor must assess whether or not the scan should be repeated or whether other imaging are necessary.
  - **Payment.** Collect payment from the patient and provide pre-filled insurance claim forms, or submit electronically.
  - **Dismissal.** After the image quality has been determined to be satisfactory, the patient may be dismissed.

#### **Radiation shielding for Patients:**

- **All patients must wear the lead apron designated for panoramic / CT acquisition.**

#### **Radiation shielding for staff:**

- **Stand outside the room in the hallway, but NOT in front of the CT room.** The walls surrounding the CT room are leaded.

#### **Scan acquisition by authorized personnel:**

- **Only the licensed doctor on duty is permitted to perform the actual acquisition of the CBCT scan.** The remainder of the tasks may be delegated to other staff members.

**When in doubt, ask the prescribing doctor.**

- The ultimate responsibility for the patient's care lies with the prescribing doctor on duty. If you're not sure about something, ask. It is much better to ask before we do the imaging and before the patient leaves.

**Report and document all errors:**

- **Do not hide your errors.** If you have done something wrong, its best to let the rest of the staff know immediately so that we can remedy the problem proactively and then think about how to prevent the same sort of error in the future.
- **Recognize that most of our errors can be traced to the critical first 15 minutes of the patient's appointment.** This is the time where we are gathering information about patients and their needs, and sets the stage for all the work that is to follow. If the quality of this data collection is poor, our execution will be poor because we are basing our work on potentially inaccurate information.

**CT Scan Reports:**

- All CTs must be reviewed and a written report prepared. The written report shall contain:
  1. Patient's name, address and DOB
  2. Prescribing dentist's name
  3. Referring dentist's name if applicable
  4. Date of CT scan and date of report
  5. Any limitations such as patient movement or metallic artifacts
  6. Indication for taking CT
  7. Any findings
  8. Clinical issues raised in the request for CT
  9. Comparative information if previous radiographs available
  10. Conclusion section