PreXion’s digital treatment planning results in predictable patient outcomes

Edentulous patients can benefit from the integration of CBCT data

By Siamak Abai, DDS, MMedSc

The diagnosis and treatment planning of edentulous patients with the integration of cone beam computed tomography (CBCT) data and digital treatment planning results in predictable treatment outcomes.

As the new standard of care turns toward technological advances with CBCT scans at the forefront, clinicians and patients benefit from ever increasing accuracy and minimally invasive procedures. The PreXion CBCT scanner and treatment-planning software allow the clinician to properly diagnose and treatment plan edentulous patients based on the final restoration design. A preliminary diagnostic CBCT scan (Fig. 1) is beneficial to properly visualize in three dimensions the extent of bone loss and the prognosis of existing dentition.

When a patient presents with hopeless and non-restorable teeth, the proper treatment of extractions and fabrication of an ideal complete denture based on functional, esthetic and phonetic guidelines is completed.

Based on a dual-scan protocol (Figs. 2a, 2b), the final tooth position and prosthetic outcome is transferred onto a digital treatment-planning protocol. The treatment-planning software allows the clinician to propose the proper implant position based on anatomical limitations. This data can be utilized to fabricate a surgical guide for guided implant placement, resulting in minimally invasive surgery, increased accuracy and faster healing and restorative times. A postoperative CBCT scan confirms the accuracy and final implant position (Fig. 3).

About the author

Siamak Abai, DDS, MMedSc, is a graduate of Harvard University’s Advanced Graduate Prosthodontics program with a master’s degree in oral biology and prosthodontics. He received his doctorate of dental surgery degree from Columbia University College of Dental Medicine, followed by two years of advanced education in general dentistry training at the Columbia University Medical Center. Abai practices implant, esthetic and reconstructive dentistry at the W-Clinic in Newport Beach, Calif. He serves as a lecturer and clinical attending at the UCLA School of Dentistry’s Advanced Graduate.