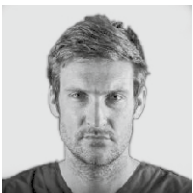
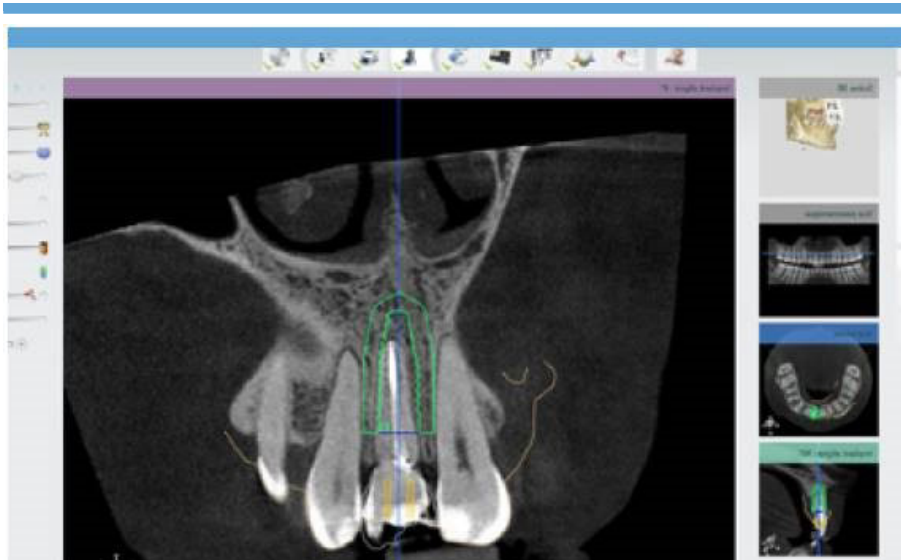


Digital efficiency for the benefit of patients transforming your workflow with PROGRESSIV-LINE



Dr. Thibaud Casas
Dentist

CASE REPORT

Digital efficiency for the benefit of patients transforming your workflow with PROGRESSIV-LINE

» Today, more often than not, it is of the utmost importance to completely transform our way of working. Changes in standards and the financial crisis precipitated by the current global health emergency have meant that we are no longer able to run our business with the confidence in their profitability and permanence that we had in the past.

When a dental practice is said to be going digital, this is often limited to the simple acquisition of a camera that takes optical impressions. It is an essential first step, but it is just one link in a long chain that takes its strength from its entirety, its integration and its scalability. The digitalization of our practice not only involves the acquisition of new devices but in addition requires a profound change in our clinical approach towards each clinical step. This has resulted in an optimization in the length and number of clinical consultations, thereby reducing chair time and ensuring these digital investments contribute to business growth.

In my opinion, before any kind of investment is made it is essential to consider its digitization; you must change your way of thinking and instead of asking "why" to discover your personal motivation. After this come the "how" of the insertion process and the "what" of which material to use.

Clinical Case

A 40-year-old female patient was referred to us following a trauma to her maxillary incisor and canine. The treating physician had attempted to save tooth 21 but a longitudinal fracture appeared during the course of treatment. It was decided to perform an extraction of the tooth, immediate implant placement and to improve the esthetics of the site. For the purposes of maximum efficiency, it was decided to use the whole 3Shape chairside workflow to treat this case. Either pilot-drill guided, or full-guided implant insertion can be used, as to prepare the interim teeth before surgery.

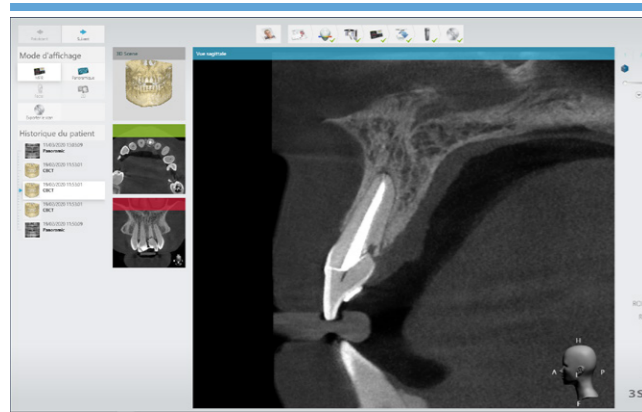
In this specific clinical case, the close proximity of the nasopalatine foramen (Figure 14) and the extraction protocol for an immediate implant in conjunction with with a conjunctive graft caused me to prefer a pilot-drill guided solution with the use of two split guides (Figures 16 and 17) and placing an interim prosthesis by doing an optical impression with a scan body in place right at the end of the surgery.



