



3D GBR IN A SEVERE ATROPHIC POSTERIOR MAXILLA PRESENTING A LARGE SINUS COMMUNICATION WITH A BONE EXOSTOSIS GRAFT: A RADIOGRAPHIC EVALUATION



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A severe maxillary bone deficit with a vertical and horizontal loss of the alveolar process requires three-dimensional regenerative procedures in the context of a correct implant-prosthetic approach. In this case report a complex regeneration is carried out in a situation in which the bone atrophy of the posterior sector of the second quarter also involves part of the cortical bone of the maxillary sinus floor, hesitating in an oral-antral communication greater than 5mm, whose closure had previously been obtained only with the management of the mucous tissue.

The present work shows, through a radiographic evaluation, how a three-dimensional bone regeneration was obtained with a minimally invasive approach. At the same time the restoration of the maxillary sinus bone floor without using a second surgical removal site was obtained.

A vestibular bone exostosis present on the left maxillae tuber was in fact removed through piezoelectric surgery, shredded and used as an autologous component in the preparation of the graft mixture formed by 50% autologous bone and 50% deproteinized equine bone. For GBR a d-ptfe membrane stabilized with tenting screws and fixing pins is used.

Radiographic follow-up at 8 months shows an horizontal and vertical bone augmentation of up to 9.5mm allowing the future insertion of implant fixtures in a prosthetically guided position.



Fig.1 Pre-surgical two-dimensional radiographic evaluation.

