Immediate Placement of a two-piece zirconia implant
Z-Systems Z5c Tissue Level Implant

A 63 years old male suffering from allergies showed up in my practice in January 2013. The initial diagnosis revealed that tooth #2 was decayed by caries, and tooth #1 was affected by a periodontal abscess with furcation involvement. Both teeth were considered hopeless. Tooth #4 and #3 were already missing before, and the patient wore a bridge spanning from position 2-6. In a second appointment on February 20, 2013 tooth #2 and #1 were extracted and two ceramic implants were installed in position #2 and #4.

Position #4 showed a good bone quality (D2) and a Z5m monotype implant (Ø 4 mm x 10 mm) from Z-Systems was inserted with a torque value of 45 Ncm. Position #2 showed less desirable bone quality (D3), thus a Z5c two-piece implant (Ø 4 mm x 10 mm) from Z-Systems was chosen and a healing cap, placed out of occlusion, was utilized. The implant was installed reaching a torque value of 25 Ncm.

Figure 1 shows an occlusal view after implantation, and figure 2 shows a panoramic x-ray after surgery.

The patient left the office with an immediate provisional restoration with reduced occlusal contact in the region #4 and without dynamic occlusion in the region #4-5.

Three months later, May 17, 2013, the final restoration – a full ceramic zirconia bridge – was placed (see figure 3).
The x-ray pictures after placement of the final restoration (see figure 4) and January 30, 2014, 12 months after implant placement and 10 months post loading (see figure 5), show very good preservation of the cortical bone.

![Fig. 4: panoramic x-ray after loading](image)

![Fig. 5: x-ray 1 year after implant placement](image)

**Conclusion:**
The Z5c two-piece zirconia implant from Z-Systems, Switzerland, showed excellent clinical results. The handling of the abutment was easy and the soft tissue healed tightly around the implants. Z-Systems Z5c Tissue Level Implant is a reliable option for implant placement and prosthetic rehabilitation.
Splinted restoration on two-piece zirconia implants
Z-Systems Z5c Tissue Level Implant

The lower left first and second molars of a 54 years old female patient were replaced with two new two-piece ceramic implants and restored with splinted crowns.

The implants (diameter: 4 mm, length: 10 mm) were placed 12 weeks after extraction (Nov. 23, 2012) with a classical flap elevation procedure without adjunct bone augmentation. Figure 1 and 2 show panoramic x-rays before and after implant surgery.

The clinical situation after primary wound closure can been seen in figure 3.

The implants were allowed submucosal healing for 16 weeks (Mar. 3, 2013) before they were restored with straight abutments and splinted crowns in a second stage surgery (see figure 4). The soft tissue’s response around the zirconia implants shows no signs of inflammation. The height of the abutments needed to be reduced (see figure 5) to leave enough space for the future prosthetic restoration.
After impression taking the patient was restored with two splinted ceramic crowns. Ten months later (Jan. 10, 2014), the patient was seen for a follow-up examination. Healing was uneventful and gingival health as well as crestal bone level maintenance are very good (see figures 6 and 7).

**Conclusion:**
The new two-piece ceramic implant from Z-Systems shows excellent clinical results and crestal bone level maintenance. Z5c Tissue Level Implant is a reliable option for the prosthetic rehabilitation of missing molars.
Restoration of two-piece zirconia implants

Z-Systems Z5c Tissue Level Implant

Case 1 is a 43 year old female who received a Z5c two-piece zirconia implant (Ø4.0 mm x 10 mm) in tooth position number 30.

The implant was uneventfully placed August 22, 2012 after flap elevation and without bone grafting.

After submucosal healing of 4.5 months (January 9, 2013) the implant was restored with a straight abutment and a single crown.

At 12 months after loading (January 30, 2014), healing was uneventful with the patient presenting excellent gingival health and good crestal bone maintenance (see Figure 3)

Conclusion:
As demonstrated in these two cases the Z5c two-piece zirconia implant manufactured by Z-Systems is a reliable alternative to conventional titanium implant systems.

Fig. 1: panoramic x-ray after implant placement, case1

Fig. 2: x-ray after loading with prosthetic restoration, case 1

Fig. 3: 12 months post loading x-ray follow-up, case 1