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## Title: Treatment of Fully Edentulous Patients with Cross-Arch Implant-Supported Zirconia Prostheses

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### **Proposal**

When the final remaining teeth in the dental arch are lost, patients are confronted with a challenging state of edentulism which is associated with discomfort and psychological stress. Today, the successful treatment of edentulous arches with oral implants has been confirmed in various investigations. The prosthetic rehabilitations of such edentulous arches can be restored with implant-retained, implant supported, or fixed implant supported prostheses. Although, studies have shown that the survival rate of implants supported by fixed prostheses are greater and the chewing capacity with fixed reconstructions are better than the removable ones, the overall patient satisfaction was comparable because of the large metallic frameworks. The frameworks of fixed full prostheses, which were usually made of gold, cobalt-chromium, or titanium alloys, were heavy, often had large dimensions, and therefore frequently miscast. To overcome these problems, computer-aided-design and computer-aided-manufacturing (CAD/ CAM) technology was developed. Recent studies have shown that CAD/ CAM fabricated implant supported zirconium-oxide frameworks are more biocompatible when compared to implant supported full-arch titanium prostheses. Moreover, zirconium-oxide frameworks provide a high standard of aesthetics, reduce the number of metals used in the oral cavity and have lower density compared to metals, which reduce the weight of large frameworks. However, current evidence indicates that zirconia fixed complete dentures have a very low failure rate in the short term, but may have complications related to chipping of veneered porcelain in the long term. Therefore, the aim of this special issue is to investigate the clinical outcomes of one-piece fixed complete dentures made of zirconia for edentulous patients.

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