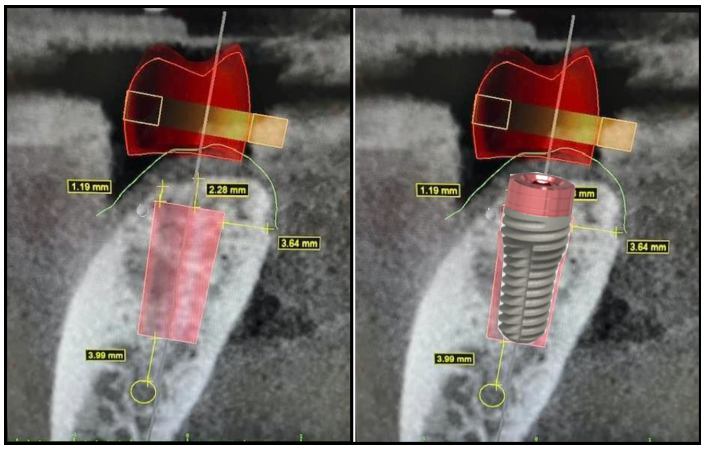
IMPLANT PLACEMENT ON SLOPED RIDGE WITHOUT RECONTOURING BONE

I posted this response to an extensive debate about placement of an implant in a lower posterior arch with about a 2 mm difference in the height of the ridge from lingual to buccal. Solutions proposed ranged from countersinking the implant, flattening the ridge to place the implant level with the Buccal and Lingual of the ridge, to flattening the ridge and still placing the implant 2 mm sub-crestal.



"I read all the comments and realized how ingrained in many dentists's minds that sub-crestal placement is a solution to an uneven ridge.
Here is how my new GEN5 implant addresses the common dilemma of an uneven ridge. A 11.5mmL x 5.7mmD implant was proposed by the clinician for this wide, posterior ridge. I overlayed a 13 mm GEN5 implant, which is actually 14mm long. The GEN5 implants have an extra 1 mm added to the top of each implant to give vertical flexibility in placement. As shown on the right, I would place the implant level with the highest point of the bone on the lingual while leaving its smooth, anodized surface exposed above the scalloped bone on the buccal. The exposes smooth surface will not contribute to future peri-implantitis as might be the case with an exposed blasted surface. According to one comment, Neodent recommends 2 mm sub-crestal placement. That may be because that system only offers one platform diameter so, with wide implants, a long running room is needed for the abutment to widen to an appropriate diameter to support a crown. This may compromise oral hygiene as it does not produce a natural emergence profile.

As for placement of the top of the implant sub-crestal, if micro-leakage occurs at the implant-abutment junction, do you want it occurring deep in the bone or supra-crestal? Also ask why countersink or flatten the ridge when an implant with a hybrid surface design, having a smooth neck and an extra 1 mm of length to the neck, can accommodate uneven ridges and position the implant-abutment junction supra-crestal. Dr. Daniel Buser, Professor Emeritus, Bern University confirmed in an interview that since the 1990s he has placed Strumann Tissue Level implants 1mm supra-crestal, with part of the smooth neck sub-crestal. The Swedish Derks 9 year study demonstrated a reduced incidence of peri-implantitis with Straumann's Tissue Level implants compared to NobelBiocare's and Astra's implants placed bone level with the rough surface to the top of the implant.

RESEARCH SUPPORTS REDUCTION OF PERI-IMPLANTITIS BY USING A HYBRID DESIGN SURFACE WITH THE IMPLANT-ABUTMENT JUNCTION SUPRA-CRESTAL

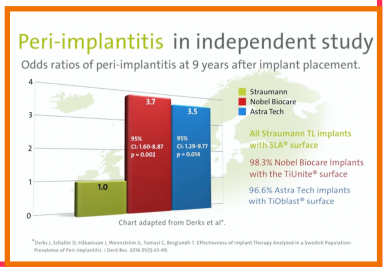
Applies to Straumann's TLX implant and Paragon's GEN5 implant BUT not the BLX

Dr. Niznick Article: AO News Vol.33 No. 2, 2022:

"Dr. Buser cites a Swedish 10-year study comparing three implants: Astra, NobelBiocare and Straumann's Tissue Level implant, claiming the latter exhibited significantly less peri-implantitis. Assuming part of the smooth neck of the Straumann TL implant was inserted in bone, this would give it a hybrid bone interface. It also adds the variable that the implant-abutment connection would be supra-crestal… [which] is at least as important a factor in minimizing peri-implantitis as a hybrid surface."

Dr. Michael Dard, Prof. NYU Interview:

1. **Explains peri-implantitis** and
2. **Discusses results of the Derks et al study**

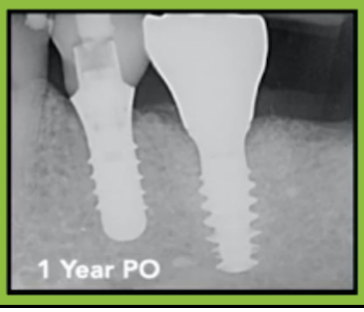


Video interview of Dr. Daniel Buser, Prof. Emeritus, University of Bern, explaining how Straumann's "Tissue Level" Implants are actually placed only 1mm supra-crestal.

Dr. Daniel Buser explains insertion of Straumann's "Tissue Level" implant with 1.8mm of its 2.8mm smooth neck sub-crestal, leaving 1mm and the implant-abutment junction, supra-crestal.

Buser Quote on Straumann's Website:
"The Future of Implant Dentistry is with neck designs combining a smooth surface in the trans-mucosal area with a micro-rough surface inside the bone. As the Derks study showed, moving the micro-gap away from the bone and having a smooth surface in the peri-implant sulcus reduces the risk of peri-implant complications."

PARAGON'S GEN5 IMPLANT HAS A 2.5mm ANODIZED, SMOOTH NECK, CONFIGERED TO BE 1mm SUPRA-CRESTAL



Influence of Implant Placement Depth and Soft tissue Thickness on Crestal bone Stability Around Implant with and Without Platform Switching

This case control study measured early crestal bone changes around sub-crestal placed platform-switched implants surrounded by thin soft tissue and compared them with regular, matching-platform implants placed in a supra-crestal position and surrounded by thick soft tissue. After 1 year, mean bone loss was 0.28 mm (SD:0.36 mm; range: 0.1-1.63 mm) in the control group and -0.6 mm (SD:0.55 mm; range: 0.05-1.8 mm) in the test group. Platform-switched implants placed in a subcrestal position in vertically thin soft tissues showed statistically significantly more bone loss than non-platform-switched implants placed supra-crestal with vertically thick tissues.

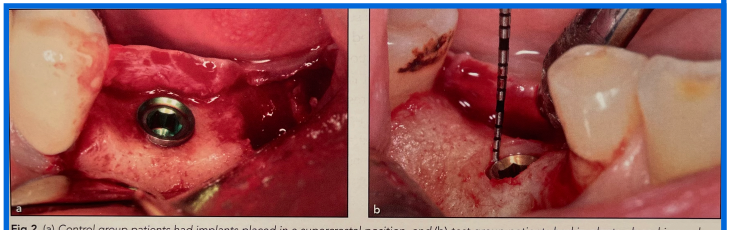


Fig 2 (a) Control group patients had implants placed in a supercrestal position, and (b) test group patients had implants placed in a sub-crestal position.