

CS 9300

## CBCT Confirms Chronic Periodontitis, Rules Out Vertical Root Fracture

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### Case Overview

A 48-year-old Caucasian female was referred to our office for a suspected vertical root fracture of tooth #19. The patient was generally healthy, but had previously been diagnosed with generalized moderate chronic periodontitis. The periodontal disease received scaling and root planing therapy in the patient's general dental office. The patient was placed on 3 month periodontal maintenance.

Several years following her periodontal therapy, persistent pocketing was noted on tooth #19 distal, and the patient was referred due to suspicion of a vertical root fracture. Upon examination in our office the patient was found to have generalized 2-3 mm probing depths, with the exception of tooth #19 distal (8 mm) and tooth #22 distal (9 mm with exudate).



Intraoral photographs show persistent pocketing and deep probing depths consistent with periodontitis on tooth #19 and tooth #22.



Jason G. Souyias, DDS  
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Jason G. Souyias is a Diplomate of the American Board of Periodontology. He earned his DDS from the University of Detroit Mercy School of Dentistry in 2002. He received his certificate in Periodontology from Oregon Health & Science University School of Dentistry in 2005. Dr. Souyias is in private practice in Port Huron, Michigan and is a former part-time Assistant Clinical Professor, Department of Periodontology and Hygiene, at the University of Detroit Mercy.

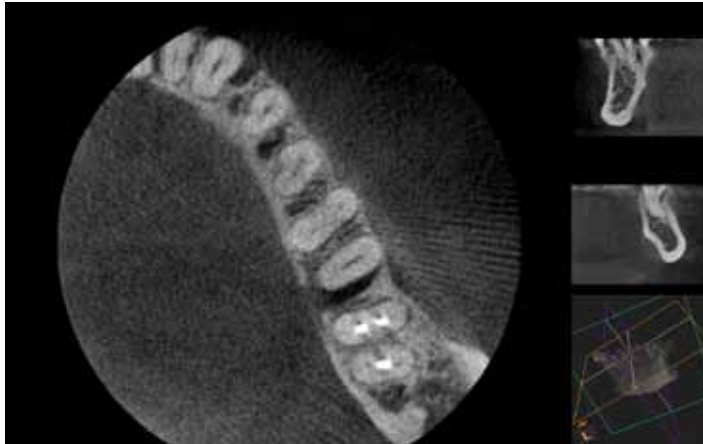


Mark K. Setter, DDS, MS  
Port Huron, MI

Mark K. Setter graduated from the University of Michigan, receiving both a DDS degree and a Masters Degree in Periodontics. He is also a graduate of The Misch International Implant Institute in Surgery and Prosthetics. Dr. Setter is presently on the adjunct faculty at the University of Michigan, is a clinical assistant professor at Temple University and is on the faculty of The Misch International Implant Institute. He is in private practice in Port Huron, Michigan.



A CBCT scan was ordered to rule out a fracture of the tooth. The scan, conducted with our CS 9300 system, confirmed our suspicion of persisting localized chronic periodontitis as opposed to a vertical root fracture.



Axial, sagittal and coronal slices of CBCT scan rule out vertical root fracture and confirm suspicion of persisting localized chronic periodontitis.



# Clinical Case Study

## Treatment Plan

A treatment plan was drawn up for guided tissue regeneration around the two sites. The CBCT scan allowed us to know EXACTLY what the defect looked like before surgery. This information helped us to choose more appropriate materials, assign a more accurate fee for the procedure, and predict the success of the outcome more accurately for the patient.

## Testimonial

Periodontal applications obviously require high-resolution images to properly visualize intricate anatomical features. This can be especially helpful for patients whose symptoms are consistent with multiple different types of pathology. In this case, having the CBCT scan at our disposal not only enabled the patient to keep her teeth, but helped us to know what to expect under the gums before we picked up a scalpel. We like that kind of predictability, and many patients prefer a quick, painless CBCT scan over an exploratory procedure. Further, capturing and analyzing a 3D image of this patient was much faster than – and eliminated the need for – more extensive differential diagnostic methods.

