



Academy of Prosthodontics 2026 Annual Scientific Session The Boca Raton Hotel, Boca Raton, FL | May 27-30, 2026

Program Speaker – Rafael del Castillo, DDS, FACP

Title

Esthetic Integration and CAD-CAM Technology: Selection of Materials for Restorative Challenges

Abstract

Due to the inherent mechanical, biological and esthetic clinical challenges, implant-supported reconstructions in the maxillary esthetic zone are considered a complex restorative treatment. To date, considering the esthetic disadvantages of conventional titanium implant abutments and the mechanical limitations of one-piece zirconia abutments, these materials cannot be considered “ideal” for all clinical scenarios.

Clinical reports and short to midterm mechanical, biological and esthetic clinical outcomes indicate that CAD/CAM implant supported restorations can represent a predictable restorative alternative to stock/custom and metal/zirconia implant restorations and be considered a clinically relevant option in mechanically challenging but esthetically demanding situations, as often found in the maxillary esthetic zone. However, while CAD/CAM technology has been suggested to enhance and ease implant abutment/restoration design and manufacturing, the selection of appropriate material combination for each restoration still remains as a critical decision affecting restoration’s long term clinical outcomes. Therefore, understanding the properties of available CAD-CAM restorative materials together with the knowledge on the most recent scientific evidence on the clinical use of these materials will allow the application of sound based clinical decisions.

Learning Objectives

- To identify key diagnostic parameters to better assess patients, diagnose complex needs, and develop comprehensive plans for restorative challenges in the esthetic zone. Evaluate Immediate Loading Candidacy More Accurately
- Understand the properties and appropriate selection of CAD-CAM restorative materials and treatment protocols to be used in partially edentulous patients with high esthetic expectations
- Apply the most recent scientific evidence and clinical rationale to treat clinical challenges merging function, esthetics and biocompatibility.

Biography

Dr. Rafael del Castillo earned his DDS degree from the University of Granada, Spain, in 1995. Following his graduation, he moved to the United States to pursue advanced postgraduate training, obtaining his Certificate in Prosthodontics from the Eastman Institute for Oral Health at the University of Rochester, New York, in 1999. After more than 20 years of clinical private practice, Dr. del Castillo became a Diplomate of the American Board of Prosthodontics in 2019.

Between 2010 and 2012, he served as lecturer for the continuing education programs organized by the Spanish Society of Prosthodontics and Esthetic Dentistry. In addition, Dr. del Castillo is the author of scientific publications in peer-reviewed journals, with a focus on restorative dentistry, esthetics, and implant dentistry.

Dr. del Castillo continues to divide his professional activity between the private practice he directs in Alicante, Spain—focused primarily on restorative, esthetic, and implant dentistry—and his academic role at the Eastman Institute for Oral Health, University of Rochester (NY), where he currently serves as a Clinical Assistant Professor in the Department of Prosthodontics. Additionally, he is currently pursuing a PhD degree as a research fellow in the Department of Oral Surgery and Implant Dentistry at the University of Granada, Spain.

**Speaker has disclosed affiliation with Dentsply Implants*