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CBCT

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INTERNATIONAL MEETING OF COMPUTER AIDED IMPLANTOLOGY ACADEMY

XV ANNUAL MEETING

Editor-in-Chief Dr. Prashant Jaju



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From the Editor's Desk

Hello CAI members & participants,

CBCT magazine welcomes you to this special issue on the occasion of XV Annual Meeting of International meeting of Computer Aided Implantology academy. CAI academy is one of the oldest research and clinical oriented group in the field of digital implantology and CBCT magazine is proud to be associated with this renowned organization.

We are bringing all the abstracts of the presentations to be conducted at this XV congress of CAI academy in this special issue. The aim of this issue is to inform all our readers & members about the quality work which will be showcased by renowned international presenters from across the globe. CBCT magazine hopes that all the enthusiastic participants will be get informative lectures and clinical presentations during the course of this congress .

Year 2022 has been fruitful year for CBCT magazine with much acclaimed authors presented their work through our journal.

We take this opportunity to thank all our reviewers, authors ,and my entire team of CBCT magazine for taking efforts to give quality clinical and research paper

We will be releasing special issue at the AEEDC 2023 Dubai as we are one of the official sponsor of this grant event.

Editor-in-Chief
Dr. Prashant Jaju MDS
Oral Medicine & Radiology

From the
Editor's Desk

Editor's Desk

PRESIDENT MESSAGE



The International Computer Aided Implantology (CAI) Academy has been at the forefront and the driving force behind the development and application of 'Digital Technologies in Dentistry'. Its Presidents, Councils and Active Members have been the pioneers and inventors of Computer Guided Surgery and they have invested much of their career in developing relevant 'Digital Workflows' and proving their actual value in 'Dental & Maxillofacial Clinical Practice'.

Since its inception, the CAI Academy, a non-profit scientific organization, has been organising numerous educational events around the globe, in order to prove the value and stimulate interest in 'Computer Guided Implantology'.

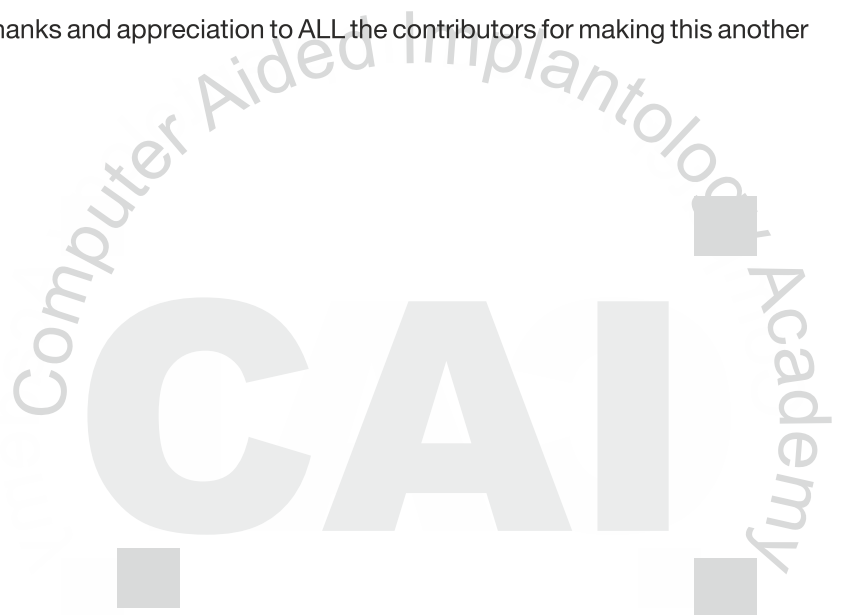
Now, that the clinical benefits are finally widely recognised and 'Scanning, Planning, Printing, Guidance' becomes a clinical reality, the CAI Academy assumes an instrumental role in providing relevant education, training and certification of dental professionals.

The 15th International Meeting in Florence is a solid proof of the Academy's commitment to continue its concrete contribution in shaping the 'digital' future.

On behalf of the CAI Academy, my sincere thanks and appreciation to ALL the contributors for making this another special '3D' event!

Dr. Panos Diamantopoulos

President of the CAI Academy



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Abstracts
in inside pages



International Meeting of Computer Aided Implantology Academy



Full arch rehabilitation cases using guided dental implantology & immediate loading protocols

Dr. Ahmed Abu Foul - DDS / UAE

Fellowship in Periodontology & Oral Surgery - University of Genova, Italy, Fellowship in Advanced Laser Dentistry - University of Genova, Italy., MSc Perio Resident II - GMU Dental Implantologist Winsix Clinical Support - MENA Region., Practice owner in two different practices - Clinical instructor at local universities such as Ajman University and Gulf Medical University - Clinical trainer for Winsix Dental Implants System

Presenting cases of free hand full arch surgeries with immediate loading protocols and discussing the challenges faced during these cases, then discussing guided full arch cases and providing solution to the challenges faced in free hand.

In short, comparison between free hand and guided full arch surgeries with advantages and disadvantages of each.



Maxillary bone atrophy and immediate loading of the dental implants

Dr. Alessandro Palumbo DDS

DDS on 04/12/1984 c/o the University of L'Aquila., Perfected in Periodontology in 1991 lecturer Prof. Giorgio Wogel University of Milan, Improved Implantology and Prosthetics in 1991 Prof. Bertil Frieberg and Professor Bengt Linden (Sweden), Perfected in Prosthetics in 1992 with Prof. Mario Martignoni Master in Orthodontics, "Multidisciplinary Approach to the orthodontic patient" c/o the University of Milan yy 1995/96., Improved Gnathology c/o the University G. D'Annunzio of Chieti yy 1996 / 97, Completed in advance maxillary Surgery c/o "MAP IMPLANT INSTITUTE", Tampa Florida U.S.A. Pat "Advanced Bone Grafting" Prof. Michael A. Pikos Perfected in Cosmetic Products & Aesthetic Medicine in Dentistry at the University G. D'Annunzio of Chieti yy 2009/10 Perfected in "Aesthetic Dentistry and Medicine:" Clinical Protocols and Techniques in Professional Practice" University of Foggia, Faculty of Medicine, yy 2011/12, Active member of several scientific societies ARO; A.P.O.R. European Academy of Osseointegration; Italian Society of Oral Surgery; AISI; SIDCO, Mentor in the program Education of NobelBiocare., Promoter from 2000 to Immediate

Function of implant, Minimally Invasive and Computer Guided Implantology, President of the Cenacle Odontostomatologic of Adriatic. Tail 2001-2007., Lecturer in practical courses in Computer Guided Implantology., Mentor of SimPlant Academy and CAI Academy, Speaker at national and international conferences on topics of implant prosthesis., Author of scientific papers in national journals

Since the beginning of dental implantology, even before the modern classical and official one, with a more scientific cut, founded by Prof. Branemark, the myth of immediate loading and Immediate function. Since the 2000s, that is, for well over 20 years now, both in my personal experience and in the international scientific literature, the immediate loading of the implant is a reality. The advent of computer-guided surgery for implant insertion has made this practice possible even in complex cases with atrophic jaws, making it simple and predictable with very low morbidity.

This type of intervention would otherwise be impossible if not with less predictable and highly morbidity invasive long methods at the expense of patient comfort. In my brief presentation I want to emphasize the possibility that the computer guided implantology that I have been applying for over 20 years offers all of us the simple solution to rehabilitate complex cases of atrophy in a very short time with immediate load and function. This is possible by exploiting the basal bone such as the septa and medial walls of the maxillary sinuses, the suture of the pterygoid bone, the symphysis, the nasal spine etc .. Clinical cases performed by me following the principle of CGI with immediate load and function with follow-up from 5 to 20 years will be shown.

“ A new zygomatic protocol for atrophic maxilla treatment : the piezoelectric approach “

Dr. Andrea Tedesco

Dr. Andrea Tedesco graduated in Dentistry and Prosthodontic at the University of Florence, Italy. He specialized in Oral Surgery and gained a Post-graduate Diploma at the Oral and Maxillofacial Department of the Guy's and St. Thomas Hospital, in London., He is enrolled in the General Dental Council of London.He has performed over 200 implant surgery with the use of zygomatic implants., Member Fellow of Royal Society of Medicine London, UK., Winner for best Oral Presentation: " The treatment of atrophic maxilla using zygomatic implants " Advances in Maxillofacial Implantology meeting at The Royal Society of Medicine, London, Uk on January 2016.,Award Winner: " Best Dentist - Zygomatic Implantologist " at the World Dental and Oral Health Congress, House of Commons Parliament London, UK 2019.He's currently testing a new Minimally Invasive Technique on the use of zygomatic implants associated with piezoelectric instrumentation. Research Fellow on the treatment of severe maxilla atrophy using zygomatic implants at the Oral Surgery Department - S. Chiara Hospital, University of Pisa, Italy Editorial Board of " Journal of Dental Science Research Review and Reports "Member of American Academy of Oral Surgery Author of the book: " Gli impianti zgomatici: attualità nelle riabilitazioni implanto-protesiche dei mascellari atrofici " Ed. Quintessenza Fellow Research

on implant treatments of severe jaw atrophies using zygomatic implants at the Oral Surgery Department - S. Chiara Hospital, University of Pisa.Lecturer / Tutor in " Implantology " at the Dentistry Degree, at the Master in Oral Surgery, at the Oral Surgery Specialization course and at the " Master of II level in Zygomatic Implantology ", University of Pisa.Dr. Tedesco owns a private dental practice in Florence, dealing in oral surgery and implantology and as consultant in other private dental practices.

