

# From the implant planning to the resin provisional, a reliable cooperation for the good of the patient

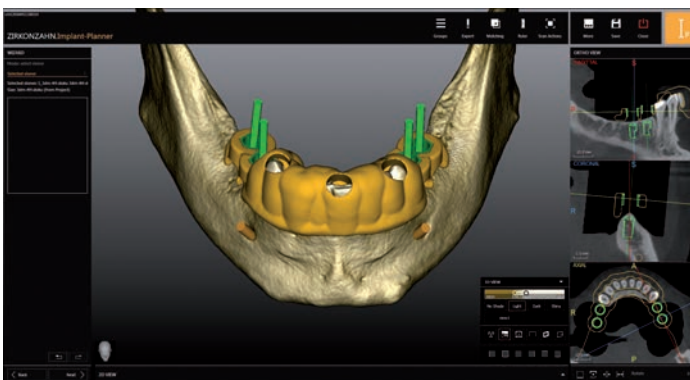
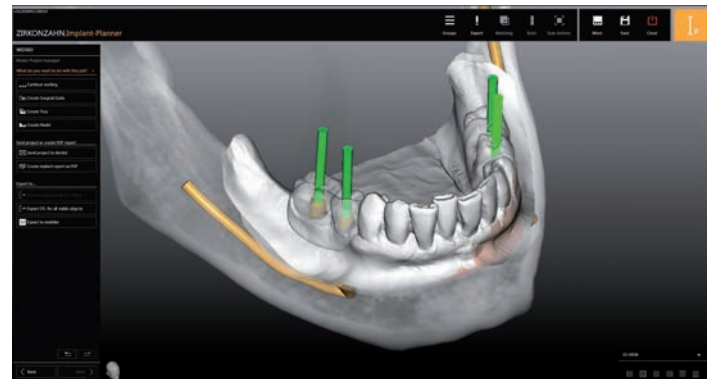


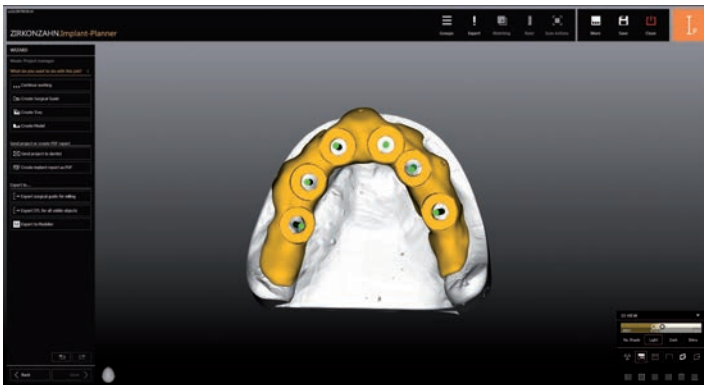
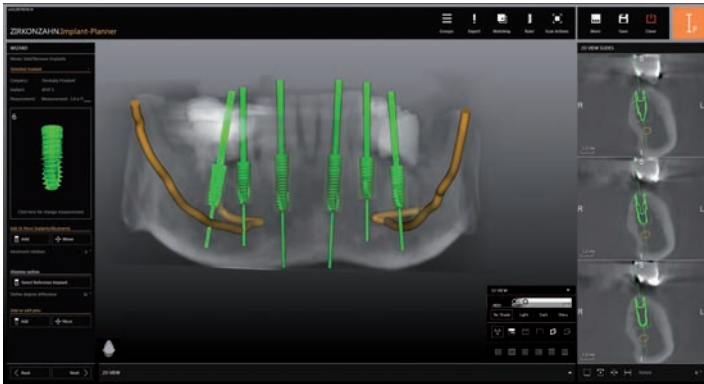
With the Zirkonzahn.Implant-Planner implant planning software, the cooperation between the dentist and the dental laboratory can be taken to new levels, reconciling the planned aesthetic design of a prosthetic restoration with the planned implant situation (backward planning). Based on digitally merged patient data (such as DICOM data or data from model or face scans), the dentist can determine the optimal implant position in terms of function, anatomy and aesthetics, taking bone structure and set-up into account. The user is guided through the planning process one step at a

time, making implant planning an easy task right from the outset and requiring only a minimum of user familiarity with software procedures. With the data transfer feature the data can easily be sent to the dental lab. Here, the surgical guides, the restorations, the custom impression trays and/or the models with laboratory analogues are made. This allows the dentist to receive all components required for an implant case simultaneously (immediate loading). All structures – from surgical guide to the prosthetic restoration itself – can be manufactured using the Zirkonzahn CAD/CAM system. Every step

fits perfectly with the existing Zirkonzahn workflow. The open data-exchange feature allows the use of CAD/CAM systems by other manufacturers or 3D printers for the production of surgical guides or models.

