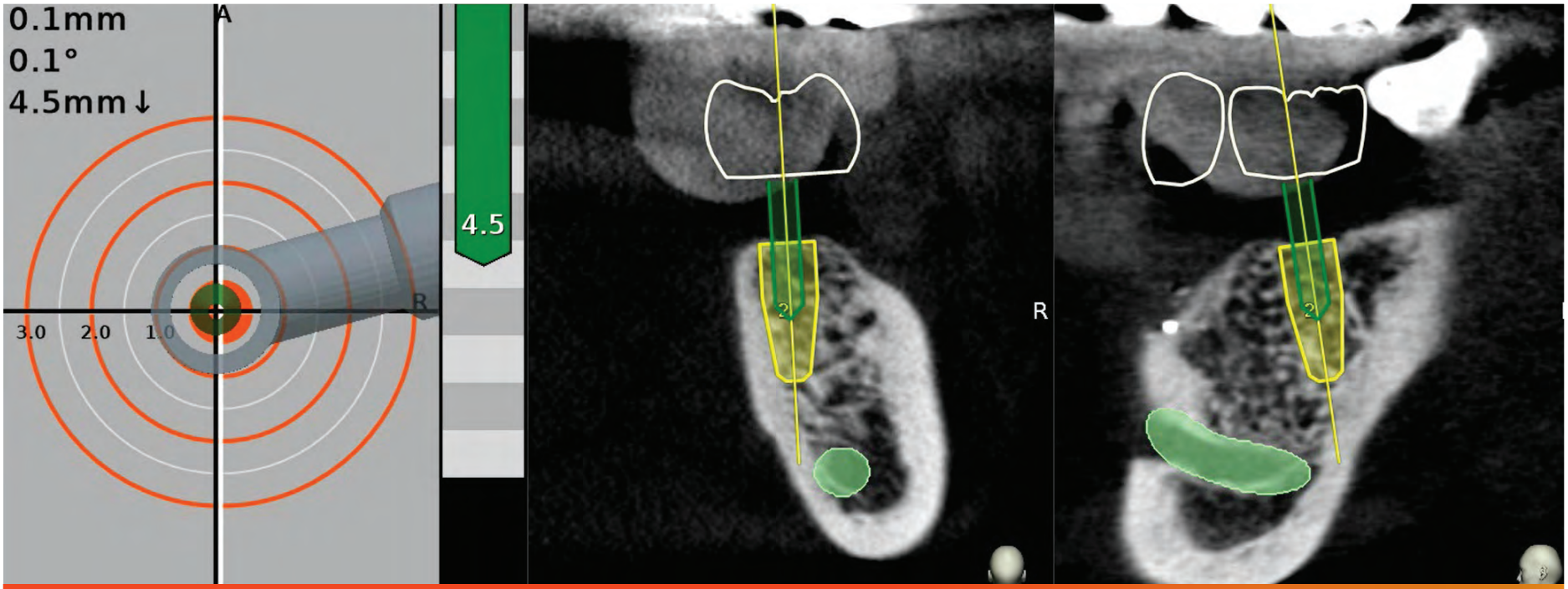