Key words : Zygomatic implants, edentulous, atrophic, piezoelectric surgery.

Objectives : The zygomatic implants represent a valid alternative to regenerative surgery of severe maxillary atrophies. With a right clinical indication and a correct training for the operator it's possible to treat complex cases with immediate loading to reduce the patient's discomfort. The Minimally Invasive Technique developed by Author, using piezoelectric dedicated inserts, helps the surgeon to realize an easy surgery, less demolishing, more predictable because the osteotomy preparation is always outside the sinus, totally using the piezoelectric instrumentation. Usually, the zygomatic implant site preparation is still performed with long drills difficult to control. In addition, the classic intra-sinus approach involves the maxillary sinus, increasing the morbidity, the operating times, and other complications difficult to resolve. The aim of this work is to evaluate a new Minimally Invasive Technique using piezoelectric dedicated inserts and extrasinusal approach.

Methods : A total of 268 conventional implants were placed together with 224 zygomatic implants. The patients, 72 male and 40 female, no smokers, in good health, with a removable prosthesis, were followed up 48 months. After Tc Cone Beam and software planning design, each surgery was performed placing for each patient two or four straight implants in the frontal area and two zygomatic implants in the zygomatic bone. Some cases have been treated with 4 zygomatic implants, and other with nasal implants After planning the surgery a stereolithographic model was created for each patient. The insertion torque was over 35 Nc. The surgeries was performed under general anesthesia.

Results : No zygomatic implants was lost during the observation period. The survival rate for the zygomatic implants was 100% over an average of 24 months observation period. Two conventional implants were lost and there were no significant complications.

Conclusion : The zygomatic implants are a valid alternative to grafting procedure for the rehabilitation of the atrophic maxilla, in many cases using a immediate function protocols.The zygomatic implants were placed outside the sinus and anchored in the maxillary alveolar process and in the zygomatic cortical bone.

There are many advantages about this new technique:

- **Extrasinusal approach:** No sinus complications
- Piezoelectric instrumentation
- Dedicated inserts
- **No instruments vibration:** No dangerous
- **The surgery follows 3 steps:** more accuracy
- Greater visibility
- Less time
- **Less post-operative discomfort**

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Application of intra oral scanner in guided surgery: a clinical case

Dott. A D' Arienzo (Italy)

Degree in Medicine and Surgery obtained on 10/04/1987 c/o University of Florence. Specialization in Odontostomatology obtained on 12/07/1990 c/o University of Pisa, Master in implant Surgery obtained c / o University of Florence. After graduating in Medicine he attended the maxillofacial surgery department of Florence for several years. He was scientific referent of Bionova srl (computer assisted surgery). He was scientific referent of 3diemme srl for the application of intraoral optical scanning in the RealGuide guided surgery procedure, Scientific referent for Double Guide guided surgery procedure for Idievolution (Concorezzo-MB). Currently he is scientific referent of guided surgery procedures for Straumann Group (Basel-Switzerland). Active member of Cai Academy..Cultural secretary of ANDI Firenze and Cultural secretary of ANDI Toscana. He is author of scientific publications in specialistic journals and speaker in various conferences on guided surgery and digital prosthodontic.

An increasing number of clinician in their practice use IOS as alternative to conventional physical impression taking. Several studies have shown high levels of accuracy in Prosthodontics and in Orthodontics. Little is known about applications of intraoral scanners in guided surgery. The aim of the presentation is to understand how the intraoral scanners can be integrated in the process of the computer guided surgery. Starting from literature up to clinical cases, the Author will analyze the applications of intraoral scanner in case of parzial edentulism and complete edentulism.



Applications of Digital Dentistry in Oral and Maxillofacial Implantology for the treatment of the atrophic jaw

Prof Cemal Ucer

BDS, MSc, PhD (OMFS), MFDS RCS (Eng), FCGDent, FDTFEd RCSEd

Professor of Dental Implantology, University of Salford , Fellow of the British Association of Oral and Maxillofacial Surgeons , Fellow of Dental Training Faculty of Royal College of Surgeons of Edinburgh, Fellow of College of General Dentistry, UK, Fellow of ITI, Director of Centre for Oral-Maxillofacial & Dental Implant Reconstruction, and Zygoma ZAGA Center Manchester. Cemal Ucer, is a specialist Oral Surgeon and Professor of Dental Implantology at University of Salford in Manchester, UK. He is director of Centre for Oral and Maxillofacial & Dental Implant Reconstruction and ZAGA Centre Manchester at ICE Postgraduate Dental Institute. He leads University of Salford's MSc in implant dentistry and Advanced Certificate in Bone and Tissue Regeneration & Sinus Grafting programme and Zygomatic Implant ZAGA Proficient Course in Manchester. Cemal is a Fellow of the Faculty of Dental Trainers of Royal College of Surgeons of Edinburgh, Fellow of the British Association of Oral & Maxillofacial Surgeons, Fellow of the ITI and a member of the Faculty of Examiners for the RCSEd Diploma in Implant Dentistry. Cemal is a founding member of the National Advisory Board for Human Factors in Dentistry, UK

Digital dentistry is an new field of dentistry that involves the use of digital technologies and devices that incorporate computer-assisted components to carry out dental procedures. DD is increasingly being used to replace traditional dental procedures more efficiently than using mechanical tools. Digital techniques streamline the delivery of dental treatments and help to meet rising patient demands. Emerging research and clinical evidence demonstrate many real benefits of using digital work-flow (DWF) in oral and maxillofacial surgery and implantology.

In the severely atrophic jaw, implant treatment requires multiple interventions including a pre-prosthetic bone grafting before implants can be installed. In extreme cases where bone grafting cannot be performed, specialised implants such as 3-D printed bone-anchored customised devices or Zygomatic implants are used. DWF is increasingly playing a central role in improving the successful outcome of particularly complex dental and maxillofacial implant reconstructions for the treatment of a wide variety of indications. The digital technology is becoming indispensable not only during the restorative phase of the treatment but particularly during the diagnostic imaging, assessment, treatment planning and surgical delivery stages. This lecture will look at the role of 3D digital workflow (DWF) in implant dentistry and discuss how it could help to increase the efficiency and success of dental implant treatment, whilst reducing both the short and long term complications through improved surgical accuracy and precision. Emerging applications of DWF in oral and maxillofacial implantology will be discussed including the use of intraoral scanning, cone beam computed tomography (CBCT), computer-assisted-design and manufacturing (CAD/CAM) processes, 3D printing, milling and additive manufacturing, fabrication of anatomically and prosthodontically guided surgery, custom-made bone grafts and 3D printed individualised implants particularly for the rehabilitation of patients with moderate to severe atrophy of the jaw.



The work flow for zirconium ceramic implants in full arch restorations is shown on the basis of several cases. Template guided, flapless, immediate implant, implant loading.

Dr. med. dent. Gernot Obermair

- Born in Bolzano (Italy) in 1966
- Studies of dentistry at the University of Ulm (Germany)
- Foundation of the private praxis in 1996 in Bolzano
- Specialized in advanced implantology
- Experience in implantology since 1994
- 3D navigated implantology since 2002
- Examiner expert of the implantology DGOI 2001
- Active Member of the CAI Academy since 2016
- 3D planned, template guided and dynamic navigated implantology (xGuide/ immediate loading)

The work flow for zirconium ceramic implants in full arch restorations is shown on the basis of several cases. Template guided, flapless, immediate implant, implant loading.



Dr Roberto Giuseppe D'Ambrogio

DDS, Spec Oral Surg, DiplImp Dent, MSc Imp Dent, MSc Aesth Med



Dr Francesco Grecchi

MD, DDS, OMFS

New horizons in zygomatic implantolog

Dr Roberto Giuseppe D'Ambrogio

DDS, SpecOralSurg, DiplImp Dent, MScImpDent, MScAesthMed

Dr Francesco Grecchi MD, DDS, OMFS

Dr Roberto Giuseppe D'Ambrogio

Graduated in Dentistry in 2011 at the University of Brescia, from 2014 to 2016 attended the two-years post-graduate course in Implant Dentistry held by the Royal College of English Surgeons

(London), visiting the departments of Oral Surgery of the Universities of Frankfurt and Tübingen (Germany) and achieving so the relative Diploma in Implant Surgery. In 2018 completed the Master of Science in Implant Dentistry held by the Universidad Rey Juan Carlos (Madrid), with a research-work on the treatment of Peri-implantitis. From 2018 to 2019 attended and completed the European Master course of Aesthetic Medicine of the face held by the International Academy of Practical Aesthetic Medicine (Milan);

From 2019 he is attending the Specialty in Oral Surgery held by the University of Brescia. Member of various scientific societies (EAO - European academy of Osteointegration, IAO - Italian academy of Osteointegration, EfP - European federation of Periodontology, SIdP - Italian Society of Periodontology, SIdCO - Italian Society of Oral Surgery, RCS - Royal College of English Surgeons, AIG - Italian Academy of Gnatology) he dedicates his work-practice exclusively to Oral Surgery, Jaws Reconstructive Surgery, Traditional, Zygomatic and Pterygoid Implantology, Complex Prosthetic Rehabilitations and Periodontology; cooperates with the ENT department of the Spedali Civili (Brescia main Hospital) for the implant re-habilitation of the oncologic patients.