Planning the implant position using DICOM data and a previous tooth setup at sites 36, 35, 45, and 46. The sectional views of the 3D X-ray images help find the best possible implant position in aesthetic and functional terms, taking bone structure into account.





The planned titanium bases are well visible under the tooth and corresponding gingival tissue, shown here as semi-transparent.

The finished virtual model of the surgical guide with apertures to check for proper

intraoral seating. The data can now be exported to produce the surgical guide.

The software is available in two different versions, Zirkonzahn.Implant-Planner, the full version with relevant tools for implant

planning and for the production of surgical guides, and Zirkonzahn.Implant-Planner Practice, with all relevant functions for implant planning only.

Furthermore, depending on the desired



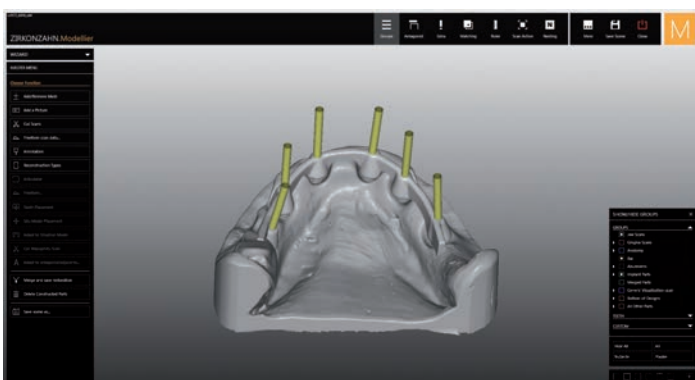
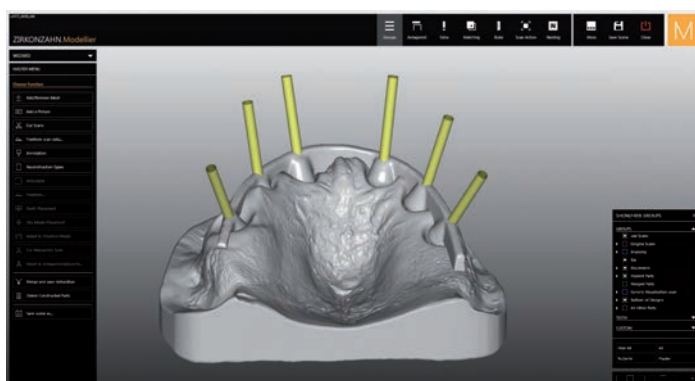
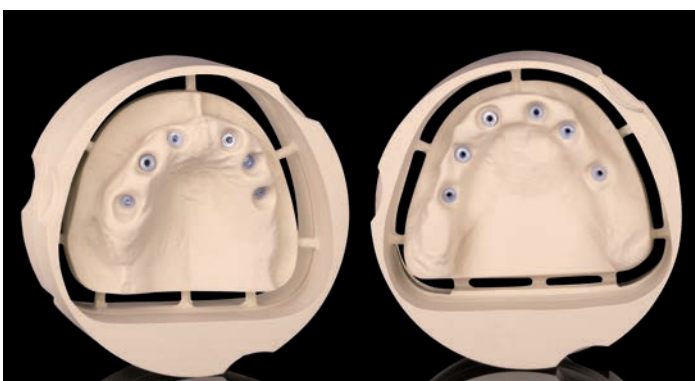
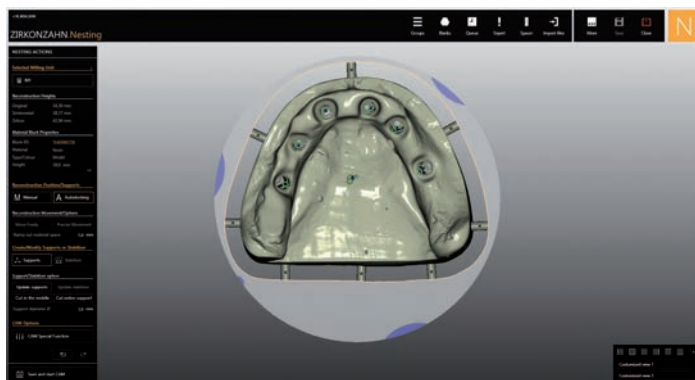
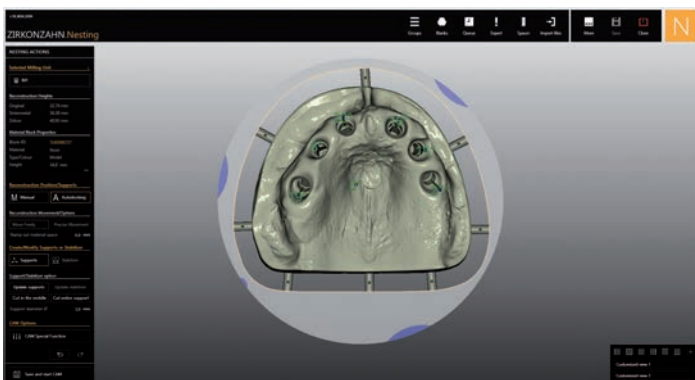
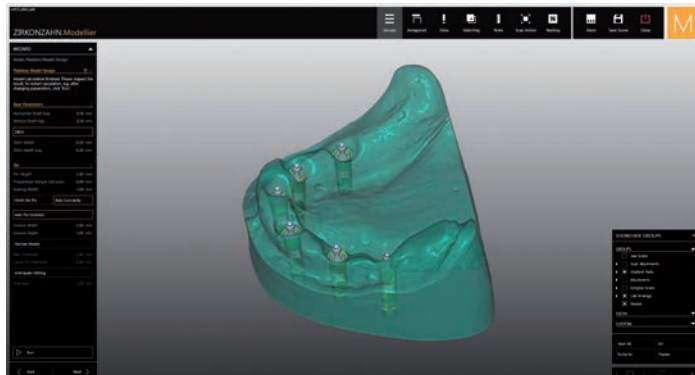
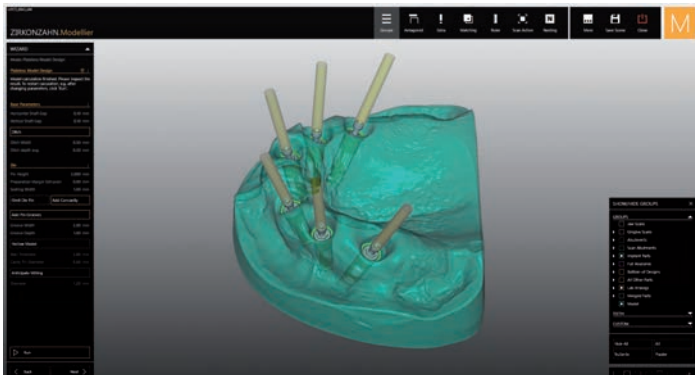
range of applications, two additional software modules can be integrated (at extra cost): the CAD/CAM STL-Converter software module – for converting DICOM data into STL data for further processing with different CAD software types – and CAD/CAM Z-Tray software module Module, for the manufacture of custom impression trays.

