

## Addressing the "Mission Impossible"

Thomas J. Balshi, D.D.S., Ph.D., F.A.C.P.

Technological advancements have led to superior outcomes for patients, but they have also ensured that experiences in the prosthodontist's chair are faster and smoother than ever before.

The smile is a vital asset to human well-being. The prosthodontist's professional pride is in building smiles that are worthy of celebration. Dental implant technology has enabled us to deliver healthy smiles with superior esthetics for virtually every patient. Innovations have reduced the time and trauma from the procedures, permitting remarkable results with minimal treatment time and a smooth recovery.

## "The many advantages of digital design culminate in a prosthesis that fits, functions and appears excellent."

The cutting edge of prosthodontic expertise addresses "Mission Impossible" clinical conditions and makes them do-able. This is most particularly evident in patients with severe bone loss. In past times, they often began their journey in a hospital, giving up bone from another site to be later used in the jaw. Today, we may sidestep bone grafting using extraordinary data available from cone beam CT scans to plan in 3D intricate surgeries on a computer and, with computer generated templates, surgically place zygomatic and pterygomaxillary implants. This "No Bone Solution" protocol completely eliminates donor site morbidity with grafting and provides the patient with immediate gratification by placement of an implant-retained prosthesis immediately following surgery. Recovery time is drastically reduced and most patients are fully functional the next day.

The combination of surgical technology with zygomatic implants and refined laboratory technology has proven to be a patient-friendly experience that delivers predictably high quality results. The cone beam CT scan and the 3-D planning gives us the opportunity to create the best possible technique for the actual surgery, and allows us to determine both the bone anchorage points for the implants and the prosthetic emergence points for screw retention.

The long term success of such sophisticated dental implant treatment is critically dependent on the quality of the final prosthesis. Technology now allows robots to mill exact frameworks to support highly esthetic individual ceramic enamel-like crowns and especially life-like gingival prostheses. Our use of individual crowns on computer generated frameworks has eliminated screw holes in the crowns which adds to the natural esthetics of the prosthesis and allows the crowns to maintain maximum integrity. In our practice, this process builds upon the immediate prosthesis "prototype" and permits refinement of the initial plan by skilled dental technicians. The many advantages of digital design culminate in a prosthesis that fits, functions and appears excellent.

Instead of the eighteen month plus treatment plan using bone grafting,



The CM Prosthesis



new technologies allow us to reach the same destination in essentially three visits. Our imaging technology permits 1) placement of implants and provisional prosthesis during one visit, 2) a final impression following implant integration and 3) delivery of the final prosthesis. Many patients who previously thought the pathway to teeth was impossible today find this technology to be a stepping stone to a dream come true. We are honored and privileged to incorporate it into our everyday care and to build celebrated smiles. We are prosthodontists!

## About the author



Dr. Thomas J. Balshi is a Diplomate of The American Board of Prosthodontics and founder of Prosthodontics Intermedica, the Pi Dental Center, in Fort Washington, PA. He is also a

director at the Institute For Facial Esthetics. Both his graduate and post-graduate degrees were earned from Temple University School of Dentistry, and he received an Honorary Doctorate of Science from Cabrini College. Dr. Balshi received his surgical and prosthetic implant training directly from Professor Per Ingvar Bränemark, Institute For Applied Biotechnology. He is a Charter Member and Fellow of the Academy of Osseointegration, a Fellow of the American College of Prosthodontists, and a Fellow of the American Academy of Implant Prosthodontists and the ICP. He was a Founder and President of the Pennsylvania Prosthodontic Association.