Dr Francesco Grecchi, Italy

Graduated at the Universitas Studiorum Mediolanensis in Milan in 1981. Specialist in General Surgery and Maxillo-Facial Surgery. From 2000 to 2021 Head of the Maxillo-Facial Surgery Department of IRCCS Istituto Ortopedico Galeazzi. Consultant of Maxillo-Facial Surgery Department, Istituto Stomatologico Italiano (ISI - Milan) and consultant in maxillofacial traumatology IRCCS Istituto Clinico Humanitas, Rozzano. He has performed more than 2000 Orthognathic surgery operations and 2500 operations of major pre-prosthetic surgery, using reconstructive techniques supported by state-of-the-art materials and technologies. In 2009 he published an original surgical technique for the rehabilitation of atrophic jaws (One step oral rehabilitation). He is an expert in zygomatic implantology both in oncological rehabilitation and in extreme atrophies; Italian maxillofacial consultant of the National Association of Ectodermal Dysplasia (ANDE). Author and co-author of 107 scientific publications.

The use of the zygomatic bone to stabilize dental implants for prosthetic aim is not really a recent procedure but was introduced by the pioneers of dental implantology so to bypass the unpredictable resorption of the maxillary bone after teeth loss, before the introduction of pre-prosthetic reconstructive surgery.

This mini-invasive approach, if compared to major reconstructive surgery, gained success and popularity in the treatment of severe atrophies where its favorable results led to the contraction of costs and treatment time, the reduction of the complications associated with bone grafting procedures and to the possibility of rapidly rehabilitating the patients through immediate loading protocols. Recent improvements to surgical technique and implant design, together with the increasing safety and accuracy of the procedure, determined the extension of the treatment indication to classes of atrophy less severe than V and VI of Cawood and Howell, as well as to high demanding clinical scenarios, where due to huge oncologic resections, severe congenital malformation or failure of previous reconstructive approaches, the physiologic anatomy is subverted and traditional anatomical landmarks altered. In mid-face oncology, the combination of microvascular soft tissue free flaps with guided zygomatic implantology, immediate loading protocols and a full digital work-flow can led to a one-day complete rehabilitation of patients candidate to partial or complete maxillectomy with net and concrete advantages in terms of invasiveness, treatment time, costs, clinical results obtained and quality of life regained. Zygomatic guided implantology, furthermore, can be a great help in the aesthetic orthognathic approach of edentulous dismorphic patient in Class 4 atrophies of Cawood and Howell. To successfully carry out these procedures, a multi-skilled team is required, as evidenced by the good results of the cases presented, to which oncologic surgeons, implantologists, maxillofacial surgeons, engineers and dental technicians have contributed.



Ten years follow-up of titanium custom made implants in the treatment of oral bone atrophy

Guido Schioli

Born in Genoa, Italy in 1963, he graduates in Medicine and Surgery at the University of Genoa in 1988 followed by a post graduate degree in Dentistry in 1991 and a two year continuing education program at Harvard University focused on implant surgery and guided bone regeneration. He also receives training in clinical implant surgery at the Misch Implant Institute (Detroit, MI) and at the University of Michigan (Ann Harbor) in periodontology. From 1997 to 2005, he is a national and international trainer, lecturer and advisor for Zimmer screw-vent implant system (formerly Paragon). He starts using Simplant software in 1998 before it is acquired by Materialise. Starting in 2002, he is considered a pioneer in guided surgery owing to his use of several software for guided implant placement including Nobel Guide system. He is also trained at the Branemark Implant Institute in Goteborg, Sweden in 2006. Trained under the direction of Dr. Ruben Rosenberg at the satellite Branemark Institute (Santiago, Chile) for zygoma implant surgery in August 2006 and then under the tutelage of Professor Chantal Malevez (Brussels, Belgium) and of Dr. Luc Vrienlick (Genk, Belgium). He starts practicing zygoma implant placement by hand and later using a customized semi-guided surgical protocol (published in JOMS). Speaker and trainer for Nobel Biocare from 2008 to 2010. In 2012 he develops a full digital protocol for subperiosteal titanium laser sintering implants for the treatment of extreme atrophy of distal lower jaw (still not published).



Also a prosthodontist since the start and later with the use of digital technology. Founder and past President of CAI Academy (www.caiacademy.org) for the biennium 2007-2008 and current member of the commission for active member admission. He has also published several scientific contributions in journals with recognized impact factor. Speaker for many years both nationally and internationally. He practices dentistry at the San Raffaele Hospital/University (Milano, Italy) and privately in Genoa at the dental office of its Chief. Born into a family with a tradition in dentistry, along with his sister, he is a third-generation dental professional. He dedicates his free time relaxing at the seaside in Liguria where he lives during the weekend. He loves music, plays the drums and is an avid cook of regional Italian cuisine. Willing to relocate to be part of a new experience.

Purpose: To present the application of custom-made 3D-printed subperiosteal titanium implants for fixed prosthetic restorations of the atrophic posterior mandible

Methods: Between June 2012 and January 2022, all partially edentulous patients aged between 52 to 78, with two or more missing teeth in the posterior atrophic mandible were treated. These patients were rehabilitated with custom-made subperiosteal implants, designed from cone beam computed tomography (CBCT) and fabricated in titanium by means of direct metal laser sintering (DMLS). The outcome measures were fit and stability of the implants at placement, duration of the intervention, implant survival, and early and late complications. All patients were restored with immediate prosthetic function and followed from one to ten years

Results: Nineteen patients (six males, thirteen females) were included in the study. The fit of the implants was always excellent before the insertion of the screws. The mean duration of the intervention was 44.3 min (SD ± 19.4, median 37, 95% CI 32.3-56.3). At the six-years follow-up, no implants were lost (survival rate 100%). After six years one implant presented a dehiscence in the buccal plate probably due to a later extraction of an adjacent tooth and had been removed. At the 8 years of function one implant presented infection and the resistance to the antibiotic treatment and had been removed. Any immediate postoperative major complications occurred. In only one patient a temporary nerve symptom occurred. All patients referred very low pain and swelling and sometimes ecchymosis. Some provisional restorations fractured during the temporization phase. The cumulative rate of success was

Conclusions: Although in the limits of number of patients, DMLS has proven to be an effective method for fabricating accurate subperiosteal implants, with high survival rates. This may represent an alternative treatment procedure with a severely atrophic posterior mandible. Further studies are needed to confirm these outcomes.



Ten years follow-up of titanium custom made implants in the treatment of oral bone atrophy

Dr. Stefanelli Luigi Vito.

Dr. Stefanelli Luigi Vito., Doctor of civil engineer at the Politecnico di Torino
Doctor of dental science at "Sapienza", University of Rome., PhD of head and maxillo facial district diseases at "Sapienza", University of Rome., Professor at the implant master of second level at "Sapienza", University of Rome, since 2014. Professor at the prosthesis master of second level at "Sapienza", University of Rome, since 2015. President of Dynamic navigation society EMEA Master Clinical Trainer and opinion leader of Navident, Claronav. Active member of Digital Dentistry Society. Active member of Digital Implant and Restorative Academy. Author of several patents on static guided surgery. Author of several papers on guided surgery.

The implant prosthetic rehabilitation of the atrophic jaws is always a challenge for the clinician.

The use of computer aided implantology (CAI) allows the clinician to make it more predictable and safe, with a minimal invasive approach.

In order to transfer the plan to the jaw there two ways of CAI, the static guides, based on the use of surgical guides and the Dynamic navigation systems, that allows to follow real time the advancing of the drill into the bone. There are several protocol, by using dynamic navigation systems, that can be used in order to treat the atrophic jaws:

- Avoid anatomical constraints as well as sinus and inferior alveolar nerve;
- Navigation Antral Bone Expansion;
- Pterygoid implants;
- Zygomatic implants.

All these protocols are based on the use of native bone.



The implant prosthetic rehabilitation of the atrophic jaws is always a challenge for the clinician.

Maurice Yves Mommaerts MD, DMD, PhD, FEBOMFS, FICS, FAACS

Professor, European Face Centre, University Hospital Brussels. Training Director OMFS, VUB. Consultant GZA Hospitals, Antwerp (coordinating training director). Consultant Face Ahead (private clinic aesthetic facial surgery). Honorary President of the European Association of Cranio-Maxillo-Facial Surgery. Honorary Member of the Sociedad Española de Cirugía Plástica Facial. Member of the Board of Directors, Aesthetic & Reconstructive Craniofacial Surgery Foundation, Hyderabad, India. Medical Advisory Board Member - Hyderabad Cleft Society Founder, CEO & Innovation manager, at CADskills. Member of the editorial board of J Craniofacial Surg, Ind J Plastic Surg, Ind J Cleft Surgery, Am J Cosmetic Surgery, Ann Maxillofac Surg. Surgical activities centered around rhinoplasty (revisional mainly), aesthetic facial surgery (blepharoplasty mainly), facial makeover (orthognathic & orthofacial surgery), facial feminization - masculinization surgery (cis & trans), congenital craniofacial malformation surgery, patient specific implants - TMJ prosthesis - AMSJI

In 2021, the 3.0 version of AMSJI was launched. The ostectomy guides extended treatment to terminal dentition and mandibular rehabilitation became an acceptable treatment option. The most significant expansion has been toward rescuing lost zygomatic implant cases; more than toward reconstructions of maxillary defects. The system opened for Straumann, Nobel and Astra connections. More than 250 cases have been handled. The overall failure rate was 1.2%.



