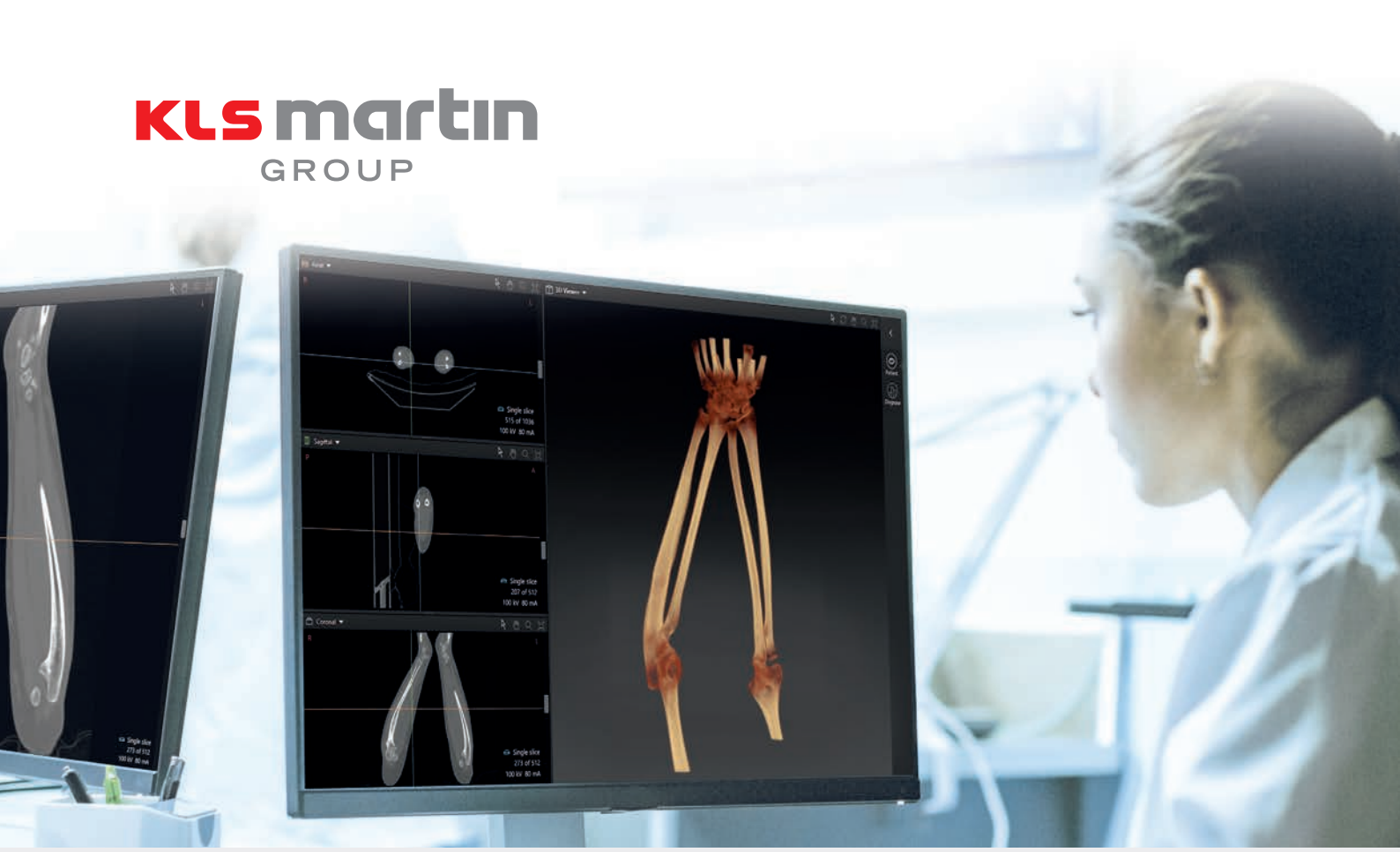
KLS martin GROUP



IPS Implants®

Scan protocol

Radius | Forearm Reconstruction

IPS Implants® scan protocol

Radius | Forearm Reconstruction

Basic information

This scan protocol describes how patient data need to be prepared for virtual planning of radius and forearm reconstructions so that a product of the "Individual Patient Solutions" product family can be made.

Deviations from these instructions may mean that the clinical results will not match the planned results.