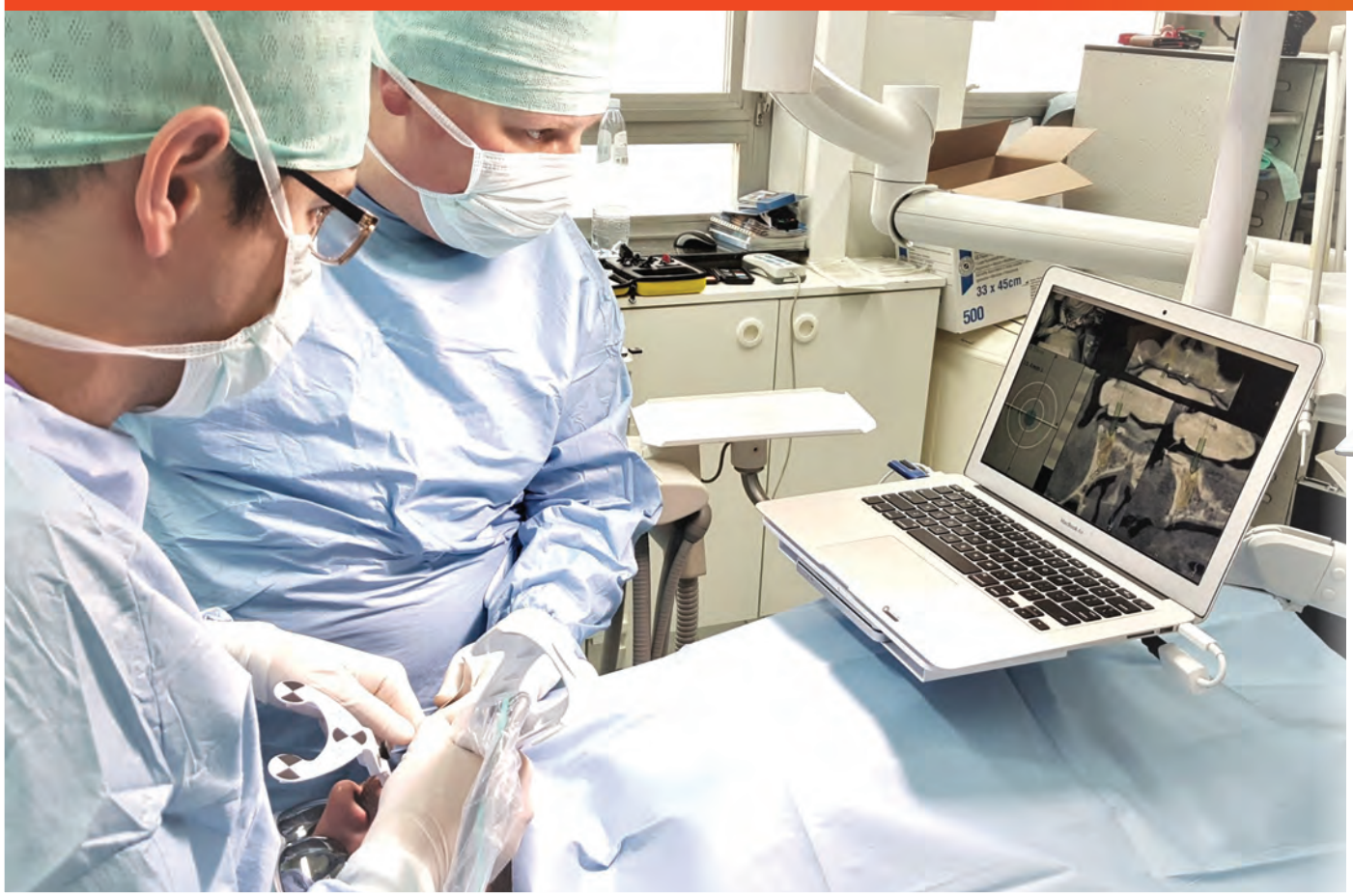


