Response from Authors

Dear Editor

This is in response to the comments about our article: '*Ex vivo* accuracy of three electronic apex locators: Root ZX, Elements Diagnostic Unit and Apex Locator and ProPex', which appeared in the *International Endodontic Journal* **39**, 408–414, 2006.

We welcome the opportunity to comment on the questions concerning the above referenced article.

We would like to emphasize that we have used all three apex locators according to the manufacturer's instructions. We did withdraw the file to the '0.5' mark with the Root ZX, the Elements Diagnostic Unit and Apex Locator, according to the manufacturers indication that this is the limit that corresponds to the apical constriction. In the opinion of the authors, if in the 'ProPex' manufacturer's instruction booklet it is stated 'apex reached' when the display shows 0.0, the clinicians must not withdraw the file to the 0.5 which is considered 'middle of apical zone', because the middle of the apical zone is neither the apex nor the apical constriction.

This was the logic behind our comparison. Furthermore, it is specified in the manufacturer's instructions that the apical zone is arbitrarily graduated in 10 segments. This does not constitute a real linear dimension.

Perhaps the instructions for use could have been more precise and recommendations could have been made to which point one should restrict the treatment. According to the results of our study we now know that registering 0.0 indicates we are long, assuming we accept the apical constriction as the point of reference; however, we would be correct if we had accepted the apical foramen as apical terminus.

We should point out that before we conducted our study, we did not know that the 0.0 point when using the ProPex was longer than the point chosen for the two other devices as stated in your letter. To add to the confusion, the manufacturer never specified which anatomical area the 0.0 point represents.

Based on the data of this study, the recommendation can be made to clinicians that use the ProPex to stop their preparation before the 0.0 mark. Rather than believing that our conclusions are misleading, we feel that we have contributed to a more accurate use of the ProPex. Further studies are needed to demonstrate that the ProPex numeric display read-out of the 'arbitrarily graduated apical zone' described in the manufacturer's instructions, indeed correspond with the actual millimetre position in the canal.

We feel that we have reported in an unbiased fashion on the accuracy of three systems, leading to recommendations that benefit the practitioner and improve patient care.

Kind regards, the Authors

G. Plotino, N. M. Grande, L. Brigante, B. Lesti, F. Somma
gplotino@fastwebnet.it