



EFOSA

EUROPEAN FEDERATION OF ORTHODONTIC SPECIALISTS ASSOCIATIONS
FEDERATION EUROPEENNE DES ASSOCIATIONS DE SPECIALISTES EN ORTHODONTIE

EFOSA Radiation Guidelines

Cone-beam computed tomography (CBCT) has made a remarkable entry into the field of Orthodontic diagnosis the last few years. It produces impressive 3D color pictures, in comparison to the black & white 2D projections we have been accustomed to.

However, because of its very recent development, most of us have not been trained in this technique and we do not appreciate its limitations. Some technical aspects of CBCT have to be considered, paying particular attention to the various sources of error in the images, so that our diagnosis can be valid and reliable.

CBCT has been widely accepted as an image modality for different dental applications. The possibilities of CBCT are evident, providing high resolution three dimensional images at a relatively low radiation dose.

CBCT can deliver important information for orthodontic treatment and planning. Correct use of CBCT in orthodontics allows better treatment choices for both orthodontist and patient.

In 2009 the European Academy of Dental and Maxillofacial Radiology (EADMFR) published guidelines for the use of Cone Beam CT [Basic principles for use of dental cone beam computer tomography: consensus guidelines of the European Academy of Dental and Maxillofacial radiology – Horner *et al.*, DMFR 2009].

These guidelines imply the following:

1. There should be a clear understanding of the justification of CBCT use.
2. Users of CBCT should be trained to use CBCT correctly.

EFOSA recommends therefore the following :

1. Those who use the CBCT images should be able to interpret them correctly.

They should follow extra courses on radiation physics, radiation dose risk, radiation protection and CBCT equipment specifications.

2. Those who take the CBCT images and provide the referrers of written report

They should follow all of the above and practical sessions (CBCT equipment, imaging techniques, quality assurance, care of patients) and radiologicql interpretation (included radio-anatomy and radio=pathology and interpretation of artifacts.

3. CBCT conebeam can be applied with limited field of view to improve accurate diagnostics
4. CBCT cone beam should be taken by the practitioner who needs the cone beam related to the pathology.