TARGETING PERFECTION with Navident by ClaroNav



"Surgical navigation has the potential to change the playing field, allowing us to more easily place implants with greater precision."
Dr. Michael McGuire, Houston, United States

"The future is now with dynamic surgical navigation. Navident allows for accurate, precise implant placement, with the ability to view placement in real time. Increased confidence when planning implants in sites with close root proximity, the esthetic zone as well as the ability to adjust implant size on the fly. Taking a CT scan and virtually placing implants in real time."
Dr. David Lipton, Houston, United States

"Navident will undoubtedly be the new standard of care in the near future, much like CBCT has become an indispensable tool in any surgical practice. For those who strive to stay ahead of the curve it is the next must-have."
Dr. Ramin Azghandi, Germantown, United States

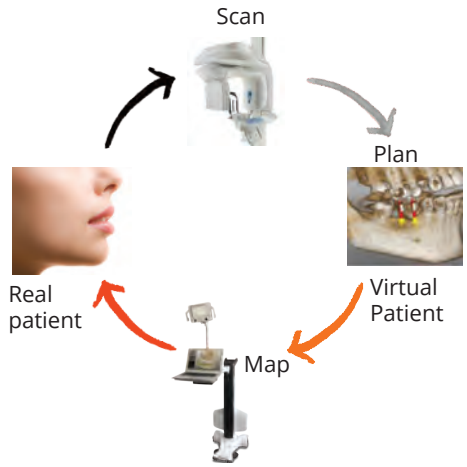
"The Navident system is the next leap forward in CBCT based implantology. The ability to verify and validate, in real time, positional accuracy of osteotomy site preparation and implant positioning is unlike anything that has ever been available before outside a research center. Every day and every case now closes with me knowing (and having a medicolegal record of proof) that I am providing the most accurate and precise implant placement for my patients and referring doctors to maximize functional and esthetic prosthetic outcomes. In a discipline that depends largely on precision and accuracy, there should be and can be no more excuses."
Dr. George A. Mandelaris, Chicago, United States

Pictured:
(Top, left) Drs. Michael McGuire and David Lipton, Houston, United States
(Top, right) Dr. Daniel Spagnoli, Southport, United States
(Bottom, left) Dr. George A. Mandelaris, Chicago, Illinois
(Cover) Drs. Jan D'haese and Johan Ackhurst, Ghent, Belgium

From Virtual to Reality

A breakthrough in computer-aided implantology, Navident offers dental surgeons an easy to use, accurate, highly portable and affordable way to plan the desired restoration and implant placement on a virtual patient, then execute the plan on the real patient's jaw.

The virtual patient's jaw is created from the CT and, optionally, digital impression data, in seconds. The plan, including crowns and implants, is prepared in a few minutes and can be modified any time. During surgery, Navident shows the advance of the drill tip or implant in the patient's jaw relative to surrounding structures and the implantation plan.



Let Navident help you become a better surgeon

Do a better job

Plan the restoration on screen, then optimize the implant positions considering both bone and crowns. Then let Navident guide you to accurately implement your plan in the patient's jaw.

Reduce harm to patient

Perform flapless surgery, leading to reduced patient discomfort, reduced risk of infection, and faster recovery. Avoid unintentional iatrogenic damage to nearby anatomical structures.

Increase your efficiency

Eliminate plaster models, wax-ups and fabrication of guides. Reduce chair time by eliminating raising and suturing flaps.

Reduce treatment costs

Leverage accuracy to reduce the need for custom abutments, bone augmentation and re-work. Use retrievable screw-retained, rather than cement-retained, superstructures.

Attract referrals

Demonstrate to patients your ability to leverage the latest technology to deliver better, safer, less invasive care.

Relax and enjoy

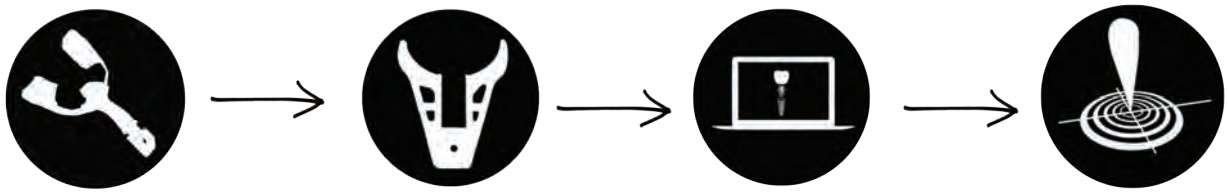
Reduce your mental stress. Sit up during surgery. Use exciting new technology. Increase your job satisfaction and extend your career.

"Navident is another step towards a complete digital workflow for dental implant treatment. Having used the system for several months now, I would not want to go back to preparing and placing dental implants without its 3D visual guidance. For me, acquiring Navident has been a logical progression in my personal desire to achieve the very best I can for my patients."

Dr. David Burgess, Carbis Bay, United Kingdom

Simplified Workflow

... which, with an on-site CBCT scanner, can be performed in a single appointment



Stent

A NaviStent is fabricated directly on the patient's jaw

The process starts with a quick in-office preparation of a hot water thermoplastic stent, called NaviStent. The stability of NaviStent's fit can be immediately evaluated to ensure predictable results.

Scan

Scan patient in a CT machine with a NaviStent and CT Marker in place

A "CT Marker" part containing a precision manufactured fiducial body is attached to the NaviStent and the patient is scanned as usual. Navident is compatible with all dental CBCTs on the market, including small field ones.

