

Befriend your oral and maxillofacial radiologist

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Every orthodontist I know realizes that he or she has an immense responsibility for decisions made when treating patients on a daily basis. But just how far does this responsibility extend? Must the doctor who takes a panoramic radiograph to look for an impacted tooth disclose the findings to the patient or the parent? Yes, I think we would all agree that the patient should be informed of what was learned from viewing any radiograph. But what if the clinician orders a cone-beam computed tomography (CBCT) scan? Is it the orthodontist's responsibility to explain the full depth of the information that is encapsulated in this 3-dimensional image? For that matter, will most orthodontists fully understand what those images have to say?

Just bringing up this issue prompts many questions. Should all scans be read in their entirety and, if so, by whom? Is the cost of reading a CBCT scan included in the fee for taking the scan, or is it additional? Do patients have any choice regarding the degree of interpretation included? How is this problem handled in medicine?

It should be obvious why these questions are being asked in the orthodontic community. The use of CBCT has evolved much faster than anticipated and is accelerating rapidly. With increased availability, universities are finding that CBCT imaging greatly enhances the scope of research opportunities for most departments. The popularity of temporary anchorage devices to aid in the controlled movement of teeth is 1 reason that 3-dimensional equipment is becoming more available to private practitioners. Even with this apparent acceptability, the issue of liability when using CBCT imaging is causing much confusion and is often the source of misinformation. This leads back to my original question: Who should manage the CBCT data set?

Theoretically, there are 2 ways to meet this challenge. The orthodontist could take training courses to

become "cone-beam fluent." This level of education could be offered as part of the resident's university curriculum, or continuing education courses could be taught by oral and maxillofacial radiologists. Dr Larry Jerrold believes that the average orthodontist is qualified to learn how to read these films and notes, "The anatomy is basic anatomy of the skull. Although the average clinician might not know what a given abnormality is, I believe that he or she should be astute enough to recognize it as abnormal and refer appropriately." The other approach is to send the patient's data set to a person who already has the skills to analyze each image, render an opinion, and report it directly to the orthodontist.

The AAO's Council on Scientific Affairs (COSA) recently provided these concerns to radiologists from various universities in the search for a solution. The combined responses are briefly summarized as follows:

1. *Should all scans be read in their entirety and, if so, by whom?* All scans should be read by a qualified person. As in the case of panoramic radiography, the area covered by the radiograph is the responsibility of the diagnostician.

2. *Is this cost of reading a CBCT scan included in the fee for taking the scan, or is it additional?* The cost is usually included in the scan, although in some places it is treated as an additional cost.

3. *Do patients have any choice regarding the degree of interpretation included?* No, in most situations. A meaningful examination cannot be completed without some interpretation of the radiographic scan.

4. *How is this problem handled in medicine?* Throughout medicine, a written report is required by the radiologist when a scan has been requested.

It was just a few short years ago that oral and maxillofacial radiology became recognized as a specialty by the American Dental Association. It only makes sense that, as specialists in orthodontics, we understand when to refer our patients' CBCT scans to specialists in radiology—for the best possible care.