



**Figs. 1 & 2:** Initial clinical situation. **Figs. 3 & 4:** Pre-planning of the surgery. **Figs. 5 & 6:** Placement of the implant. **Figs. 7 & 8:** A temporary removable denture relined with silicone. **Fig. 9:** The patient with inserted temporary removable denture.

# Single-tooth restoration in the aesthetic zone

Dr med. dent. Franz-Jochen Mellinghoff, M.Sc., PhD, Germany

The following clinical case report describes a successful single tooth restoration of an aesthetically compromised dentition using Straumann® PURE Ceramic Implant. The natural-looking ivory colour of this implant allowed us to meet the expectations of patients who are seeking to achieve better aesthetic outcomes.

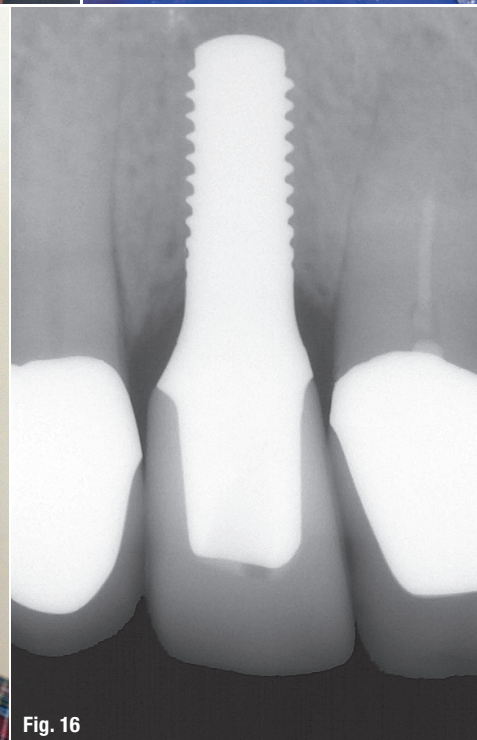
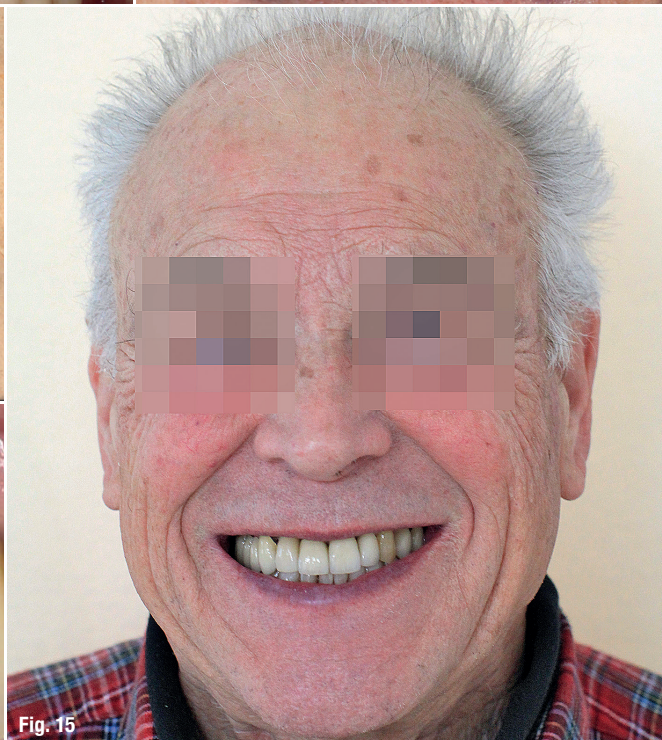
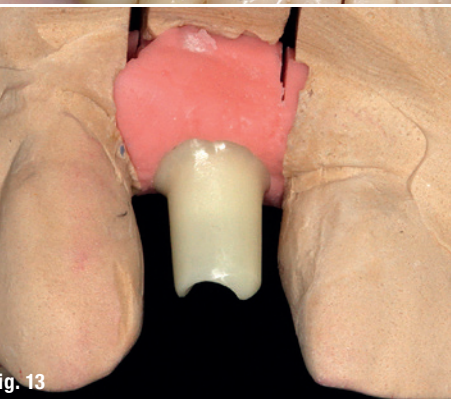
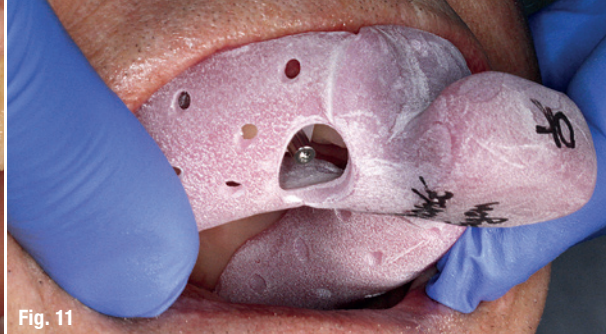
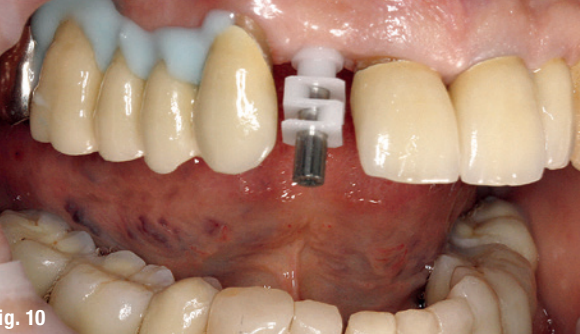
## Initial situation