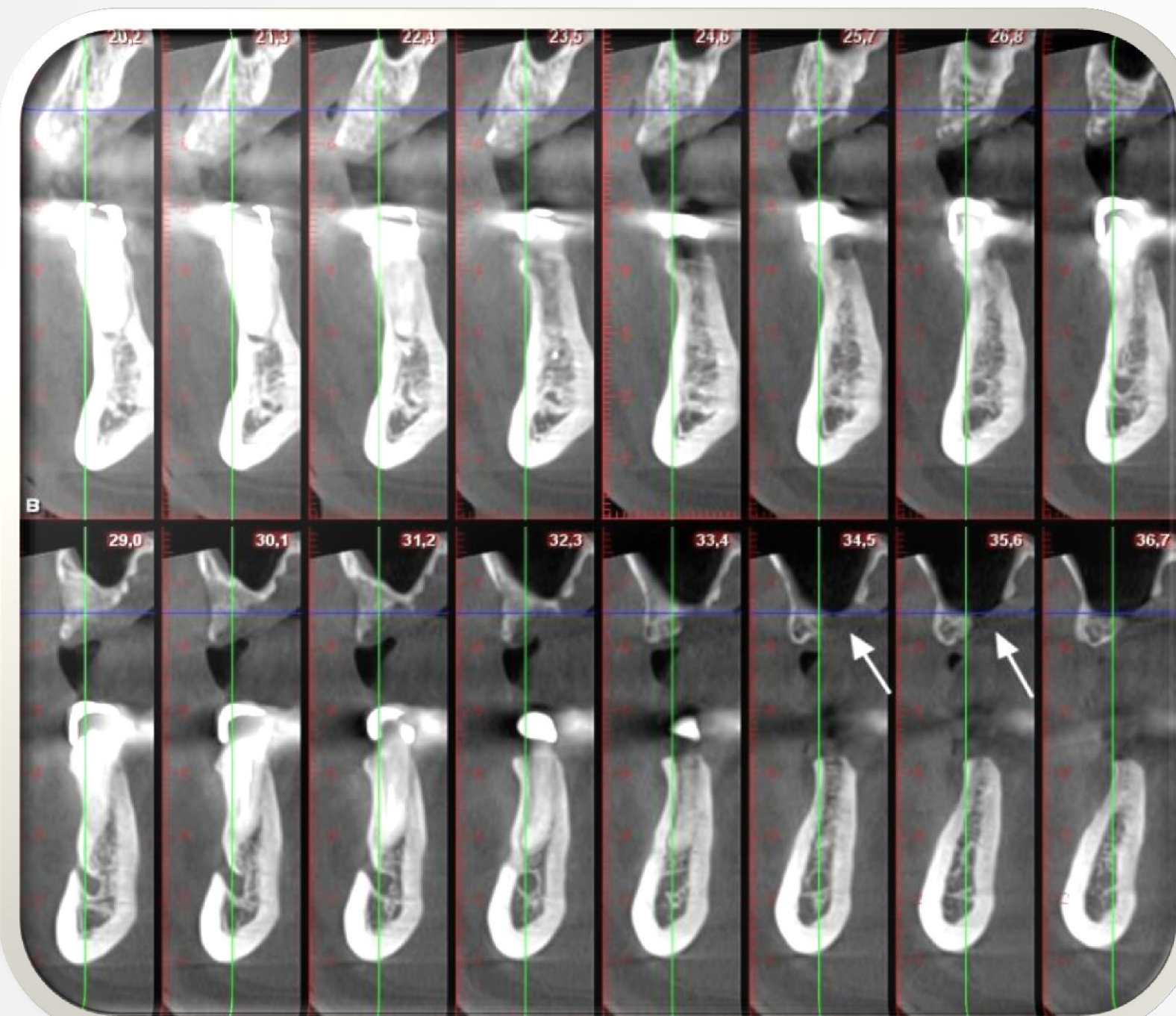


Fig.2 CTS: severe atrophy of the alveolar process and bone perforation (arrow).