Plan

Plan restorative-driven implant placement on a laptop

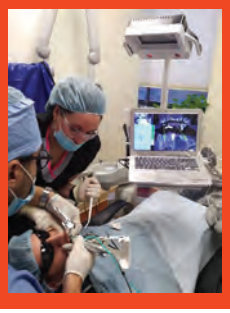
The restoration and implant placement plan is created using the CT image data, optionally with added intraoral scans or any other surface data (STL files). The plan can be modified at any time, even during surgery. Navident is compatible with any implant size and type available on the market.

Place

Drill and place the implants under dynamic guidance

Following a brief drill or implant calibration, Navident dynamically presents the deviation between the position and orientation of the drill/implant and their planned ones, guiding the surgeon to accurately implement the plan.

(see next page)



"Navident has been a great asset to our office. Not only has it been a marketing tool but also has given patients confidence and ease with implant procedures. Navident is an exciting new venture for this office and keeps us technology savvy and up to date with implant procedures."

Dr. Hector Sarmiento, New York, United States

Pictured: Dr. Hector Sarmiento, New York, United States

Dynamic over Static

"Real-time navigation is a valuable alternative to stereolithographic (static) guided surgery as it offers the clinician some advantages compared to the former technique. Using real-time (dynamic) navigation one can avoid the fabrication of a stereolithographic template resulting in a less expensive treatment. As navigation is considered as a dynamic guided surgery system, changes to the treatment planning (location and size of the implants, number of the implants, flap or flapless...) can be easily made intra-operatively. Also the tactile feeling during the drilling procedure, as well as the manual control over the implant stability, is still present when using navigation surgery."

Source: "Use of Dynamic Navigation Implant Surgery In Combination with An Immediate Loading Procedure" by D'haese et al, 2015

Flexibility View the CT data and change the plan at any time, even during surgery.	Immediacy Guidance immediately available following planning – no need to wait weeks for guide to arrive.	Predictability More predictable – stent problems can be detected and corrected on the spot.	Safety Accuracy check always available – large errors immediately observed and addressed.	Simplicity User friendly and intuitive planning – no need to design the guide and sleeves.
Economy Lower cost per procedure. No expensive kits or specific drills.	Irrigation Better irrigation during drilling of open osteotomy site.	Access to implantation site No need for longer drills which interfere or preclude usage in posterior implantation sites with minimal jaw opening.	Integration Fully open – any implant, any drill system, any handpiece. No need to buy special kits.	Completeness Guides the implant itself, not just the drilling.

Solution for Fully Edentulous Cases

For fully edentulous jaws, or when the teeth are insufficiently stable or expected to be removed during the implantation procedure, Navident offers a unique Bone Anchoring Solution. A single small diameter implant (SDI) is temporarily inserted in the jaw, either vertically or horizontally, to provide a stable bone anchor. A special version of the NaviStent arm, with a bracket designed to provide strong and stable coupling to the head of the implant, is then used to attach the CT-Marker or the JawTag to the jaw. The bracket has a built-in safety snap mechanism to prevent damage to the bone or the SDI when the CT-Marker or JawTag are accidentally hit.

"For the 30 implants where the mini-implant approach was used, mean deviations of 0.78 mm at entry, 1.22 mm at apex and 1.91° of angulation were achieved. These results are statistically consistent with the results obtained using Navident's partially edentulous protocol."

Source: "Accuracy of a Dynamic Dental Implantation Navigation System in Regular Clinical Usage" by Stefanelli, 2017

NOTE: Navident is cleared by the FDA in the United States for use with partially edentulous patients. This solution for use with completely edentulous patients is not currently available for use in the United States.

Fig 1: Arm rigidly anchored to the mandible using a single vertically inserted SDI

