

# Objective cast and panoramic radiograph grading system

**R. Don James, DDS, MSD, President, American Board of Orthodontics**

*Oklahoma City, Okla*

Candidates for certification by the American Board of Orthodontics (ABO) must meet a series of requirements to attain diplomate status. The third and final requirement is the Phase III examination, in which candidates submit a selection of case reports for grading by ABO examiners. The cases are evaluated for quality, completeness, and accuracy of the records; diagnosis and treatment planning; dental and skeletal objectives of treatment and achievement of those objectives; proper case management; facial esthetics and facial change; knowledge of the intricacies of each case; and occlusion.

In an effort to make the evaluation of occlusion more objective, the ABO implemented an objective dental cast and panoramic radiograph grading system in 1999. The most recent Phase III clinical examination in February 2002 was the fourth in which the objective grading system was used, and this examination yielded the highest passing rate (89%) in recent years. Of the 479 cases presented for examination, only 9 (1.9%) were found to be unacceptable due to occlusion; this was the lowest posttreatment cast failure rate ever. Because candidates score their own posttreatment casts and radiographs before the examination, they can select

cases that are likely to pass, resulting in the low failure rate due to occlusion.

The usefulness of this system depends not only on its objectivity, but also on the validity and reliability of the measurements. The grading system was field tested for 4 years to establish the criteria and the precise methods of evaluating posttreatment casts and radiographs, and a special measuring gauge was developed. About 2 months before each Phase III examination, the directors and the examiners go through some measurement calibration exercises to establish a confidence interval in the scoring to account for interrater variability and to make the scoring fair for all candidates.

The objective cast and panoramic radiograph grading system has also been used in voluntary recertification field testing. During this field test, diplomates must score 10 consecutively treated cases and submit their scores. Feedback from the diplomates has been positive.

A voice-over CD-ROM is being made to demonstrate the ABO's cast and panoramic radiograph grading system. It will be available soon through the ABO's central office and its Web site.

This objective grading system for assessing the final occlusal results of orthodontic treatment helps to satisfy our mission of establishing and maintaining the highest standards of clinical excellence and to contribute to the development of quality graduate education programs in orthodontics.