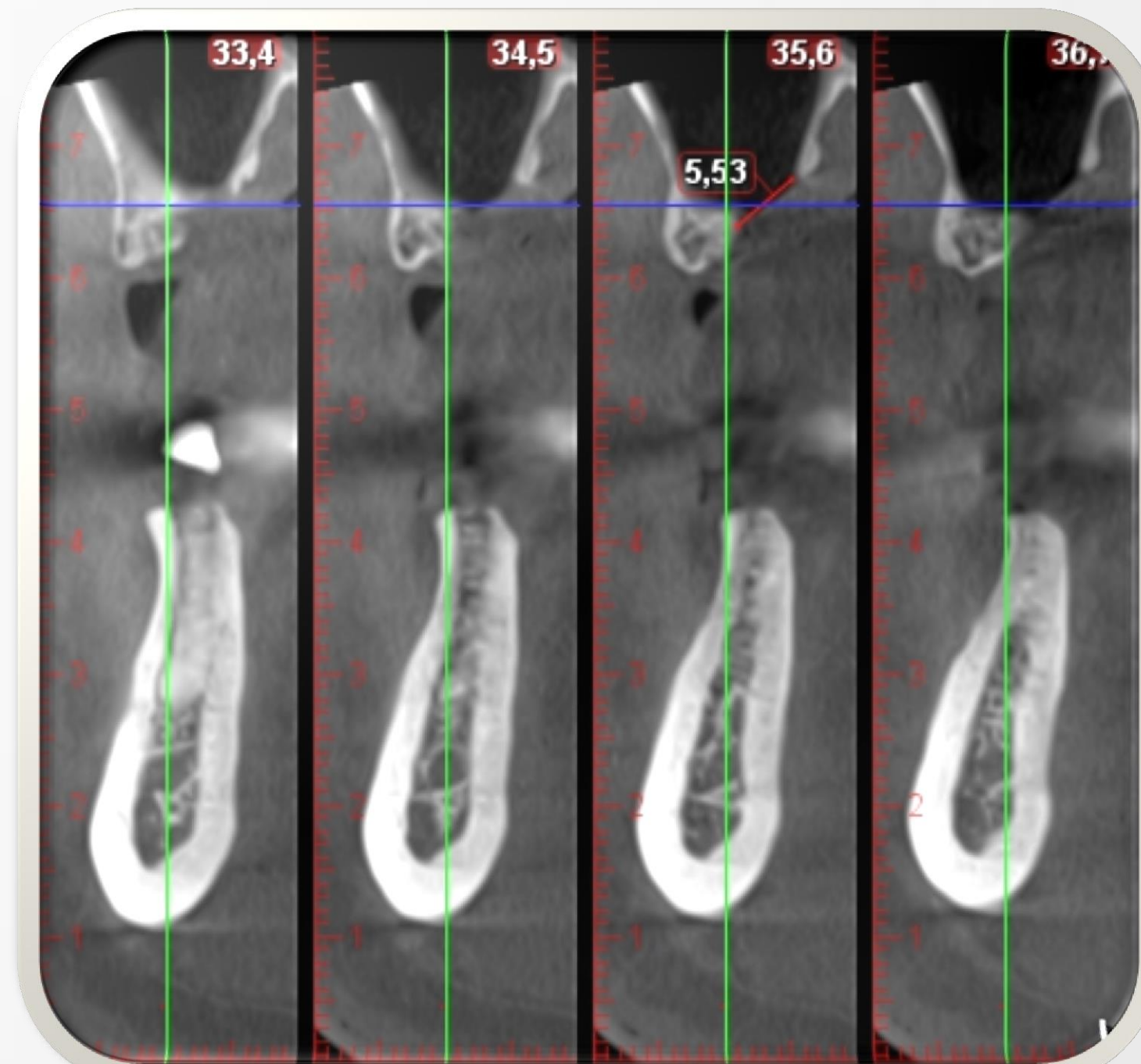


Fig.3 Measurement of oro-antral communication.