Short implants supporting a fixed prosthesis in mandibles with extreme atrophy.

Dr. Mauro Marincola

Dr. Mauro Marincola graduated in 1988 at "La Sapienza University" Rome, Italy and received in 1990 his Italian and German doctor degree in Dentistry and Dental Prosthetics. He received in 1998 his Master's Degree in Stomatology with focus on Implant Dentistry from the "Center of Research and Post Graduate Studies", Medical Academy of Rome and in 1999 his title as Specialist in Implantology from the "Order of Physicians and Dentists" in Koblenz, Germany. Currently serves as clinical director of the "International Center of Oral Implantology" and professor at the dental school, University of Cartagena, Colombia where he is clinically active and professor since 1997. He served also as visiting professor at several dental schools like Beijing University, Nanjing University, University of Leuven, University of Rome and Verona, Mid Western University, Phoenix.



Since 1998 in charge as a scientific research coordinator for Bicon, Boston, MA, he is a co-developer of innovative surgical and restorative techniques of the Bicon implant system together with Dr. Vincent Morgen, IDC Boston. Dr. Marincola is author and co-author of numerous scientific articles in international dental journals. Lectures extensively in Europe, Asia, USA and Latin and South America on Short implant related topics. He speaks fluent Italian, German, English and Spanish.

The mandibular atrophies are the most challenged to be treated with fixed prosthesis supported by implants. Unlike for the Maxillary not many grafting options are in the hands of the clinician. The posterior region has his anatomical delimitation with the presence of the mandibular nerve and implants could be only inserted at the intra-alveolar bone region. Short implants with the appropriate design can solve this problem.



3D Block-onegraft Abstract

Dr. Michele Jacotti

PERSONAL PROFILE- - Private Practitioner exclusively committed to implantology and implant prosthesis.- Course and Congress lecturer, he has written articles in both national and international journals.**EDUCATION**-1986 – 1991 Doctor of Dental Surgery (DDS), Università degli Studi di Milano.1991 – present Attended several Advanced Courses in Oral Surgery and Implantology, in Italy and abroad.

PROFESSIONAL EXPERIENCE-1992 – present Private practitioner in Brescia.

PROFESSIONAL MEMBERSHIPS

- Active Member of CAI Academy (Computer Aided Implantology)
- Active Member of SICOI (Italian Society of Oral Surgery and Implantology)
- Active member of DDS (Digital Dentistry Society)
- ?- Active member of IAO (Italian Academy of Osteointegration)

The use of bone grafts as a regenerating technique has become increasingly important over the last few years and several authors have described bone grafts in alloplastic blocks. This technology means that the patient does not have to undergo a further operation in order to get the graft. In implantology, CT has by now become nearly a routine exam, as it is the only one that can really give significant data on bone quantity, anatomic structure morphology and maxillary three-dimensional vision. From the data of a CT maxillary exam it is thus possible to get three-dimensional models in heat resistant plastic material, that can be put in an envelope and sterilized. The 3D sterilized models are then used, with a sterile procedure, to model the dehydrated bone grafts which are then screwed onto the model. When the job is finished, the models with the grafts are put in sterile envelope which will be reopened only when the patient is called for the surgical phase during which the premodelled grafts will be unscrewed from the model and screwed onto the receiving site. This technique drastically reduces the operation time on the patient, as most of the job is done on the 3D model. There is also better control of the graft precision as it is dry modelled and can be verified from different points of view, without the classical visual obstacles such as bleeding, flaps and limitations due to the oral cavity. The future: virtually shape the bone with special software using the CAD-CAM technique, exporting the STL file in order to receive the shaped sterile block directly from the tissue bank. A further development of the CAD CAM technique is to create customised titanium mesh: again from the DICOM data of the patient's CBCT, specialised companies design the mesh, with the holes for the fixing screws and the space to accommodate the biomaterial.



Artificial Intelligence In Dentistry- A Game Changer

Dr. Prashant Jaju BDS,MDS

Oral Medicine and Radiology.,
Officer on Special Duty(OSD), Professor ,Head of Dept & Guide
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Co Authors : Dr. Sushma Jaju BDS,MDS

Prof. Dr Prashant P Jaju is currently serving as administrative head, head of the department of Oral Medicine Radiology department - Rishiraj college of dental sciences and research centre, bhopal, India. Having an experience of more than 15 years in dentomaxillofacial radiology with special interests in CBCT and Artificial Intelligence. Author of two books on CBCT and editor in chief of CBCT magazine which is the official publication of Computer aided implantology academy.. Also serving as advisory board for Velmeni Inc, AI based company for 3D imaging. He is also key opinion leader for dental imaging for Dentsply Sirona in India.

Artificial intelligence has captured the imagination of every aspect of human lives. This presentation will highlight the applications and advances of Artificial Intelligence in dentistry and how it would be reshaping the dental diagnosis and treatment aspect



General considerations on the surgical techniques in the treatment of the atrophic maxilla.

Paulo Malo DDS, PHD

The importance of total rehabilitation
Evolution & history of the MALO protocol
MALO protocol diagnosis
What is All-on-4®?
All-on-4® treatment concept
All-on-4® Standard
All-on-4® Hybrid
All-on-4® Double-Zygoma
All-on-4® Extreme

During this session it will be reviewed the principles, advantages, objectives and biomechanics of the All-on-4® treatment Concept to restore complete edentulous and failing dentition cases, followed by the discussion of the most recent advancements that this technique has gone through.

It will be discussed the different techniques to rehabilitate patients with extreme situations, the new products developed to overcome the challenges of restoring the atrophic maxillae, comprehending a wide range of solutions since zygomatic to short implants, along with other implant design innovations, emphasizing its importance to the success of this treatment and providing clinical examples to its application.



Art and science of computer guided implantology: the history of computer guided surgery

Dr. Philippe Tardieu DDS

DDS from Paris VII University, Post graduate in Implantology from Nice Sophia Antipolis University, Adjunct Associate Professor New York University College of Dentistry, Inventor of the SAFE System® and inventor of the Immediate Smile® protocol and components, Inventor of the AxisGuide®, the E- Medical Manager® and the AccuDent® online software, Past President of the CAI Academy, private practice in Dubai, UAE, limited to implantology and aesthetic reconstructions.

ABSTRACT :

In 1991, the display of the CT Scans including the frontal oblique images was the first step into computer guided implantology. I made a first publication on this topic in 1992. Then, Columbia Scientifics edited the SimPlant Program to plan implants. This started in 2D first and then in 3D in 1999. The images were by far not as good as they are today and there was no way to make segmentations. A company from Belgium called Materialise, started developing a program including image treatment and implant planning. They were designing guides with another program. They brought Columbia Scientifics and spread their program and guides under the name of SimPlant, over the world on Columbia Scientifics network. I invented the SAFE System and the Immediate Smile procedures at that time. And even today all this is intensively copied by different implant brands. Then I invented the AxisGuide® program which is a universal program for all kinds of implants including zygoma implants, immediate loading cases, tumor designs, implants guides, sinus lift guides, and even endodontic guides. The spread of CBCT made the use of guides cost effective and very easy to perform. In parallel to these developments and since more than 18 years navigations systems are available on the market. Today we expect new CT Scan developments coming from China allowing accurate measurement of bone density. Most of what we are using today was invented more than 20 years ago. New developments will come from CT scan new technologies.



General considerations on the surgical techniques in the treatment of the atrophic maxilla.

Marco Rinaldi MD DMD

He has developed a specific experience in Reconstructive Surgery, using 3D Technologies. He has contributed to international studies and researches on Computer Guided Implantology and Stereolithographic Models, President of Computer Aided Implantology Academy in 2015-2016, Director for Italy of Computer Aided Implantology Academy, President of SimPlant Academy Italy in 2012, Active Member of IADDM, Active Member of Italian Society of Odontostomatological Surgery, Life Member of Academy of Osseointegration, Honorary Member of CAI Academy. He is a Member of the Editorial Board of several scientific magazines. As an international speaker, he has taken active part in national and international courses, seminars and congresses and he is the Author of a large number of scientific publications and of some books including: "Computer Guided Applications for Dental Implants, Bone Graft and Reconstructive Surgery" published by Elsevier U.S.A. in 2016 and translated into Spanish and Chinese and Editor of "Implants and Oral Rehabilitation of the Atrophic Maxilla-Advanced Techniques and Technologies" published by Springer in 2022. Dr. Rinaldi works as Oral Surgeon in Bologna, at Clinica Privata Villalba GVM Care & Research and in his Dental Clinic.