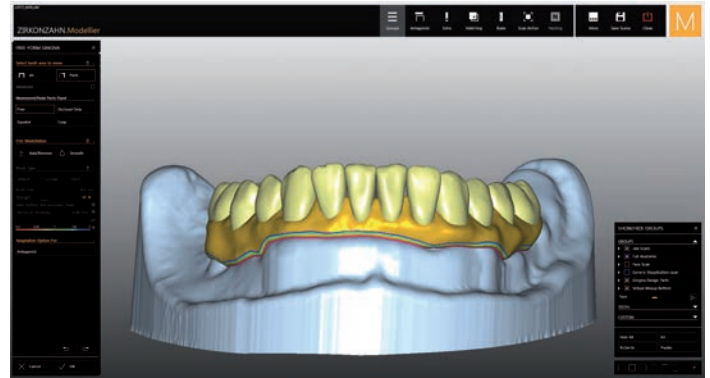
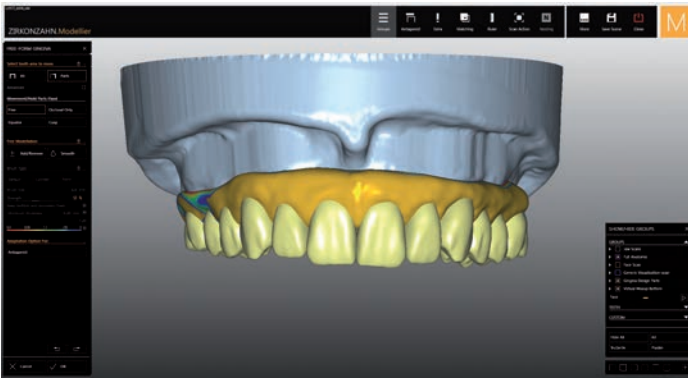
## Features at a glance