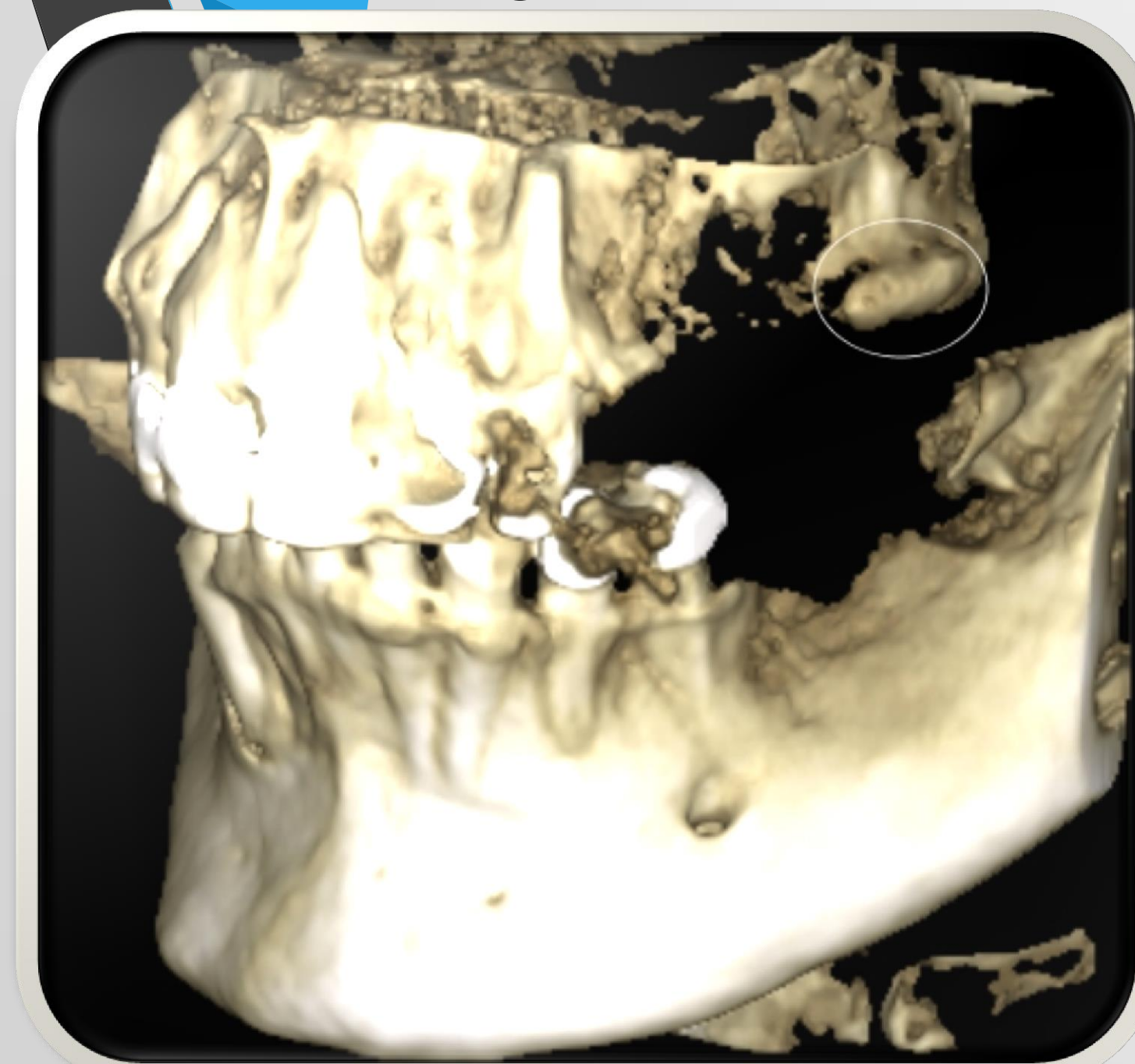


Fig.4-5 CBCT: vestibular bone exostosis. It has density characteristics suitable for use as an autologous component of the graft (in the circle).

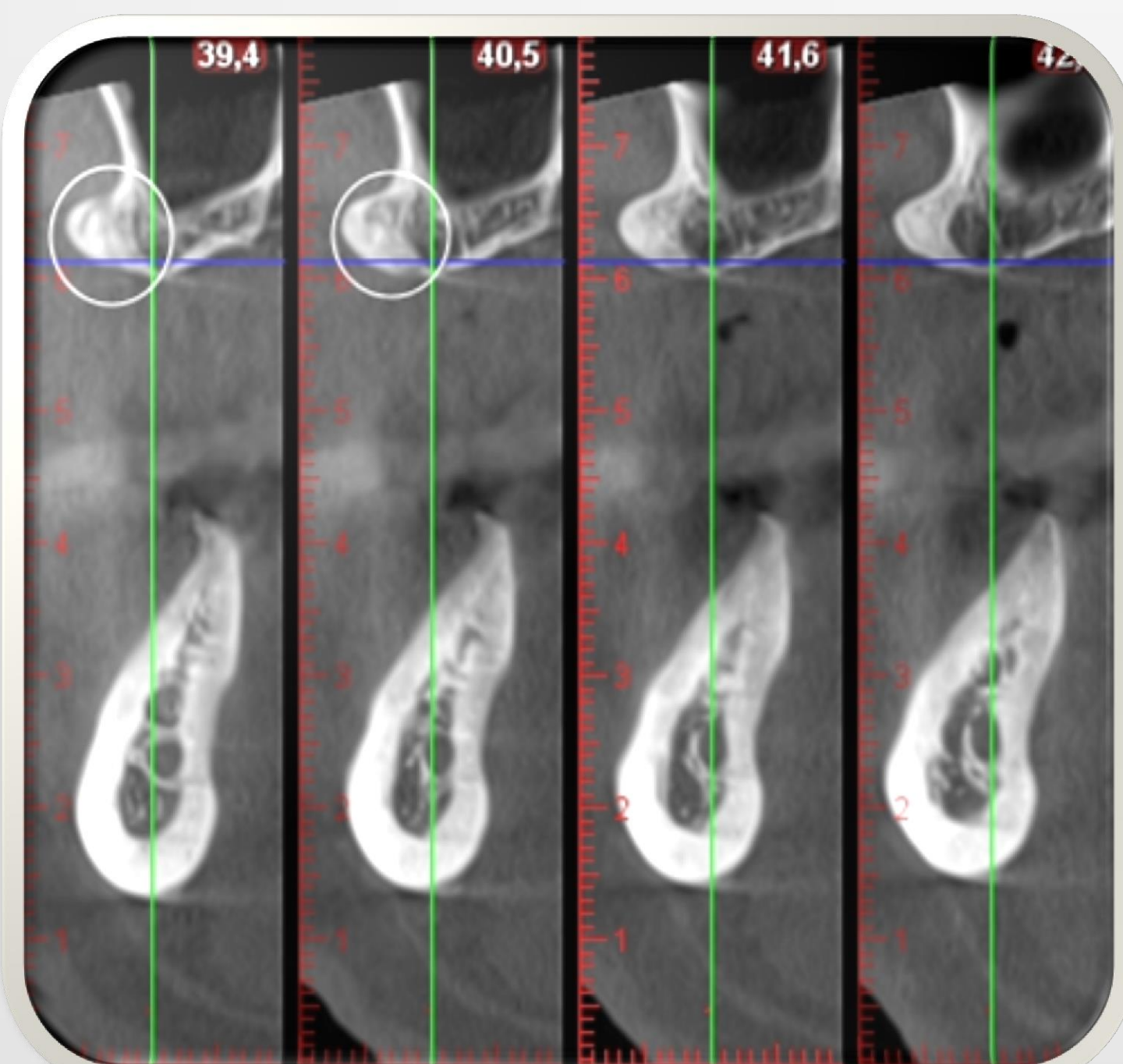


Fig.6 Post-surgical two-dimensional radiographic evaluation.

