

Radiation Program Educational Requirements

Operators of ionizing radiation equipment shall be knowledgeable about the operational parameters of the equipment and their influence on radiation dose and image quality.

1. Dental X-ray Equipment

The equipment operator must have a thorough understanding and have completed training for safe working methods and appropriate techniques and procedures. It is also acceptable to send staff to training facilities that offer training for the equipment that has been installed or modified. This training must be documented.

2. Dental Lasers

Dental laser operators must complete training in the safe operation of the equipment at the time of purchase/installation. New dentists and staff, who join the facility after the installation and initial training, must receive similar training. It is also acceptable to send this staff to training facilities that offer dental laser training for the equipment that has been purchased/installed. This training must be documented.

3. Cone Beam CT Equipment

Any dentist registered with the College may order a cone beam CT scan. It is their professional responsibility to have an understanding of the technology that includes: the benefits relative to possible risks of the technology as well as the diagnostic limitations in scan interpretation. It is recommended that cone beam CT continuing education in this area be documented when an ordered scan is to be used for treatment decisions. Dentists registered in Alberta may submit, to the College, prior education for consideration of equivalency and qualification for any of the categories listed below.

a) Dentist Education - Acquiring, Interpreting and Reporting

i. Cone Beam CT Unit Specific Education

Any dentist acquiring a cone beam CT scan must have a thorough understanding and have completed training for safe working methods and appropriate techniques and procedures at the time of installation of the specific cone beam CT unit. New dentists who join the facility and who will be ordering and acquiring images after the installation and initial training, must receive similar on-site training. It is also acceptable to attend training facilities that offer cone beam CT training for the equipment that has been installed. This training must be documented.

ii. Acquiring, Interpreting and Reporting Education

In addition to the cone beam CT unit specific education the acquiring, interpreting, or reporting dentist also requires the following education.

Small and medium field of view: 10 centimeters or less Dentoalveolar cone beam CT

A small field of view used for imaging the teeth, their supporting structures, the mandible, and the maxilla. Successful completion of an approved course of instruction, with examination, will allow the dentist to acquire, interpret, and report on scans limited to this size.

College approved qualification programs and continuing education specific to this category are:

- University of Alberta small field of View 3-day course with examination.
- University of Toronto small field of view course with examination.
- Appropriate and College approved University didactic program for undergraduate or post graduate dental students.

Large field of view – over 10 centimeters - Craniofacial cone beam CT scan

LEVEL 1, Acquiring images only for Large Field of View Craniofacial

In addition to dentoalveolar structures, a large field of view may include intracranial structures, the base of the skull, the temporomandibular joint, the paranasal sinuses, the craniovertebral junction, the cervical spine, the neck and the airway spaces.

Successful completion of an approved course of instruction at this level only allows the acquisition of scans of this size. All images must be interpreted and reported on by a more qualified dentist (see LEVEL 2).

College approved qualification programs and continuing education specific to this category are listed below.

- University of Alberta course under development.
- Appropriate and College approved University didactic programs for undergraduate or post graduate dental students.

Large field of view – over 10 centimeters - Craniofacial cone beam CT scan

LEVEL 2, Reviewing, interpreting and reporting Large Field of View Craniofacial

In addition to the requirements of Level 1 Large field of view over 10 centimeters, additional craniofacial course(s) of instruction which cover interpretation of craniofacial cone beam CT curriculum. Successful completion of an approved course of instruction, with examination, will allow the dentist to acquire, interpret, and report on scans of this size.

College approved qualification programs and continuing education specific to this category are listed below.

- University of Alberta program under development.
- Appropriate and College approved University didactic programs for undergraduate or post graduate dental students.

b) Qualifications of Staff

The dentist must ensure that any staff member operating a cone beam CT unit is appropriately trained. The staff member must be adequately qualified by registration or licensure, have a thorough understanding and complete training for safe working methods and appropriate techniques and procedures with minimal supervision. Supervision is defined as having the ability to consult with the dentist either onsite or by phone.

The College recommend the following minimum staff educational requirements in addition to the on-site training specific to the cone beam CT unit to be used:

Successful completion of a course, at least 1 day's duration, in the operation of a cone beam CT scanner. The curriculum should include theoretical, practical and practice components, radiation physics and protection, patient positioning, selection of parameters based on established protocols and image processing. A certificate or other evidence of satisfactory completion of the course, as well as a description of the program, signed by the course director should be available for review. An appropriate cone beam CT training facility program, university program or the training provided by the equipment manufacturer is sufficient.

c) Continuing Education

All dentists and staff members that operate cone beam CT equipment shall include courses and/or other educational programs related to the ordering, acquiring, interpreting, and reporting of cone beam CT scans in their personal continuing education. Continuing education should be documented.