In atrophic jaws, implant rehabilitation with a fixed prosthesis represents a challenge for the entire dental team. Many surgical techniques can be used and the localization of bone defects significantly influences the indication of the most suitable technique. Despite this, various trends in the use of surgical techniques have occurred over the years and have prevailed in the clinic and in the specialist literature. Every oral surgeon who has engaged in implant rehabilitation has experienced these trends. At first it was considered imperative to reconstruct the lost bone therefore bone grafts were used, preferably autologous (Bone grafts). Subsequently, the use of tilted and short dental implants represented a less invasive alternative to bone grafts (Graftless). But as the degree of atrophy advances, many techniques have to throw in the towel as they are no longer usable because the maxillary bone is almost

completely reabsorbed. In these cases, an attempt was made to find an anchoring of the implants outside the maxilla and precisely in the zygomatic bone which is a stable bone that does not undergo resorption. Many studies have therefore focused on the use of zygomatic implants (Zygomatic Implants) as an alternative to large bone reconstructions. Even more recently, the availability of new engineering technologies has allowed the creation of patient-specific implants (PSI), that is, customized implants built to measure starting from the concepts of subperiosteal implants. In general terms, the choice of the surgical technique should obviously fall on the least invasive one possible among those equally effective in guaranteeing long-term success. This is a crucial point of the question: invasiveness and success. It would not make sense to reduce invasiveness to have a non-optimal and not lasting result. We should therefore try to better define some concepts, what we are talking about when we talk about clinical success, duration over time and invasiveness. In other words, what are the objectives and what are the risks. The answer is not obvious and is further complicated if we insert an important variable: the patient. In fact, it is a question of evaluating the techniques, the success and the risks but above all understanding which technique is the most suitable for that particular patient.



Dr. Marco Conti



Dr. Giuseppe Spinelli

CAD-CAM assisted full facial reconstruction and rehabilitation

Dr. Marco Conti
Dr. Giuseppe Spinelli

Dr. Marco Conti

Doctor of Dental Surgery, University of Florence (Firenze, Italy), 2018
Doctor of Medicine, University of Florence (Firenze, Italy), 2013
PhD Student, Maxillo Facial Surgery Unit, Azienda Ospedaliera Careggi (Firenze, Italy).
Dentist (Private Practice), "Studio Conti" (Firenze, Italy)
Volunteer, Maxillo Facial Surgery Unit, Azienda Ospedaliera Careggi (Firenze, Italy).
Volunteer, Maxillo facial Surgery Unit, children's hospital Meyer (Firenze, Italy).
Author of many scientific articles.

Dr. Giuseppe Spinelli

Born the 26/06/1966 in MESSINA (ITALY)
Degree in MEDICINE AND SURGERY, 1992, University of Florence
Specialization diplomas in ODONTOSTOMATOLOGY, 1996, University of FLORENCE
Specialization diplomas MAXILLO-FACIAL SURGERY, 2002, University of MILAN
Among other, has held positions at S. Anna" University Hospital Ferrara and HOSPITAL-UNIVERSITY CAREGGI Florence as Medical Director for Maxillofacial Surgery.
Author of many scientific papers and book chapters, as well as speaker in numerous courses, conferences, congresses, seminars. Direction or participation in many national and international research activities. European Board of Oro-Maxillo-Facial Surgery.

ABSTRACT

CAD-CAM technologies offer new solutions to jaw reconstruction, allowing results in terms of both aesthetic outcome and prosthetic rehabilitation. Maxillary reconstruction appears complex, above all because it must provide a correct three-dimensional anatomical reconstruction and ensure a correct masticatory function. A correct dental prosthesis is of pivotal importance to ensure the function of the jaws, and endosseous or zygomatic implants reduce mobility discomfort in patients who have altered or atrophic bone surfaces. Pedicled or free flaps combined with endosseous and/or zygomatic implants allow bone reconstruction and lay the foundation for prosthetic rehabilitation. Virtual surgical planning makes it possible to accurately study the demolition and reconstruction of the jaws, which will be carried out using specific cutting templates, and to plan a prophetically guided implant position. Concomitant demolitive, reconstructive and implant surgery improves patients' quality of life. Immediate implant placement is a feasible and predictable procedure, which significantly reduces the number of surgeries.



COMPUTER ASSISTED SURGERY AND IMMEDIATED LOADING: A JOURNEY BETWEEN PRESENT AND FUTURE

Dott. Riccardo Ciolli

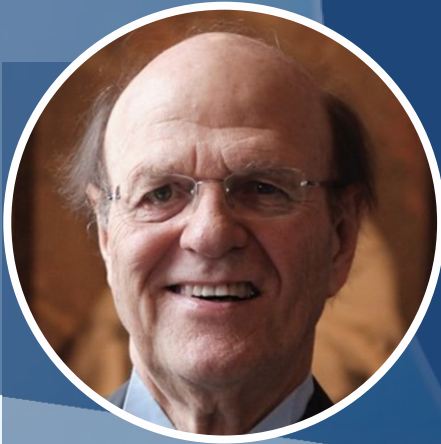
Freelance in Rome. Graduated with honors in dentistry and dentures in 1998. "la Sapienza" in Rome. Specialist in oral surgery and implantology.

Dott. Riccardo Ciolli

We every day try to imagine the future losing the evolution around us, not realizing that the future belongs to us; I really like to think that in a futuristic world, the human being can achieve great things with small rational gestures. Today thanks to the intelligent system of three-dimensional images and very precise programming software we make possible the dream of all time, we can restore the smile and chewing to a patient in a few hours and without trauma. 73 year old S.C. patient is the classical superior total denture example.

First, we reveal a dental imprint with digital technique (with the intraoral Scanner) or analogical technique where on the product model you pack an Evobite and with this you do a new Cone Beam examination: these procedure make it possible matching DICOM Files (CBCT) and STL Files, the first are produced by skeletal tissues examination and the latter from the oral cavity tissues examination. The chosen programming software plans the location, length and diameter respecting the bony volumes and anatomic structures, all this guarantees a maximum possible surface of bone-implant contact and avoids additional surgeries such as sinus lift or bone increments that occupy all available volumes. We choose implants and prosthetic structures, we send our choices to laboratory, which provides the realization of templates and temporaries.

This temporary thanks to the characteristics related to the technological properties gives isoelasticity to the prosthetic scaffold and makes compatible and similar supporting bone structure and prostheses. With the careful positioning of template, the surgery will be performed safely and in short time. The phase of dismissal of the patient is made easy thanks to the adaptation of the temporary with the solidarity of the prosthetic towers with an auto-photopolimerizable resin. Thanks to this technique it is possible to apply all the osteo-integrated implants and the prosthesis avoiding the maxillary sinus lift, in a single surgical session. This contraction of materials and operating phases results in economic and biological savings, and guarantee the patient long-lasting results equal or superior to the traditional techniques



Treating very extreme atrophied maxilla with extra SHORT® implants without augmentation -why do they work?

Rolf Ewers, Mauro Marincola and Paolo Perpetuini

Professor Rolf Ewers is currently Chairman of the CMF Institute Vienna, Austria. Raised in Dresden and Stuttgart, Germany, his final school year was spent as an exchange student in San Diego, USA. He studied Medicine and Dentistry in Freiburg, Germany. His Residency was started as a first-year surgery resident at the Downstate University in Brooklyn, USA, continuing his training as a Cranio-, Maxillofacial and Oral Surgeon and finishing with his PhD in Freiburg, Germany. For 9 years, he was Deputy Chairman of the University Hospital for Oral-Maxillofacial Surgery in Kiel, Germany. Until October 2012, for 23 years he was Chairman of the University Hospital of Cranio-, Maxillofacial and Oral Surgery in Vienna, Austria and is also since that time chair of the CMF Implant Institute in Vienna, which he continues to be until now.

We report 13 years of experience with SHORT® and extra SHORT® Bicon implants in the extremely atrophic maxilla. All patients have been treated with CAD/CAM produced metal free hybrid fiberglass-resin prostheses. Our cohort includes by now 47 patients, mostly treated with 5.0 mm extra SHORT® implants. Only 4 have been not osseointegrated or lost in the maxilla. In accordance with Wolff's law, we observed bone gain even in the implants that were splinted. Due to these successful results, we changed our restorative method of supporting prostheses from four implants to three implants. In the maxilla, we place the middle implant in the incisive foramen and the nasopalatal canal. In very atrophic maxilla cases we also insert sometimes extra SHORT® implants into the Tuberosity of the maxilla. In conclusion we can state that the SHORT® and extra SHORT® implants we have used should be functional loaded. Some implants even show crestal bone gain under functional load.



Robotic assisted implant surgery a paradigm shift

Uday N Reebye Maxillofacial surgeon

Uday N Reebye is a board certified Maxillofacial surgeon who resides in North Carolina. He completed his undergraduate studies in Vancouver at the University of British Columbia, his dental studies at Boston University, medical degree at the University of North Carolina Chapel Hill and residency at Long Island Jewish Medical Center.