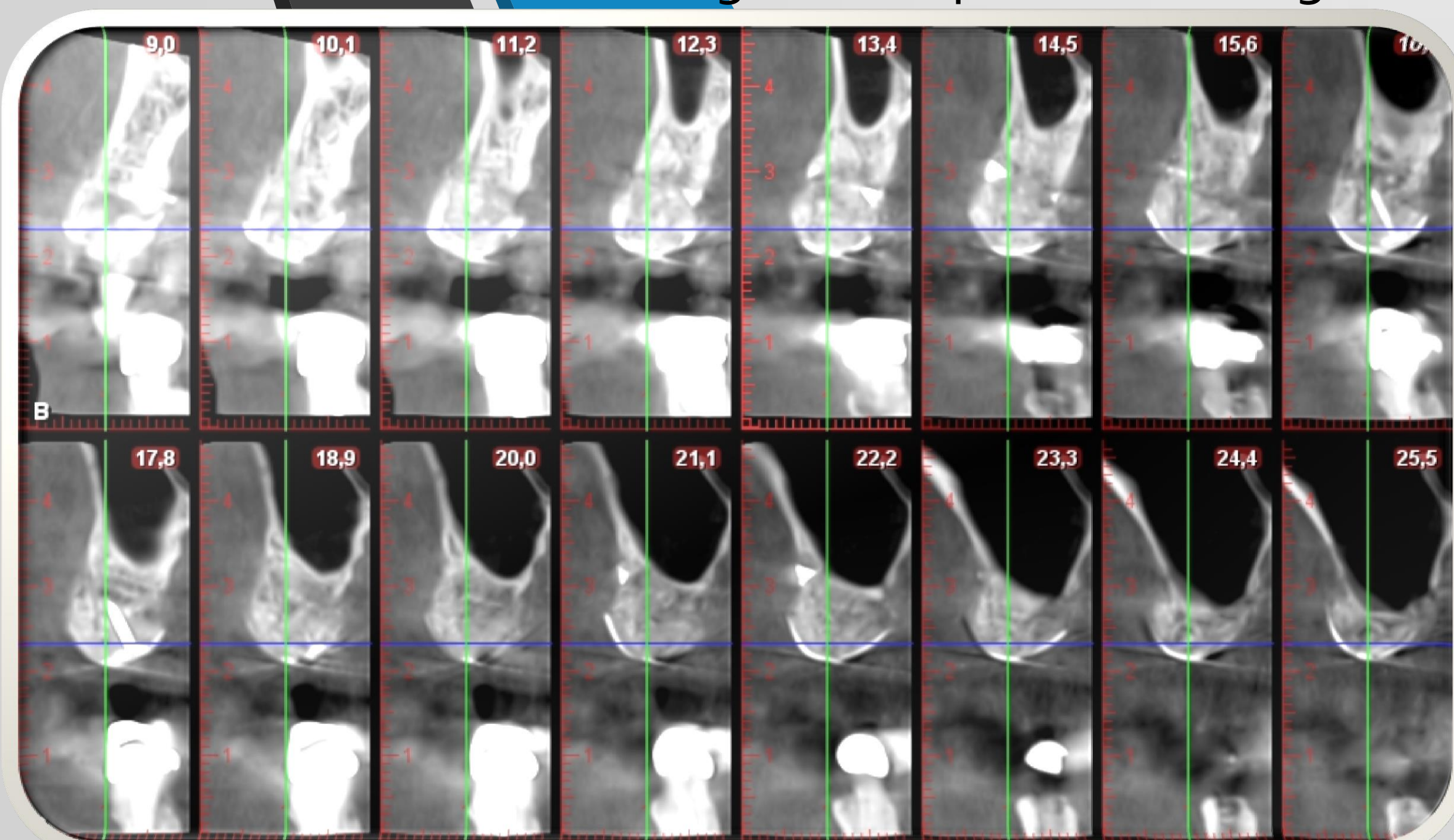


Fig.7 CTSPost-surgical evaluation (16 scans in the same position than the pre-surgical CTS).