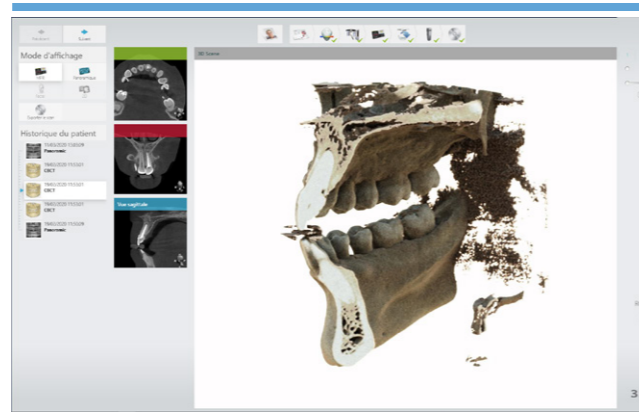
1. Initial panoramic x-ray.



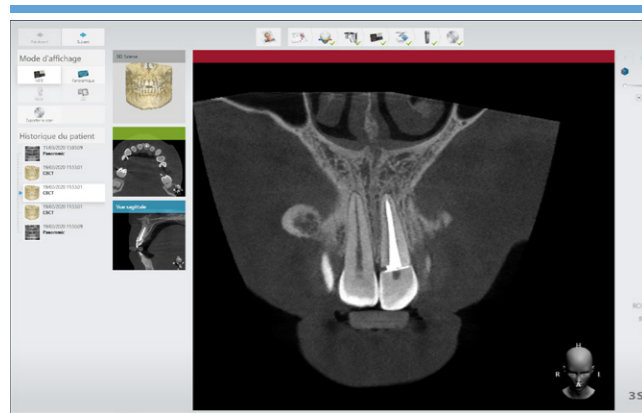
2. Pre-operative intra-oral photography.



3. CBCT scan for planning the implant (3Shape X1®). Sagittal slice centered on tooth 21.



4. 3D Reconstruction.



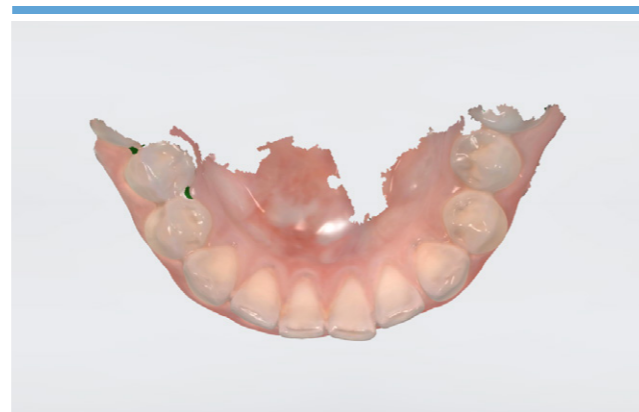
5. Frontal slice.



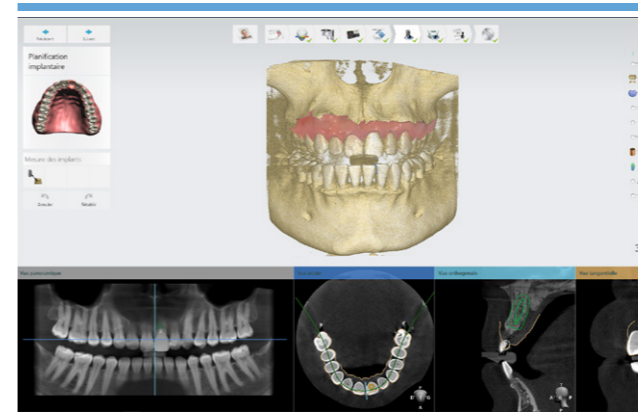
6. Pre-operative maxillary and mandibular intra-oral digital imaging (3Shape TRIOS® 4 Wireless). Frontal maxillary view.