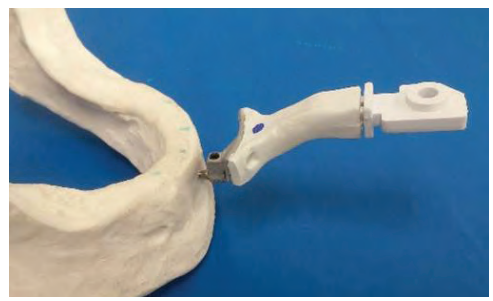


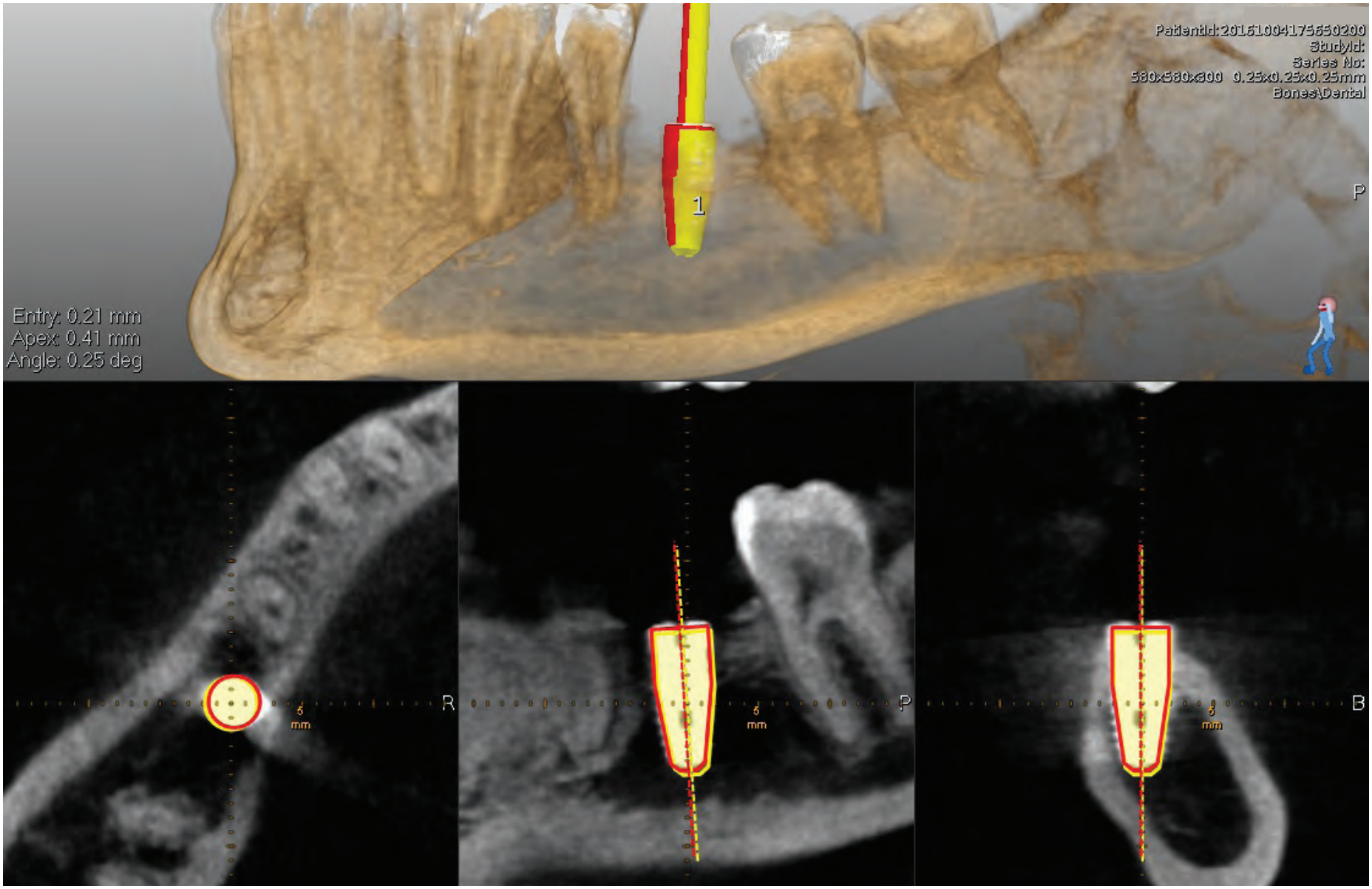
Fig 2: Anchoring to the mandible using a horizontally inserted SDI

"Navident is the future of guidance in dental implantology. The inevitable evolvement of Navident in the near future is going to enlighten the path for more and more precise placement of dental implants which is one of the most critical keys for long term success of implants and successful dental prosthesis.