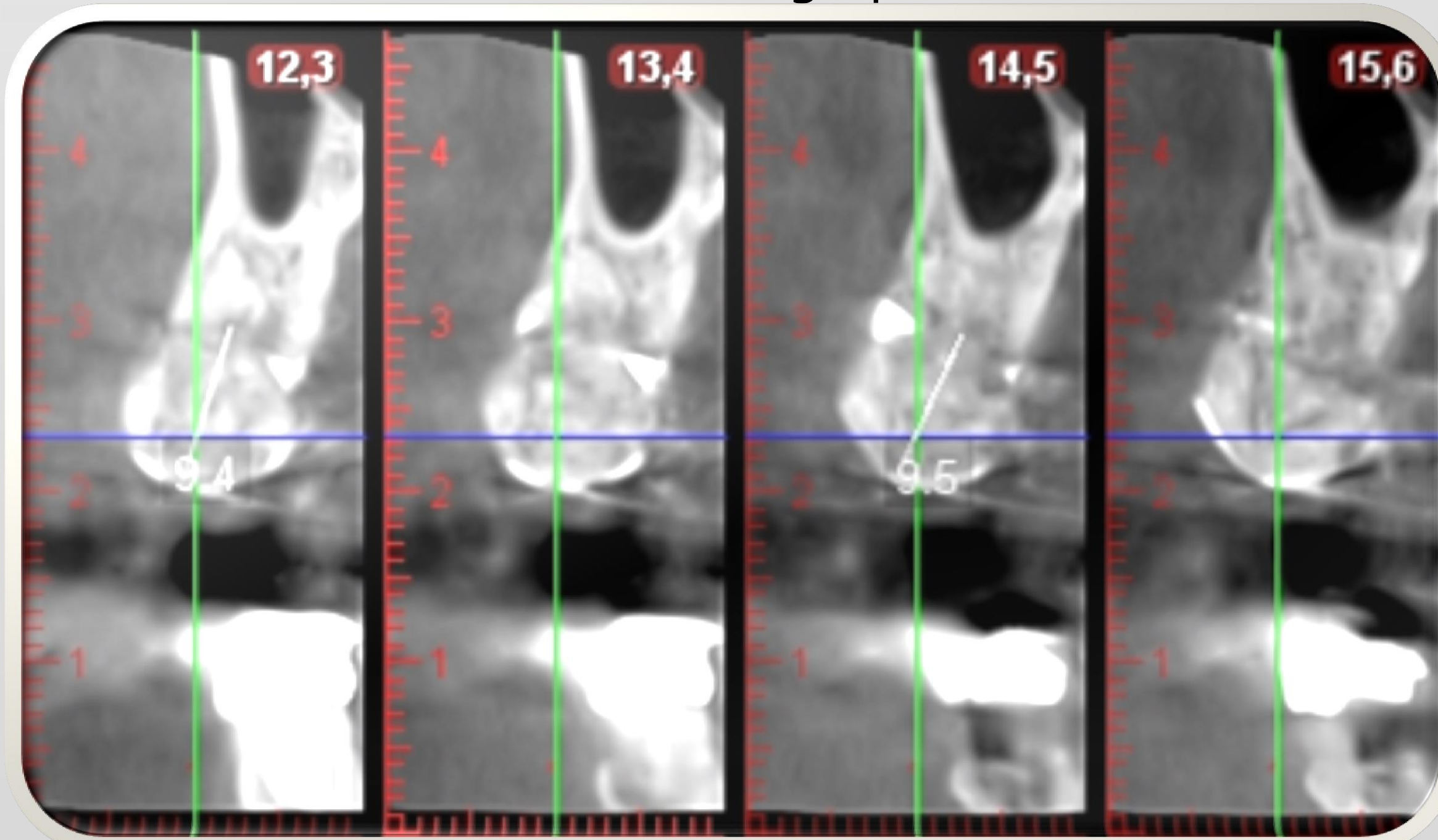


Fig.8 CTS: measurement of vertical bone augmentation.