“I can recommend the OP300 Maxio in good conscience”

An interview with dentist and implantologist Dr Frank Liebaug

With the ORTHOPANTOMOGRAPH OP300 Maxio, a device that offers numerous advantages to both specialists and general dental practitioners, the KaVo Kerr Group presented an innovation in the field of 3D imaging at this year’s International Dental Show. Dr Frank Liebaug’s practice for laser and implant dentistry was the first German practice to be able to test the wide range of treatments, from single-tooth implants to major oral and maxillofacial surgery and the planning of orthognathic surgery.

The wide range of examination areas in comparison to competitors, and, at the same time, the option of very high resolution, namely about 85 µm, were two particularly important criteria for me when selecting an X-ray and 3D imaging system.

Were there any other aspects and properties that affected your decision to opt for the OP300 Maxio?

Another aspect that is important to me is the Low Dose Technology, which, despite very low radiation exposure, allows for easily evaluable presentations that are made possible thanks to features such as the automatic beam adjustment known as Automatic Dose Control (ADC). The ADC function takes into account the patient’s anatomy, which in turn leads to an improvement in image quality and image information despite the low radiation dose.

Another special feature is the Automatic Spine Control (ASC) function. With panoramic tomographic imaging, the image information in the frontal region is usually not as good as in the lateral areas due to the superposition of the spine. Through the application of ASC, the automatic dosage is readjusted so that an optimal image quality is achieved especially for this area, eliminating the need for additional recordings. This reduces the patient’s radiation exposure.

The Automatic Facial Contour function (AFC) is also relevant for orthodontics or orthognathic operations in which images of the facial contour are required. When performing the X-ray, this automatic function somewhat lowers the exposure factors in the facial skull so that the soft parts, such as nose, cartilage, skin and subcutaneous components can be well represented at a further reduced radiation dose.

Finally, I would like to talk about the metal artefact reduction function (MAR). This technology reduces the influence of scattered radiation that occurs in very dense structures in the X-ray volume. This improves the representation of teeth with filled root canals and endodontic posts in particular, and allows for better assessment of the immediate area around metallic implants. This is another function that I don’t want to miss in the future.

With your practice focus on implantology, how has the OP300 Maxio become part of that workflow? What are the differences in terms of treatment planning or other aspects of care?

The OP300 Maxio allows for comprehensive pre-implantation diagnosis, which provides increased safety both for me as a physician and also for the patient. We can use the device to successfully represent and measure the bone supply, vulnerable anatomical structures and nerve exit points in advance. This then allows us, for example, to draw conclusions about the nerve paths and leads to a significant reduction in the risk of injury during the operation. As a treating physician, I can use the diagnostic spectrum of the OP300 Maxio to work out what to expect in advance, and will not be met with any unwanted surprises during surgery.

The total time of treatment, including diagnostics, measurement and evaluation time may not be reduced directly, but the operation time is probably reduced thanks to the improved options for pre-orientation and planning of access routes. The OP300 Maxio also provides the option of connecting the supplied evaluation software to a program for the production of drilling templates, which once again increases the patient’s safety. When used correctly, the OP300 Maxio makes implantology less risky and easier in its clinical implementation.

How do your patients react to the OP300 Maxio?

The patients have consistently demonstrated a positive response. On the one hand, they noticed that an innovative new device has been introduced into the practice, which provides us as a treatment team with a high information content. On the other hand, communication with patients has also generally improved, both in terms of the pre-operative explanation and the provision of information during continued treatment. The patient can visualize the treatment much better using the 3D representation rather than a 2D image. This enables me, as a dentist, to better explain the risks to the patient on the one hand, and the reasons for choosing the respective surgical procedure or treatment on the other hand.

How would you advise colleagues who are thinking about purchasing an imaging system like the OP300 Maxio?

He or she should first consider the range of treatments available in his or her practice or clinic and the direction he or she would like to develop in the future. Building on that, he or she should compare the devices that are currently on the market that offer the best possible choice of volume sizes and highest possible resolution for his or her indication, and that have low radiation exposure despite very good pictorial representation—a factor that will become increasingly important for precisely this reason in the future when selecting their practice.

When selecting new technologies, one should always be aware that the quality of an X-ray or a three-dimensional volume representation and the diagnostics that are made based on this representation can be crucial for the success or failure in a patient’s treatment. In this regard, I can recommend the OP300 Maxio in good conscience.