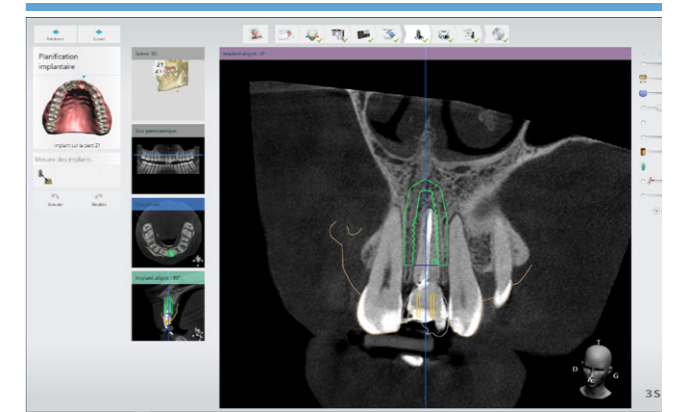
7. Occlusal view.



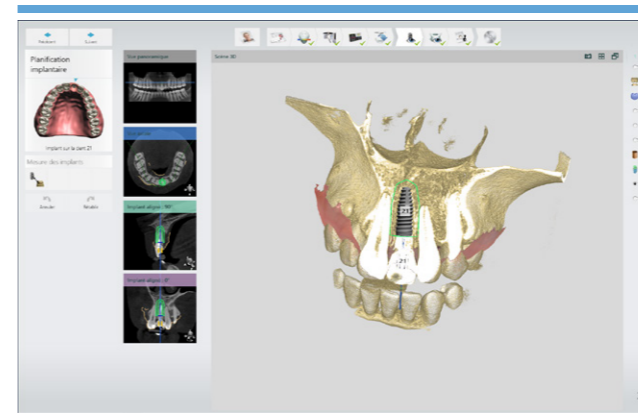
8. Mandibular occlusal view.



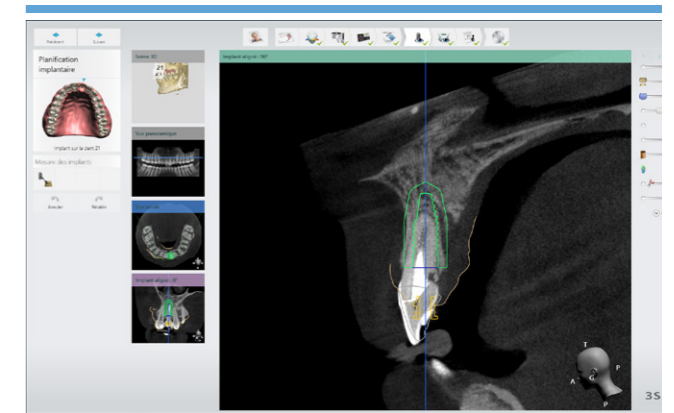
9. The data from the digital intra-oral photography and CBCT scan are automatically combined (3Shape Implant Studio®). The alignment is verified in detail and then validated in order to avoid the introduction of any potential errors.



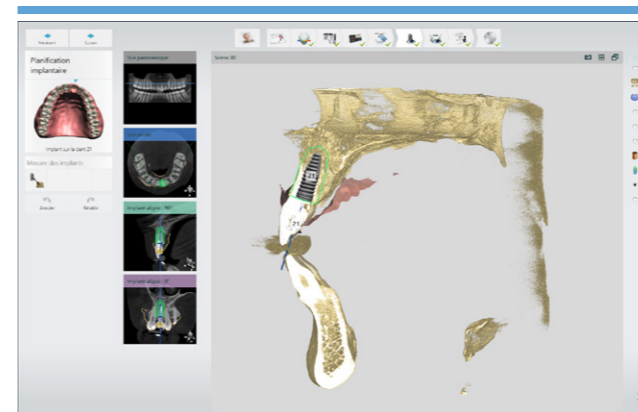
10. 3Shape Implant Studio implant planning. A CAMLOG® PROGRESSIVE-LINE Implant measuring 4.3 x 13 mm is chosen.



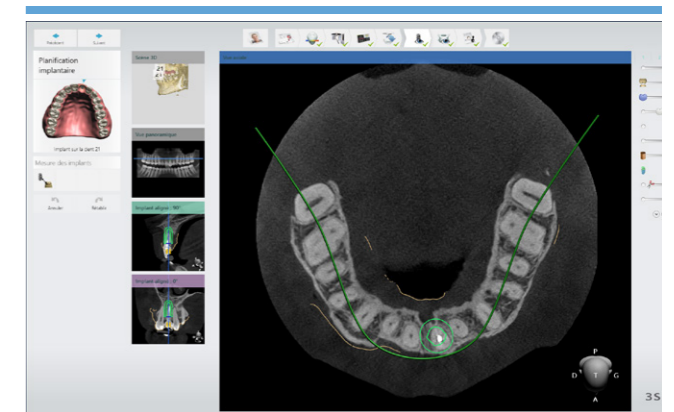
11. It is possible to navigate through the 3D reconstruction in slices in order to have an objective view of the peri-implant environment.