After a certain amount of Navident experience, we believe that Navident is a must for flapless placement of dental implants. Navident provides you extra information of how well you are doing during placement so you have the chance to correct yourself right away. It is also very effectively used for correct placement and alignment of implants in long edentulous areas and fully edentulous cases if flapped procedure is needed."

Dr. Yakup Üstün, Dr. Noyan Başal,
Dr. Hakan Uysal, Dr. Tolga Akova,
SEE Implant Dentistry Training Team, Istanbul and Adana, Turkey

Pictured: Dr. Yakup Üstün and Dr. Noyan Başal, Adana and Istanbul, Turkey



EvaluNav

The EvaluNav application, included in Navident, enables evaluation of the deviations between the planned and the actual position of implants appearing in a post-operative ("post-op") CT scan. Once the pre- and post-op scans are loaded and registered to each other, the exact position of each implant is detected in the post-op CT and compared to its planned position in the pre-op scan. The deviations at entry and apex and angle are automatically computed and presented both visually and numerically. Provided the implant itself was inserted under guidance, EvaluNav is able to further separate guidance deviation (system error) from drilling deviation (user error).

"Having participated in guided surgery since 1999, first utilizing the beta version of 3D planning software and stereolithographic guides and ever since participating in the digital explosion of technology, I am now more excited than ever with dynamic navigation that Navident is leading. The workflow that we are implementing is awesome and I believe the future of guided implant treatment planning and delivery for our patients."
Dr. Todd Scheyer, Houston, United States

Pictured: EvaluNav results for Dr. Luigi Stefanelli of Sapienza University in Rome, Italy

“The system’s accuracy is immediately evident with an accuracy check done during the simple calibration process by touching on anatomical markers. This reference, done as you change drills, ensures patient safety throughout the entire procedure.”

Dr. Luigi Stefanelli, Rome, Italy

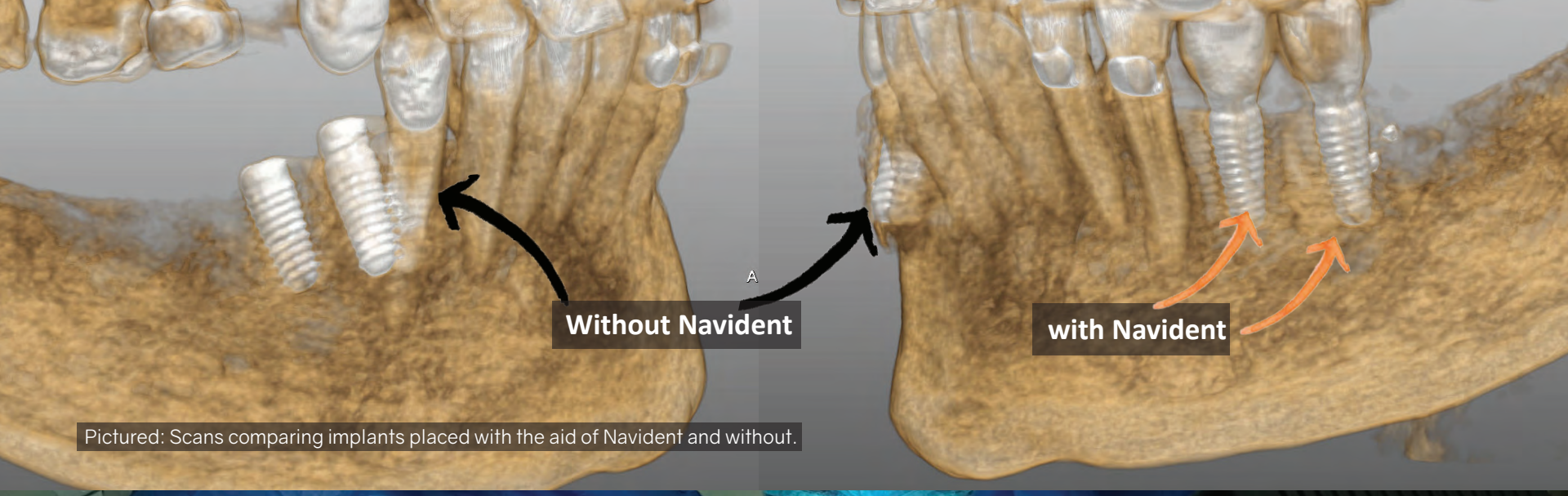
Pictured: Dr Luigi Stefanelli, Rome, Italy

The Dynamic Navigation Society is the educational division of ClaroNav, which organizes courses worldwide. Interested dental clinicians can attend Navident training sessions and hands-on courses.