- Intuitive-to-use software with step-by-step guidance (Wizard)
- Compatible with DICOM data of any CT/CBCT device; it is possible to track the trigeminal nerve, plans

and panoramic section curves with perpendicular sections can be created and disturbing artefacts can be removed

- Determination of the ideal implant position from a functional and aesthetic point of view, taking the bone structure into account





- Data transfer function for a reliable data exchange between the dentist and dental technician; at crucial stages during the patient case planning, the dentist's validation is required
- Extensive measuring functions: manual or automatic distance measurement
- Conversion of DICOM data into STL data records for further processing with other CAD software (CAD/CAM STL-Converter software module required)
- Unlimited import of various scans (intraoral scans, model scans, face scans) or standardised data formats (STL, OBJ, OFF, etc.); fast and correct matching with 3D DICOM data
- Integrated tooth library with roots for creating a setup already during the planning phase
- "Best Fit" option for automatic alignment and matching of different scan data (model scan, intraoral scan, impression scan, radiopaque reference spheres); manual adjustment is possible
- Extensive implant libraries with corresponding implant-prosthetic components for all common implant systems and a varied drilling sleeve library (individual extensions possible). The libraries are continuously expanded and made available via the automated update system
- Export of the implant planning for further processing in the Zirkonzahn.Modellier software or another CAD software for planning the prosthetic restoration and models with laboratory analogues. Manufacturing with Zirkonzahn CAD/CAM milling units, with CAD/CAM systems of other manufacturers or with 3D printers possible
- Creation of surgical guides (only for the Zirkonzahn.Implant-Planner full version): the surgical guides can be created either tooth-borne, bone-borne or mucosa-borne and can be fixed with pins
- Creation of custom impression trays (CAD/CAM Z-Tray software module required)

### From the implant planning to the resin provisional – Case example with Zirkonzahn.Implant-Planner

With Zirkonzahn.Implant-Planner, the design of the prosthetic restoration can be considered already during the implant planning phase. Implant planning is possible for all common implant systems – the software



contains an extensive library of implant-prosthetic components and drilling sleeves, which are continually being expanded.

Based on the digitally merged patient data (e.g. DICOM data, intraoral scans, set-up), the dentist can determine the ideal implant positions according to functional and aesthetic aspects, taking bone density into account. Based on such data, the dental technician can produce surgical guides, individual impression trays, models, restorations for immediate loading and resin prototypes.

After the implants placement, the situation can be recorded either using an intraoral scanner and White Scanmarkers, or following conventional methods with individual impression trays, impression copings and ScanAnalogs. Then, the situation is transferred in the correct position into the Zirkonzahn.Modellier software or another design software.

With the CAD/CAM Model Maker software module, the upper and lower master models are designed and then manufactured

using a Zirkonzahn milling unit. The models are fitted with laboratory analogues and can then be used to check the final restorations, e.g. resin prototypes with titanium bars.

The digital master models together with the diagnostic wax-ups created in the Zirkonzahn.Implant-Planner software serve as a reference for the design of the titanium bars.

After their elaboration with a Zirkonzahn milling unit, the bars made of high-quality titanium 5 are refined with a surveyor and high-gloss polished. According to one's requirements, the titanium bars can be anodised in a golden shade using the Titanium Spectral-Colouring Anodizer, in order to avoid the grey value shining through the superstructures.

The resin prototypes are designed and milled according to the metal bars and to the virtual wax-ups adapted to them.

For this purpose, the flexible high-performance Multistratum® Flexible resin is used. This stable, biocompatible material

is already provided with a natural colour transition, which endows the provisionals with highly aesthetic properties. The gingival areas are Would you like to know more about Zirkonzahn.Implant-Planner software?

Visit [www.zirkonzahn.com](http://www.zirkonzahn.com) to download for free the software demo version and to learn more about our 1,5-day CAD/CAM Milling Implant-Planner course organized with our experts!

Scan the code to watch our conference "From implant planning to immediate loading" with Zirkonzahn's expert MDT Antonio Corradini. ■



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