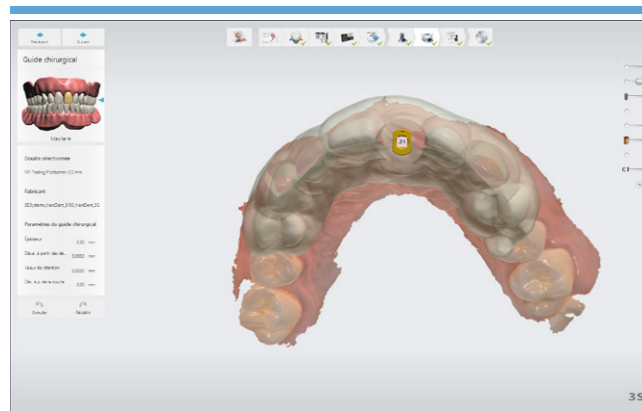
12. 3Shape Implant Studio® implant planning. A CAMLOG® Progressive-Line Implant measuring 4.3 x 13 mm is chosen.



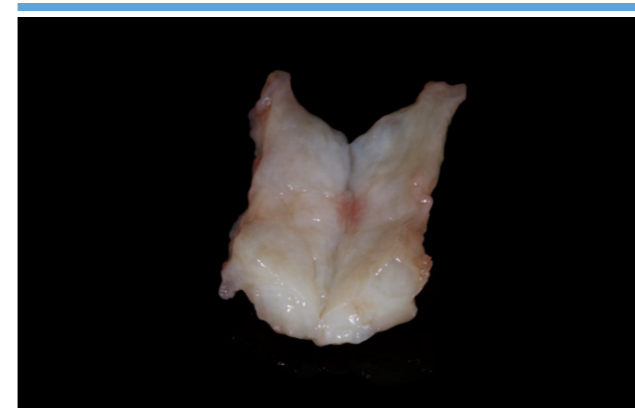
13. 3D Reconstruction – Sagittal slice centered on the implant.



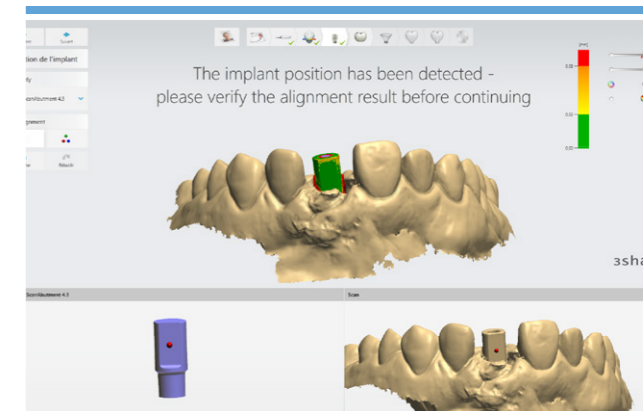
14. The close proximity of the nasopalatine foramen can be distinctly seen in this slice. Axial slice.



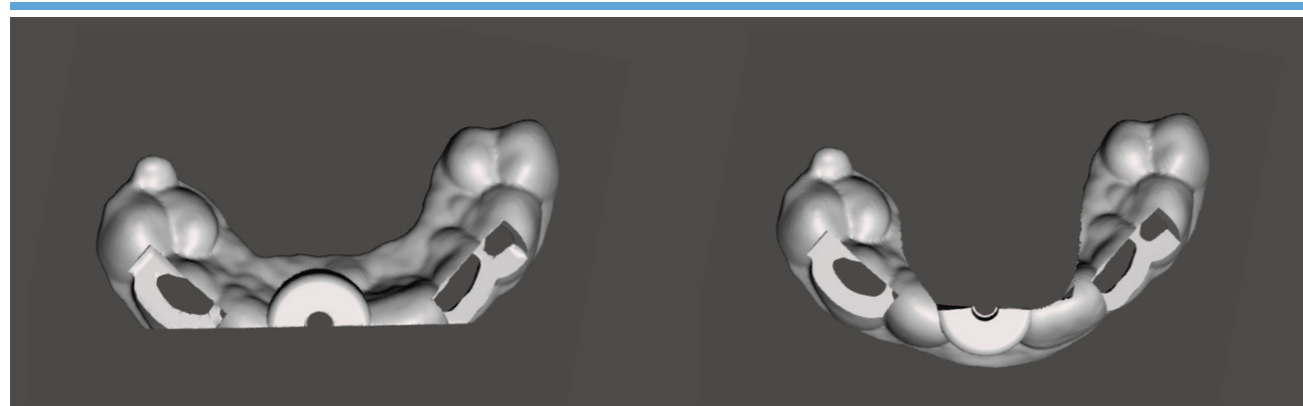
15. Occlusal view of the pilot surgical guide (NT-Trading® 2 mm socket).



