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## Cone beam computed tomography (CBCT) and computer guided implant surgery: From virtuality to reality

**Khaled Ekram**

Cairo University, Egypt

Cone beam computed tomography (CBCT) is now very widely accepted and is already in use in dental practice all over the world. This presentation will demonstrate how this modality can provide the dentist with useful diagnostic information which can be integrated with other advanced modalities to produce computer generated surgical guides that can allow the operator to surgically apply the predetermined treatment plan for different surgical and prosthetic applications that are difficult or even impossible to obtain by conventional methods. In this presentation, computer guided implant surgery will be discussed in details from A to Z, starting from the CBCT scanning protocol which differs according to the type of support from which the computer generated surgical stent will get its support till the drilling protocol and types of drilling systems and techniques used in these types of surgeries. Also in this presentation, the types of computer generated surgical stents will be highlighted. Surgical stents differs according to the type of support and also according to the drilling technique. Moreover, the precautions that should be made during the surgical protocol will be discussed in details as well as the differences between the conventional surgical protocol and the computer guided methods. Finally, other applications of digital dentistry will be mentioned briefly.

### Biography

Khaled Ekram, DDS, BDS, PhD, is currently working as Assistant Professor of Oral and Maxillofacial Radiology at Faculty of Oral and Dental Medicine, Cairo University. His scientific activities include: Senior Consultant of Oral and Maxillofacial Radiology, Member in European Association of Dento-Maxillofacial Radiology, Member in International Association of Dento- Maxillofacial Radiology and Program Instructor for Continuous Education Courses, Faculty of Oral and Dental Medicine, Cairo University, Egypt, 2010-2014.

[khaledekram@yahoo.com](mailto:khaledekram@yahoo.com)

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