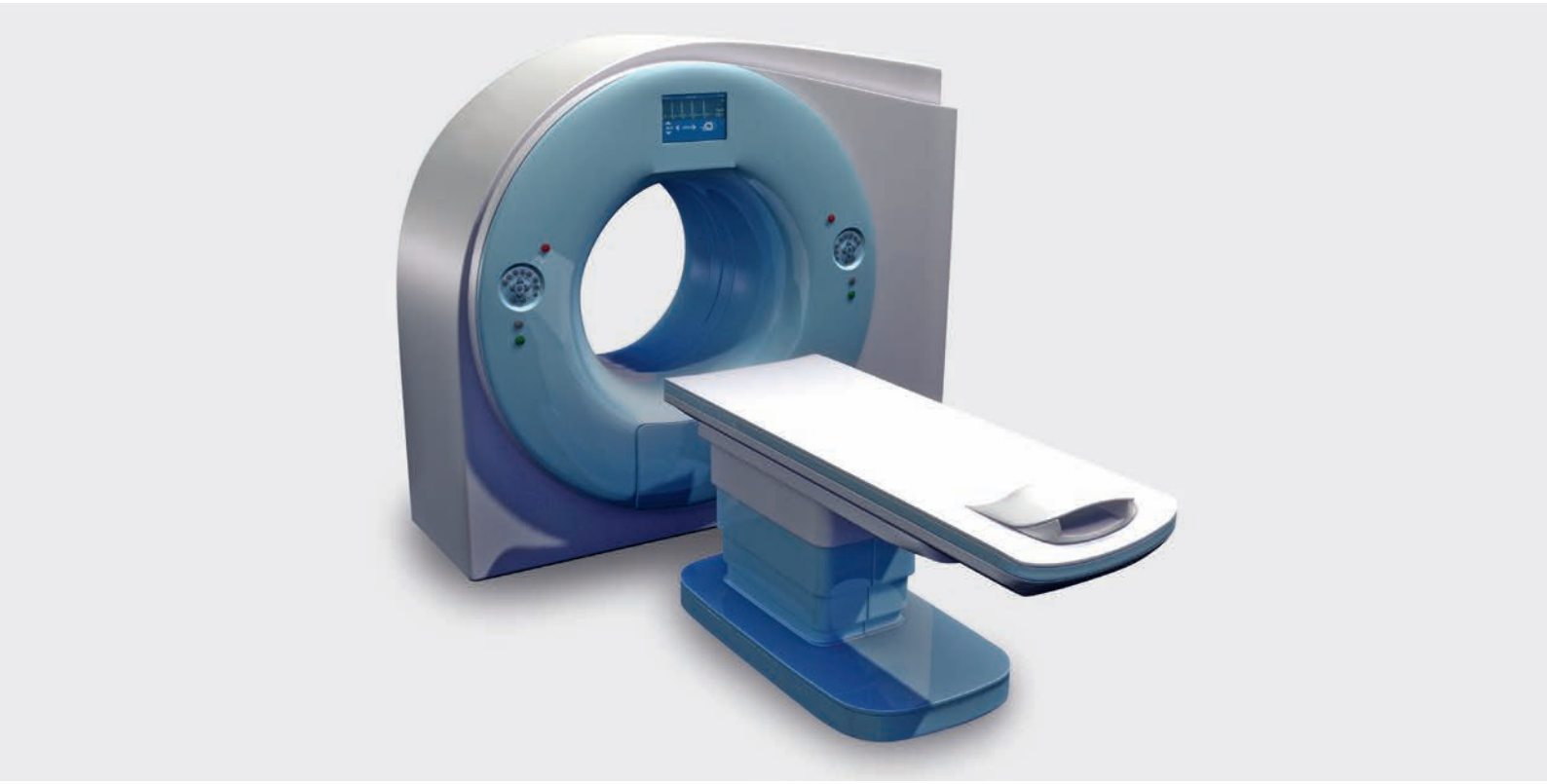
KLS Martin can process data from all standard CT scanners and use almost all storage media.

Should you have any queries, please do not hesitate to contact our **hotline +49 7463 838-222**.

Important:

Planning results are only ever as up to date as the clinical data records! If the anatomical situation should change after scanning, the precision fit of the products can no longer be guaranteed.

Scan unaffected forearm (left)



Scan affected forearm (right)

Scan both forearms (affected and unaffected side)

- Patient scans must be current and precise (< **four months**).
- The spatial resolution of the scans should be between **0.5 - 1.25 mm**.
- The **axial sections** are required.
- Movements of the patient during the actual scanning have to be avoided coercively.
- **Classical CT scans** are preferred.
- For classical CT scans, the **Gantry inclination must be 0°.**
- A scan of the affected and unaffected forearm is required. The scans must be performed in a neutral position. Both arms must be in the same position.
- The image section should include the complete forearm (complete radius and complete ulna). The ideal image section covers the area of the carpal bones up to the proximal part of the radius and ulna including the elbow joint.
- Save the entire scan including all sub-data in DICOM format (without integration into a display software).

Radius and forearm reconstruction

Post-operative malalignments often occur as a result of radius or forearm fractures which can result in loss of strength, pain and restricted movement for the patient. Especially in complex cases, patient-specific radius and forearm reconstruction can be a solution, particularly in complex cases. Furthermore, IPS Implants® can also be used to correct congenital malpositions in the forearm.

Anatomical models

Anatomical models visualize the osseous situation and accuracy of fit of the implants.

Drilling and marking guides

Drilling and marking guides are used to predrill the planned screw holes and mark the osteotomy line at the previously planned position.

Implants

The patient-specific implants are manufactured additively from titanium. This innovative manufacturing technology (AMTi) enables complete freedom of design of the material and its surface.

The implants for radius and forearm reconstruction are fixated with smartDrive® screws.

Application requires only few instruments.

The IPS® product range

IPS Implants® Radius and Forearm Reconstruction

IPS Implants® convinces by combining complex anatomical conditions into a functionally stable and patient-specific functionalized solution.

With the IPS Gate®, we provide a platform which guides surgeons and users reliably and efficiently through the process of inquiring about, planning including possible corrections, and completing patient-specific products. The intuitive concept offers the user maximum mobility, flexibility, and functionality.

IPS Gate®

The web-based platform and app guide surgeons and users reliably and efficiently through the process of inquiring about, planning, and completing patient-specific products. With the HTTPS standard IPS Gate® guarantees encrypted data transmission, which is additionally certified by the TÜV Süd seal.

IPS Implants®

Patient-specific implants, planning aids, and anatomical models are made from various materials using state-of-the-art fabrication technologies. Thanks to computer-based planning and functionalized patient-specific implants, preoperative planning can be implemented in surgery with unprecedented precision.

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