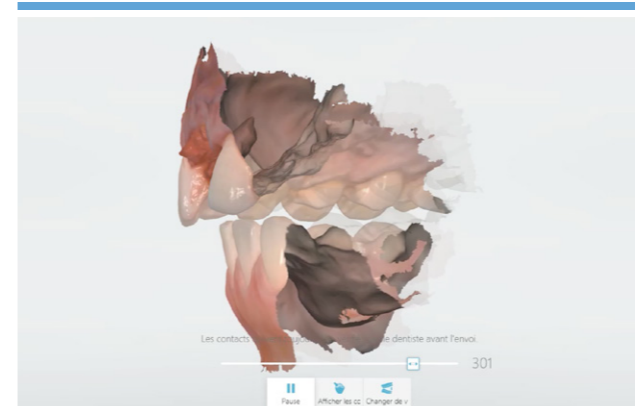
20. Connective tissue was taken from the retrotuberosity area and then inserted into a vestibular and papilla access tunnel [1].



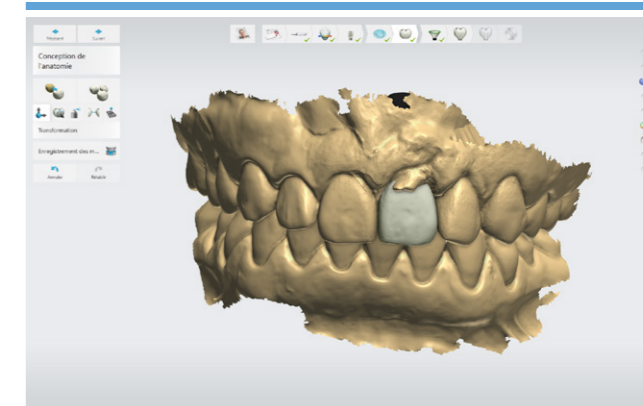
21. A panoramic x-ray is taken with a scanbody in place. This is directly recognized in the 3Shape TRIOS Design Studio®. Dynamic bite movements are recorded using an intra-oral scanner (TRIOS Patient Specific Motion tool).



16, 17. The initial pilot guide is divided into 2 parts to create two new split guides, to ensure the occlusal emergence of the implant in case a change of implant position is required during surgery. The guides are printed in biocompatible resin with the NextDent 5100 Dental SG® 3D System.



22. Monitoring view that records patient movement.



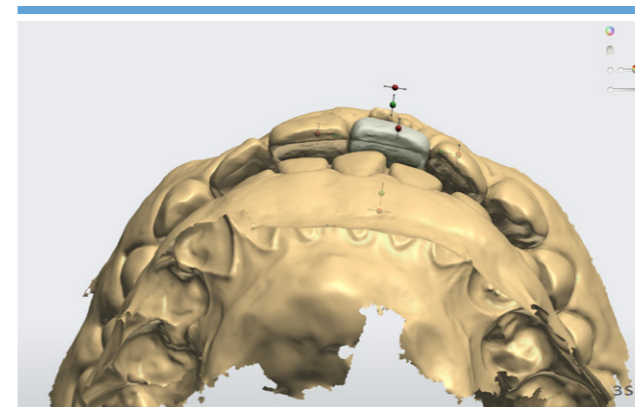
23. The contralateral tooth is used in copy mode to clone the anatomy, then the emergence profile is sculpted.



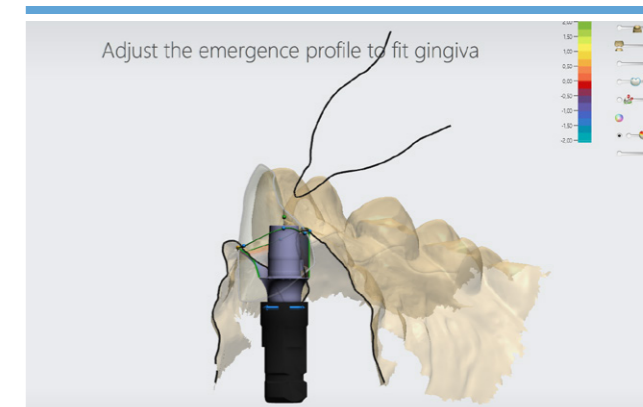
18. Atraumatic extraction of tooth 21.