Dr. Reebye has been actively involved with robotic implant surgery since its inception. As well as serving on multiple boards including the East Carolina University Health System and Surgical Guide Systems, he is the clinical chair of



Uday N Reebye is a board certified Maxillofacial surgeon who resides in North Carolina. He completed his undergraduate studies in Vancouver at the University of British Columbia, his dental studies at Boston University, medical degree at the University of North Carolina Chapel Hill and residency at Long Island Jewish Medical Center. Dr. Reebye has been actively involved with robotic implant surgery since its inception. As well as serving on multiple boards including the East Carolina University Health System and Surgical Guide Systems, he is the clinical chair of Oral Surgery1. He is involved in clinical trials that allows products to obtain FDA clearance as well as serving as an expert witness for legal reviews. Away from the office he enjoys spending time with his wife and daughters, gardening, and playing tennis. He's an avid traveller and is actively involved in medical missions both locally and internationally. Robotic implant surgery has quickly become one of the most interesting and followed topics in our field. It represents a paradigm shift in our approach to surgery, patient options and the implant field. Dr. Reebye will provide an overview of robotic implant surgery, at its inception and the upcoming and exciting advancements. Participants will be able to have a glimpse into the wonderful opportunities robotics will allow clinicians to provide their patients.



The Horizontal Atrophies Approach: Treatment Simplification With An Innovative Implant System

Dr. Salvatore Longoni MD, DDS

Laurea in Medicina e Chirurgia. Laurea in Odontoiatria e Protesi Dentaria. Specializzazione in Chirurgia Odontostomatologica. Certificate of Achievement Implantology presso la New York University. Professore a contratto: Titolare del corso di Odontoiatria Protesica e di Tecnologie Protesiche presso l'Università degli Studi Milano-Bicocca. Ha conseguito l'abilitazione Nazionale a Professore di II Fascia cod. 06/F1 - MALATTIE ODONTOSTOMATOLOGICHE - Bando 2013. Refere del Comitato Scientifico e del Comitato di Lettura della rivista Quintessenza Internazionale. Autore di pubblicazioni nazionali ed internazionali. Autore del libro: Chirurgia Implantare (Think simple). Quintessenza Edizioni, 2020. Relatore a congressi di implantologia e protesi. Direttore Sanitario del Poliambulatorio Odontostomatologico S. Apollonia di Lazzate -MB-.

L'atrofia orizzontale del processo alveolare è un'evenienza clinica molto frequente, che -a seconda dei casi clinici- prevede differenti approcci terapeutici. Le tecniche più utilizzate sono la GBR, l'innesto e l'espansione ossea, la cui applicazione è discriminata dal rapporto cortico-midollare del sito ricevente.

In questo contesto viene approfondita un'ulteriore proposta terapeutica, ovvero l'utilizzo degli impianti sottili (< 4 mm), prendendo in considerazione i criteri di utilizzo, i limiti e le eventuali complicanze associate. In particolar modo soffermandosi sulla scarsa resistenza meccanica che provoca il cedimento della connessione o la frattura dell'impianto stesso.

Viene presentato l'utilizzo di un nuovo impianto monopezzo, che si avvale di diametri a partire da 2,7mm, con una resistenza meccanica nettamente superiore agli impianti fino ad oggi presenti, grazie all'assenza di cavità interne legate al passaggio della vite protesica. Il moncone, unito all'impianto, sfrutta la conometria e una geometria di tipo Torx al fine di garantire stabilità protesica, mantenendo il filetto della vite all'interno del moncone stesso.

Da un punto di vista biologico, la morfologia del collo concava determina un effetto "healing chamber", che favorisce una maggiore presenza di tessuto duro e molle, traducendosi in una migliore e più predicibile guarigione e stabilità tissutale.

Vengono illustrati casi clinici esemplificativi, avvalendosi anche della chirurgia guidata, per meglio sfruttare le caratteristiche di questo nuovo impianto dentale.

The horizontal atrophy of the alveolar process is a very common clinical condition, which -by the clinical cases- requests different therapeutic approaches. The most widely techniques applied, are GBR, bone grafting and bone expansion, which application is discriminated by the relationship between trabecular and cortical bone of the host's site.

In this report is explained another therapeutic option, like the use of narrow implants (<4mm), analysing the usage criteria's, limitations and complication associated. Especially lingering on the poor mechanical strength that causes the connection failure or the implant fracture.

It is presented a new one-piece implant, characterized by diameters starting from 2.7 mm, which differences itself from the others same categories implant, by the higher mechanical strength due to the absence of internal implant cavity correlated to the prosthetic screw. The abutment, joined to the implant, works on the conometry and a Torx-type geometry to guarantee prosthetic stability, keeping the thread of the screw inside the abutment itself.

Assessing the biological advantages of this implant, it is important consider the morphology of the concave neck, which determines a "healing chamber" effect, leading and stimulating a greater presence of hard and soft tissue. This allows a better and much more predictable healing process and tissue stability.

Different clinical cases are illustrated, also using guided surgery, enhancing the characteristics of this new dental implant.



How to maximise patient's residual hard and soft tissues

Stefano Granata DDS

Nato a Giulianova (Te), Laureato con lode a Bologna. Professore a contratto di Protesi dal 2013 al 2017 presso Università di Modena e Reggio Emilia. È Professore a contratto di Protesi presso Università di Padova dal 2019. Specialista in Protesi riconosciuto dall'European Prosthodontic Association. EPA. Socio attivo A.I.O.P., Accademia Italiana di Odontoiatria Protetica. Socio attivo IAO Italian Academy of Osseointegration. Socio attivo D.D.S. Digital Dental Society. Socio attivo CAI Academy. Socio attivo DIRA, Digital implant & Restorative Academy. Si occupa di Protesi, chirurgia parodontale ed implantare, appassionato di Odontoiatria digitale. Vive a Modena, lavora in studio associato a Modena, Reggio Emilia e Giulianova.



Post-Oncological and Post-Traumatic reconstruction

Prof. Kurt Alexander Schicho, Md DSC

Born 14.Oct. 1972 in Villach, Austria, Study of Mathematics at University of Klagenfurt, Austria (MSc in 1996) and at the Technical University of Vienna, Austria (DSc in 1999). Special focus on applied mathematics in biomedical engineering (simulation and modeling of neurophysiologic processes at synapses), Study of Medicine at the Medical University of Vienna (MD in 2010);, Habilitation (Venia docendi) in Biomedical Engineering (Medical University of Vienna). Since October 2008: Associate Professor for Biomedical Engineering at the Medical University of Vienna, Clinic of Cranio-Maxillofacial and Oral Surgery; Expert for high technology in medicine / Founder of "Facial Esthetics Engineering" group: Biomedical engineering, computer assisted

surgery, telemedicine; Board Certified specialist in Plastic, Aesthetic and Reconstructive Surgery. Main Research - Surgical planning and simulation in esthetical facial surgery, Biomedical engineering, Telemedicine, Photobiomodulation / Low level light therapy (LLLT), 150 scientific publications, book chapters and lectures at international conferences, 55 scientific publications in peer reviewed international journals, May-June 2012: Visiting professor at the Università degli Studi di Padova, Italy Program Committee Member CARS- Computer Assisted Radiology and Surgery (International Congress) Has been working as reporter for private radio and TV stations for many years (mainly working in the fields of culture and society)

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The use of bio-materials for the realization of frameworks, the dissipation of load peaks, the mathematical / structural calculation of free prosthetic estensions.

Nazzareno Cappelli

Compendio:

L'utilizzo di bio materiali per la realizzazione dei frameworks, la dissipazione dei picchi di carico, il calcolo matematico/strutturale delle stensioni protesiche libere.

Abstract:

The use of bio-materials for the realization of frameworks, the dissipation of load peaks, the mathematical / structural calculation of free prosthetic estensions.



Hard and Soft tissue management of atrophic ridges. Computerguided bone regeneration: clinical and scientific evidences

Prof. Silvio Mario Meloni (DDS, PhD, MSc)

Associated professor of Periodontology and Implantology,
University of Sassari, Italy

Graduated in Dentistry with honors and mention of merit in 2003 at the University of Sassari, in 2008 he obtained a PhD in Preventive Odontostomatology and in 2009 the Master of Science in Oral Surgery at the same University. In 2012 he completed the gIDE / UCLA One-year Master Clinician Program In Implant Dentistry, at UCLA University, Los Angeles where he was awarded with the Award: 1st Place Top Honors in Implant Dentistry. From 2010 to 2017 he was adjunct professor and assistant professor of Periodontology and Implantology. From 2018-2021 he was University Researcher RTDB Assistant Professor of the aforementioned courses for the degree course in Dentistry at the University of Sassari. From December 2021 he became Associated Professor at the School of Dentistry, University of Sassari. In the 2013 he obtained, as

the first Italian together with prof. Marco Tallarico, the EAO Certificate for fundamental skills and knowledge in implant based therapy, awarded by the Board of the European Association for Osseointegration. In 2019 he won the Aesculapius Research Prize, awarded by the University of Florence at the VII Aesculapius Colloquium. He is international speaker on issues related to implant surgery, and author of several research projects and scientific publications with high impact factor. Formely active member of the Italian Society of Osseointegrated Implantology, (SIO), active member of the Italian Academy of Osseointegration (IAO), formerly Active Member of European Association for Osseointegration (EAO Certified), active member of the Computer Aided Academy (CAI Academy). He was also the creator of the innovative Computer Guided Bone Regeneration method. Over the years he has trained several dentists in his courses on implant and regenerative dentistry based on clinical and scientific evidence. He carries out its activity exclusively focused on research and clinical teaching in Regenerative Implant Surgery, Implant-Prosthesis, Oral Surgery and Periodontology.