Leading clinicians from around the world have joined the Dynamic Navigation Society (DNS) to be at the forefront of dynamic guided dental surgery. Peer-to-Peer Education is critical to the success of any evolving technology and with our current group of renowned clinicians we feel we are in an excellent position to lead the way.

DNS organizes high quality courses all over North America, Europe and Asia. Courses are offered in a variety of formats (half day, 1-day, 2-day, weekday or weekend) to accommodate the clinician's schedule. Curriculum includes education on demo models and observation of live surgery. First feedback has been extremely positive, as clinicians discover the way from a good treatment plan to an excellent surgical outcome.

To learn more about DNS, visit dns.claronav.com



Pictured: Scans comparing implants placed with the aid of Navident and without.

"I started guiding implants in 2003 and went through the historical process of creating radiopaque markers in the guide, then radiopaque teeth, complex segmentations, dual and optical scans and even printing my own guides digitally. Navigation in real time or dynamic guided surgery is an easy, simple and fascinating technology that allows us to scan, plan and guide implants in minutes. Each and every step of the procedure has been simplified to allow easy integration in your everyday implant dentistry armamentarium and clinical protocols. Visualizing anatomical structures and the location of your surgical bur in real time is a powerful advantage that will bring safety, speed and precision to your clinical procedures. I love it and the patients love it. My back and neck also love it as I work in a perfect ergonomic position. I invite you to join the family of dentists that have adopted Navigation in their practices. You won't regret."

Dr. Alvaro Ordonez, South Miami, United States

Pictured: Dr. Alvaro Ordonez, South Miami, United States

About ClaroNav Inc.

ClaroNav is wholly owned by us, its founders and employees. Our mission is to do good, have fun and make money.

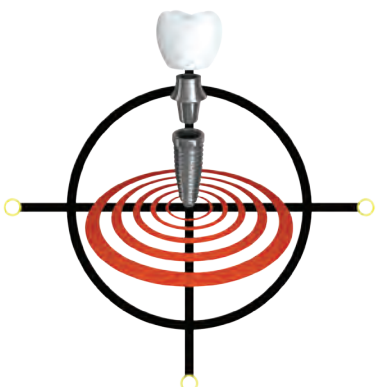
Our surgical navigation roots go back to the development of the first commercial CT-based navigation system, the Viewing Wand, which our founders developed while at ISG Technologies (now part of IBM). The Viewing Wand, FDA cleared in 1994, was used to guide neurosurgery. After we left ISG and formed our own company in 2001, we developed and marketed the first vision-based optical tracking system for surgery, the MicronTracker (2003). We then helped other companies develop their own complete MicronTracker-based surgical navigation systems, and, starting in 2010, we initiated our own. We worked closely with dental surgeons at the University of Toronto School of Dentistry to develop and market Navident, and with ENT surgeons to develop and market NaviENT.

We currently develop, test, manufacture, market, sell, train, and support our products at our Toronto headquarters. We also market, train and support out of our offices in Europe and East Asia, as well as through a network of national distributors.

DNS
DYNAMIC NAVIGATION SOCIETY

Experience Navident with a Master Clinical Trainer in your area
and become part of the worldwide Dynamic Navigation Society

dns@claronav.com



Navident by ClaroNav

Purchase Navident for your practice

TORONTO HQ
1140 Sheppard Avenue West
Unit 10
Toronto, Ontario, Canada
M3K 2A2

+1-844-NAVIDENT
628-4336

EUROPEAN OFFICE
ClaroNav
Pieter Ballewijnsstraat 1
3500 Hasselt
Belgium

+ 32-475-75-52-26

Connect with us:
Facebook.com/ClaroNav
Twitter.com/ClaroNav
Linkedin.com/Company/ClaroNav
Email: info@claronav.com

CE 0473 Navident is cleared by the FDA for sale in the United States
Approved for commercial sale in Canada and the EU

990-ND-NB (Revision B)