LETTER TO THE EDITOR

Are different imaging methods affecting the treatment decision of extractions of mandibular third molars? Methodological and statistical issues—an answer to Letter to the Editor

Dentomaxillofacial Radiology (2018) 47, 20180111. doi: [10.1259/dmfr.20180111](https://doi.org/10.1259/dmfr.20180111)

Cite this article as: Manor Y. Are different imaging methods affecting the treatment decision of extractions of mandibular third molars? Methodological and statistical issues—an answer to Letter to the Editor. *Dentomaxillofac Radiol* 2018; 47: 20180111.

The article investigated the treatment decision of oral and maxillofacial experts dealing with the question in their everyday work whether to treat the patient presenting impacted third molar according to panoramic X-ray or only after cone beam CT (CBCT). The experts were asked about their treatment decision according to the radiographic imaging of the same patient that were presented to them separately. All CBCT of the patients included the whole information and image of the third molar. All the patients were over 18 years. 62 teeth were analyzed—for each radiograph a particular third molar was evaluated by the different experts.

The static evaluation of the CBCT included all the information regarding the canal and root location and morphology which was interpreted by the different surgeons.

The questions that were presented to the surgeons were in order to ask the surgeon if he really needs CBCT for the treatment decision of the impacted third molar, to obtain the difference between interpretation of different physicians, and also to find correlation between the interpretation and the treatment decisions.

Since the experts that analyzed the radiographs were not the same physicians that treated the patients, the authors do not think that the information regarding the treatment de facto is relevant.

Since the aim of the article by Neves was to assess the reliability of four panoramic radiographic findings, it cannot be compared to our study that analyzed treatment decision and not reliability of panoramic radiographs.

The tables presented describe the results of treatment decisions according to the different radiographs: Table 1

shows that treatment decision according to panorex was achieved in senior oral and maxillofacial surgical experts, who in most of their professional life were not exposed to CBCT, did not think it is necessary to use and order it for treatment decisions; the less-experienced experts tended to get the treatment decision according to CBCT; and the rest tended to get their decisions according to panorex and CBCT equally. The table shows the inter-rater agreement was low and the result was significant (0.0045), but the intrarater agreement difference was not significant. Table 2 shows the change of decision following CBCT to coronectomy in 26 cases and Table 3 shows that there were differences between the experts regarding panorex and CBCT interpretations. Most of the differences were according to CBCT and less according to panorex.

The aim of our study was to check if the information obtained from CBCT of the impacted third molar in comparison to data obtained from panoramic radiography has an effect on treatment decision of lower third molars among experts of oral and maxillofacial surgery. The conclusions were that the CBCT has a little effect on treatment decision of lower third molars and it can be accepted according to panoramic X-ray.

With the limitations of our study, it was concluded that not in every case a CBCT is needed and that the CBCT does not change the treatment decisions of maxillofacial experts regarding lower third molars although it may give a three-dimensional picture of the impacted tooth and its relation to the inferior dental nerve.

Yifat Manor

Department of Oral and Maxillofacial Surgery, Maurice and
Gabriela Goldschleger School of Dental Medicine, Tel-Aviv
University, Tel-Aviv, Israel