Dr. Milena Pisano (DDS,)

Adjunct Professor of Clinical Dentistry, University of Sassari, Italy

Graduated with honors and mention of merit in 2009 in Dentistry at the University of Sassari. In 2011 she was a research fellow at U.O. of Maxillofacial Surgery of the AOU of Sassari. In 2018 she obtained the IAPEM European Master. Since 2021 she has been Adjunct Professor of Clinical Dentistry at the University of Sassari. In clinical practice her main focus is on dental prostheses and in particular on vertical preparation for dental prosthesis, periodontal prosthesis and implant supported prosthesis. Her clinical practice is mainly focused on the management of complex prosthetic cases and on the use of zirconia in complex treatments combining periodontal prosthesis and implant prosthesis on regenerated tissues. She is the author of several scientific publications in high impact factor international journals. Finally, she is a speaker in national and international courses and conferences.



3D printing custom made implants as an alternative treatment for the rehabilitation of the atrophic jaws.

Dr. Vladimir Garcia Lozada

Oral & Maxillofacial Implantology.

Doctor in Oral & Maxillofacial Implantology. Cambridge International University
Master in Oral surgery & Implantology. University of Lleida. Certificate in Implant Dentistry. University of Miami; Miller school of Medicine Specialist in Oral Implantology. University of Santiago de Compostela .Diploma in Oral Surgery. University Complutense de Madrid .Residency in Oral & Maxillofacial Surgery. Hospital Centre PR. Brazil .Specialist in Stomatology. University Santa Maria Dentistry degree Central University of Venezuela .Professor lecturer in different Universities programs of Oral Implantology Private practice exclusively to Oral Surgery & Advanced Implantology .Director at Cibumax. Spain .Member of the societies IAOMS, ICOI, ITI, SEI, SECIB .Author of several articles in national and international journals

The rehabilitation of the atrophic jaws continue to be a challenge for surgeons in the sense to rehabilitate with fixed teeth those patients. Protocols like extra-oral and intra-oral bone grafts reconstructions, gbr procedures, sinus and nasal lift grafts, tilted, thin and short implants as well as zygomatic, pterygoid, transinus and transnasal implants are common techniques to sort with those kind of situations in the maxilla. Additionally techniques like lateralization and transposition of the inferior alveolar nerve were used for mandible cases. Now a day in this new era of high-technology, with a great evolution and development of different protocols using digital tools for planning, design and printing with advanced softwares and additive manufacturing of biocompatible materials structures with high accuracy in medicine using cad/cam is a fact. In that sense the application of all this technology implemented to protocols for the rehabilitation of the atrophic jaws can be a valuable option treatment for those complex cases, using those medical devices/patient specific implants PSI, taking into account all the features of design, planning, manufacture and surgery for the optimisation of their biofunctionalization.



A Predictable Digital Dentistry Approach For Navigated Full Arch Immediate Provisionals

Robert Pauley, Jr., DMD

Dr. Robert Pauley has been practicing in dentistry in Union City, GA since graduating from the University of Kentucky College of Dentistry in 1988. He is a member of the American Dental Association, the Georgia Dental Association, a Board Certified Diplomate of the International Congress of Oral Implantologists, a Fellow of the ICOI, an Associate Fellow of the American Academy of Implant Dentistry, an Active Member of the Computer Aided Implantology Academy and a member of the Academy of Osseointegration. Dr. Pauley is also a co-founder of Buffalo Tactics, an educational arm allowing him to share his expertise with other dental colleagues. Through Buffalo Tactics, Dr. Pauley can follow in the footsteps of mentors who have given their time, knowledge and leadership in his educational journey.

If you're taking a trip across an unfamiliar city in the middle of rush hour, I'll bet you're using some kind of GPS system (Waze, Google Maps etc.) - not only to plan the most efficient route, but to identify traffic jams ahead and the best way to adjust your route. We would never just wing a trip like that anymore because we don't have to. There is technology readily available to guide us through situations and wildly improve our outcomes. It's no different with digital dentistry - we utilize a digital workflow to plan the most efficient route ahead of time, quickly pivot when we run into unexpected obstacles, to optimize clinical and surgical results.¹

It's becoming more common to utilize dental implants to restore lost or missing teeth and non-restorable teeth. The patient pool today is becoming more educated with regards to the benefits of dental implants over traditional bridges (where adjacent teeth are prepped) and removable partials and dentures (which are very uncomfortable to wear, chew food properly and aren't always aesthetic).² With the growing number of patients electing to have restorations with dental implants and becoming more educated on their options; esthetic and hygienic restorations are becoming the expected norm. The ability to develop a "Prosthetic Driven Implant Placement" treatment plan and ideally work from the optimal final prosthetic platform and plan in a reverse manner is paramount to optimize surgical and prosthetic results.

I want to introduce you to an everyday digital workflow that can be utilized for full arch implant retained / supported prosthetic restorations. Once we, as clinicians, get involved with larger cases and different digital dental technologies, our minds start asking different questions - What's the best way to accomplish this? How can we accomplish it more accurately? How can we accomplish it with fewer steps? How can we improve collaboration with our labs?

In today's presentation; we will discuss a workflow involving digital technology utilized in the treatment planning, implant surgery, immediate prosthetics through final prosthetics. Literature tells us that the utilization of CBCT and Intraoral Scanners in our treatment planning helps our workflows and ultimate treatment to be more accurate and precise.³ Prosthetic Driven Implant Placement workflows allow clinicians to work towards ideal implant placement after first determining the appropriate site development. The process will let the clinician evaluate the need for hard and or soft tissue augmentation prior to or during the surgical implant placement.⁴

Incorporating cone beam computed technology and intraoral scanning with X Nav technologies allows the clinician to follow a dynamic navigational workflow which gives the following advantages:²



1. The patient can be scanned, planned and undergo surgery on the same day
2. The plans can be altered during surgery when clinical situations dictate a change from the original plan.
3. The entire field can be visualized at all times
4. Accuracy can be verified at all times.

You will find literature with statistics noting that dynamically placed implants are more precise and accurate in every plane.^{5-7, 8,9.} Clinicians will also find that the utilization of a dynamically guided navigational system for treatment planning and placement will optimize surgical and prosthetic results while following a more efficient workflow, and avoid the costs associated with static guidance.

^{10.} In conclusion, I feel the utilization of dynamic guided navigation allows me to confidently treatment plan and place implants to minimize surgical complications, avoid excessive tissue manipulation (avoid flap reflection to visualize site) and to have the implant(s) ultimately placed in the position in which it was originally planned. With this technology there is no reason not to utilize its workflow for Every Patient - Every Implant – Every Time.

Learning Objectives:

Learn what data is needed to commence a full arch with immediate load workflow

Discuss digital technology utilized to develop our surgical & prosthetic treatment plans

Discuss lab collaboration utilized to develop a prosthetic driven treatment plan

Discuss design and fabrication of full arch immediate provisional

Learn the importance of a PDIP incorporated into a dynamic navigation workflow to guide bone reduction, osteotomy preparation and final implant placement

Describe the protocol of an immediate full arch provisional conversion

Describe the utilization of digital technology in the workflow of the final prosthetics.

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Lateralization of the mandibular nerve

Raffaele Vinci M.D., D.M.D.

Raffaele Vinci is Associate Professor of Oral Diseases at the Dental School, University Vita Salute San Raffaele in Milano; his teaching fields and courses are the advanced Oral Implantology, the Pre-implant Surgery and the general Oral Surgery. Currently Dr Vinci is Director of the post-graduate program in Oral Surgery at the Vita-Salute University, Milan, Italy. Since 2004 he has been working as a scientific consultant for the Dental Clinic at the San Raffaele Hospital in Milano where he has in charge the managing of the Advanced Oral Surgery Unit and Implantology. Dr Vinci is fellow of the Italian College of

Professors in Dentistry and Maxillofacial Surgery, President of Italian Society for Odontostomologic surgery (SIdCO) 2020-2022, active fellow of the Italian Academy of Osteointegration (IAO), fellow of the Italian Association for Dentistry and Maxillofacial Surgery (SIOCMF), active fellow of Italian Implanto-prosthetic Academy (AIIP).

ABSTRACT: Inferior alveolar nerve relocation in combination with the installation of dental implants is sometimes the only possible procedure to help patients to obtain a fixed prosthesis, in edentulous atrophic posterior mandibles. Other techniques for bone augmentation in posterior jaws segments are more invasive and less unpredictable. IAN relocation (traslation and dislocation) can be successfully used for immediate implant placement in edentulous posterior mandibular segments. The author describes mini-invasive techniques for IAN management and immediate loaded implants. Implanto-prosthetic planning with digital imaging help the surgeon in preoperative phase for a correct surgical approach.



Integrating Modern Diagnostic Tools With Digital Engineering

Dr. Panos Diamantopoulos
President of the CAI Academy

The principal role of Medical Imaging has been to provide valuable data for diagnoses. However, imaging systems have been exhibiting certain weaknesses regarding the generated visual representation and the further utilisation of the acquired data.

Computer Aided Design (CAD) is nowadays widely used for the design of various implants and in general for the development of medical devices. However, traditionally there has been no direct, effective method to design based on real anatomical data.