19. Insertion of a CAMLOG®/CONELOG® Progressive-Line implant 4.3x13 mm.



24. Occlusal view.

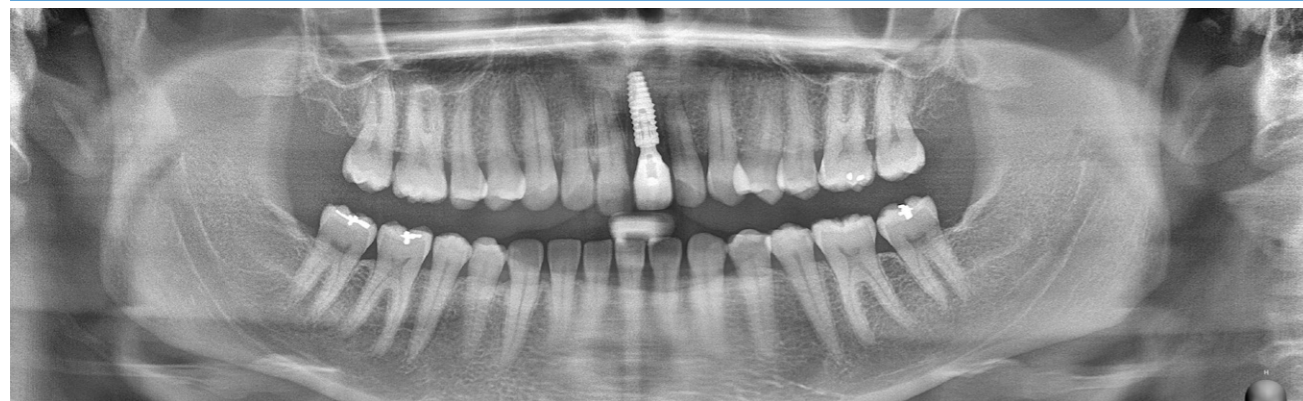


25. View of the future emergence profile.



26. The interim tooth is milled in a Kuraray Noritake® Katana Avenia block in a VHF Z4 milling machine. The screw shafts and the connection point are precision-milled. Assembly is carried out using the opaque shade of Panavia V5 Opaque.

27. The interim reconstruction in place a few minutes after surgery.



28. Follow-up panoramic x-ray.

Conclusion

As I mentioned earlier in the introduction, to treat this case my choice was to use the full 3Shape chairside workflow: from the CBCT to planning and implant insertion, all the way to the design and the position of the interim screw-retained tooth. This completely integrated workflow provides impressive efficiency by eliminating the need to move files between various software programs. Everything goes smoothly and takes place in one working environment only, which allows you to more easily achieve predictable and reproducible results and also reduces procedure time with this implant of impressive primary stability.

References

[1] Gamborena ET, Sasaki Y, Betz MB: the "slim concept" for ideal peri-implant soft tissues: QDT 2017:26-40.

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- Holder of an undergraduate certificate and a university degree in oral implantology
- Trained in bone graft techniques and complex restoration work involving dental prostheses, smile esthetics and digital dentistry technologies
- Member of the maxillofacial surgery department team at Nantes University Hospital (CHU de Nantes).
- Trainer and speaker specializing in the use of digital technology in dental surgery and with dental prostheses.
- Founder of the Facebook group WorkFlows and the site workflows-institute.com, a digital dentistry training center.

NO BONES ABOUT IT.

CONFIDENCE IN ALL BONE TYPES: PROGRESSIVE-LINE^[2]



SPECIALIST IN SOFT BONE:

- Crestal anchoring thread for additional hold with limited bone height [2]
- Anatomically shaped conical area for high primary stability in soft bone [1,2]
- Flexible drill protocol for preferred stability
- Thread design with deeply engaging thread flanks
- Thread up to the apex, ideal for immediate implantation [1,2]

EXPERIENCE THE PROGRESSIVE EFFECT.



video animation

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References

- [1] Conserva E. Initial stability after placement of a new buttress-threaded implant. A case series study. implants. 2019(3):24-28.
- [2] Ruppin J. One-year clinical experience with Progressive-Line implants. EDI journal. 2020(4):54-63.

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