In our practice, we particularly emphasise the importance of an informative first conversation with new patients. The purpose of this conversation is to discuss the expectations about treatment goals and enable patients to

make informed decisions. Patients currently desire a very good function, outstanding aesthetic results, well-tolerated materials and longevity. A healthy male patient came to our practice requesting a replacement of his missing right maxillary lateral incisor with an aesthetic restoration. He had lost tooth #12 four years ago due a traumatic accident (Fig. 1). He presented good oral hygiene with healthy gingival tissues (Fig. 2).

## Treatment planning

The treatment plan involved a detailed explanation of the intended therapy, including a series of extraoral and



**Figs. 10–12:** Impression for the definitive crown was made. **Fig. 13:** The crown made from disilicate ceramic. **Figs. 14 & 15:** Clinical situation after the surgery. **Fig. 16:** Radiograph after the surgery.

intraoral photographs, models and digital volume tomography (Figs. 3 & 4). To replace a missing tooth in region 12, we opted for a late implant placement. Given our positive experience with this method, we were able to offer the patient a safe, well-proven procedure and a good prognosis for an aesthetically high-quality treatment result. After evaluating all the diagnostic records, we were able to meet the patient's request for a ceramic implant.

### Surgical procedure

The implant surgery was carried out under local anaesthesia. The surgical procedure was performed using a drilling template according to the protocol for the Straumann® PURE Ceramic Implant System. The ceramic implant was placed in the prepared osteotomy with a torque of 35 Ncm (Figs. 5 & 6). During the osseointegration period the patient wore an existing temporary removable denture, which was relined with silicone and checked for pressure points to avoid any possible loading (Figs. 7 & 8). The slightly reduced temporary removable denture was used until the end of the healing phase and before the implant loading, and thus, the patient did not have to compromise on aesthetics during that period.

### Prosthetic procedure

The patient was able to continue with his committed public life with the temporary removable denture and was also unrestricted in his ability to communicate (Fig. 9). After the healing period, the impression for the definitive crown was made using an individual tray with polyether and a coping for open tray impressions (Figs. 10–12). The implant crown (disilicate ceramic) was made on a titanium base (CI RD Straumann® PUREbase, Fig. 13). The crown was cemented with elastomeric resin cement. Adhesive cementation gives us a reliable result. Finally, refining occlusion was performed. The patient was satisfied with the result both in terms of aesthetics and functionality (Figs. 14 & 15).

### contact



**Dr med. dent. Franz-Jochen Mellinghoff, M.Sc., PhD**  
 Pfauengasse 14  
 89073 Ulm, Germany  
 Phone: +49 731 62158  
 www.dr-mellinghoff.de