Similarly, Finite element analysis (FEA), an established numerical simulation method, has been shown to be applicable to numerous biomechanical applications for studying the function of anatomical systems. Nevertheless, while medical images can provide important information regarding the geometry and the material properties of various tissues, the communication of such information between various image modalities and the FEA software has been quite demanding.

Additive Manufacturing (AM), a fast accurate method of constructing physical counterparts of CAD virtual models, presents an enormous potential in medical applications, for manufacturing anatomical replicas, product prototypes or even actual implants, provided it can also utilise the geometrical information of anatomical data.

The effective integration of Medical Imaging with Digital Engineering, namely CAD, FEA and AM, can provide a powerful method for the realistic modelling and simulation of various body structures, the design and development of implants, tools, and medical devices, as well as the diagnosis and treatment of various pathologies. This methodology has also been the backbone of Computer Guided Implantology and Surgery.



Solving malpractice with skeletal teeth prosthesis and guided surgery: case report

Dr Sandro Fabbro

Past CAI President - Active CAI Member

After graduating at Dental Technician School, he taught for nine years in Udine at the same school "Istituto G. Cecconi" subjects such as "Material Technologies" and "Dental Anatomy". In 1983 he graduated from Medical School of Bologna in Italy and began his private practice in Dentistry, starting with Periodontology after attending a two year-clinical training course with Doctor G. Carnevale in Bologna - Italy.

From 1989 to 1991, he attended clinical courses relative to surgical and prosthetic aspects according to the principle of Osseointegration ad Modum Brånemark. In the following years, at the University of Göteborg (Sweden), he concluded his Clinical Training Course in Osseointegration and, later, the Advanced Surgical Course. From 2001 on, first he specialized in "Computer Guided Surgery" according to "Leuven School" (Belgium) and then also according to "Göteborg School" (Sweden). He is a visiting professor at the University of Padova from 2006 to 2014, for post-graduated students in Implantology and guided surgery. He has been invited as a speaker to many conferences and congresses in Italy and abroad; where he held basic and advanced courses about surgical and prosthetic aspects of Implantology.

Then he took part of numerous International research Groups for "Implant System" development. Active Member IAO (Italian Academy of osteointegrazion) Founding Member and past-president (2010 2012) of CAI ACADEMY (Computer Aided Implantology)



Surgical Planning Software and Computer Guided Implantology

Dr Scott Ganz

ABSTRACT:

"The art and science of guided surgery has been successfully illustrated in case presentations, scientific publications, lectures, and live surgical procedures around the globe. There is no question that technology has continued to provide an evolutionary improvement in software and hardware applications. Yet, the basic foundation must still remain the same, diagnosis and treatment planning. Regardless of which software or hardware is utilized, the "template will only be as good as the plan." This presentation will examine issues with proper diagnosis which can impact the desired treatment outcomes."

Brief Biography - Dr Scott D Ganz:

Dr. Ganz is well-published in many scientific journals (over 125 articles) and has contributed to 18 professional textbooks. He continues to deliver presentations both nationally and internationally as a featured speaker on the Prosthetic and Surgical phases of Implant Dentistry, and is considered one of the world's leading experts in the field of Computer Utilization for Diagnostic, Interactive Treatment Planning, Digital Workflows, CBCT 3-D imaging, and CAD CAM Applications in Dentistry. He has been a featured speaker for most major dental organizations including the Academy of Osseointegration (AO), the American Academy of Oral and Maxillofacial Surgeons (AAOMS), American College of Prosthodontists (ACP), International Congress of Oral Implantologists (ICOI), American Academy of Implant Dentistry (AAID), the European Academy of Osseointegration (EAO), Greater New York Dental Meeting, Digital Dental Society (DDS), and many more. Dr. Ganz currently serves as Editor-in-Chief of "digital" International Magazine of Dental Tribune International, and serves on the editorial staff of several other publications. Dr. Ganz is a Past President of the N.J. Section of the American College of Prosthodontists, Past President of the CAI Academy (Computer-Aided Implantology Academy), serves as adjunct faculty of Rutgers School of Dental Medicine and the Hackensack University Medical Center, the Board of Directors of the Clean Implant Foundation, Digital Dentistry Society, and Past Board of Directors of MINEC and the ICOI.

Dr. Ganz is a Fellow of the Academy of Osseointegration and the International College of Dentists, co-Director of Advanced Implant Education providing live hands-on surgical programs several times each year (AIE - www.aiedental.com). Dr. Ganz has served as a consultant to the dental industry for the past 30 years having worked with most major companies. Dr. Ganz maintains a private practice for Prosthodontics, Maxillofacial Prosthetics, and Implant Dentistry in Fort Lee, N.J. USA, and is the Director of Oral Restoration at Park40, a facility dedicated to full-arch dental implant reconstruction in the heart of Manhattan, New York USA. Dr. Ganz was recently honored for his lifetime achievements in implant and digital dentistry by the American Academy of Implant Dentistry and Digital Dentistry Society.



The ZAGA Concept for Decision Making on the Zygomatic Osteotomy.

Carlos Aparicio

MD, DDS, MSc, MSc, DLT, PhD

Summa Cum Laude in Medicine & Surgery 1978, Navarra U. (MD). Dentist 1983, Barcelona U. (DDS). Dental Laboratory Technician 1983, Ramon y Cajal School Barcelona (DLT). Diploma in Implant Dentistry 1984, Gothenburg U. Sweden (Prof P-I Brånemark tutor). Master's degree in Materials Science 1990, Barcelona U (MSc). Diploma in Periodontics 1995, Gothenburg U. Sweden (Prof Jan Lindhe tutor). Master's degree in Biomedical Research 2010, Barcelona U (MSc). PhD in medicine Summa Cum Laude, International Mention 2013 on "Zygomatic Implants: the state of the art and zygomatic criteria for success",

Theses defended at U Barcelona (Profs Tomas Albrektsson, Jan Lindhe, Xavier Gil and Mariano Monzo Board). International Teaching Scholar, Indiana University School of Dentistry, Indianapolis USA 2021. Editor of the book "Zygomatic implants: the anatomy-guided approach (ZAGA)". Fellow researcher within the Handicap Research Group, Department of Biomaterials at the U. of Gothenburg (Prof Tomas Albrektsson tutor). Past-Referee at European Journal Oral Implantology and Journal Clinical Implant Dentistry and Related Research. Past President of the Osseointegration Foundation of the American Academy of Osseointegration 2003-4. Board member European Academy of Osseointegration EAO 2004-6, Founder and honorary president of the Spanish Society of Minimally Invasive Dentistry. Fellow of the Royal Society of Medicine England. Academic at The Royal European Academy of Doctors in 2016.. Founder of the Zygoma ZAGA Centers Network. Currently is sharing his knowledge as Zygomatic implants Senior Consultant at Hepler Bone Clinic, Barcelona Spain.

ABSTRACT

The previously described systems for the installation of zygomatic implants, such as the Original Surgical Procedure, the Slot technique, or the Extra-Sinus one, are promoting a specific surgical technique that should be universally applied for all patients. However, different morphologies of the edentulous maxilla can be identified, both between individuals and intra-individuals. The use of the same osteotomy type in all situations will frequently end into bulky prosthetic constructions, impaired hygiene, eventual sinus complications and or soft tissue dehiscence. The ZAGA protocol for decision making prior to perform the zygomatic osteotomy will be introduced. The ZAGA Concept is aiming at promoting a patient-specific therapy by adapting the osteotomy type to the patient's anatomy. The surgical management of the implant site is guided by the anatomy of the patient according to specific prosthetic, bio-mechanic and anatomic criteria. In most cases, the so-called late complications are prevented. The results of using the combination of the ZAGA Concept together with the new ZAGA implant designs will be introduced. Using specific ORIS criteria, results consistently show less traumatic osteotomy; better implant stability and bone to implant contact together with better bone sealing around implant neck. Additionally, the rate of late sinus complications dramatically decreases, and more anatomic rehabilitation is achieved.



Computer-guided In Endodontics Navigation By Dr Feroz Gregory

Dr Fejoz Gregory

obtained his dental degree in 2010, at the University of Claude Bernard of Lyon 1, FRANCE. After 9 years of general practice in Haute-Savoie, not far from Geneva (SWITZERLAND), he specialized in endodontics, following the training of Dr MACHTOU and colleagues at the SOP in Paris. His current interests include developing an endolight approach by using vital pulp therapy treatments for adults and develops the use of dynamic guided navigation in endodontics.

DR FEJOZ GREGORY

COMPUTER GUIDED ENDODONTICS ADVANTAGES COMPARED TO FREE HAND

1. PRECISION

Dynamically navigated accesses are associated with higher optimal precision (drill path centered) to locate calcified canals in comparison with

the freehand technique (75% vs 45%)¹ The DNS group was significantly more precise, showing smaller mean values in the angulation (4.8°) and in the maximum distance from the ideal position (0.34 mm)²

2. TISSUE PRESERVATION

Dynamically navigated accesses resulted in significantly less mean substance loss in comparison with the freehand technique (27.2 vs 40.7 mm³)² Substance loss was significantly lower with dynamically navigated accesses than freehand technique (10.5 mm³ vs 29.7 mm³)⁴

3. TIME REDUCTION

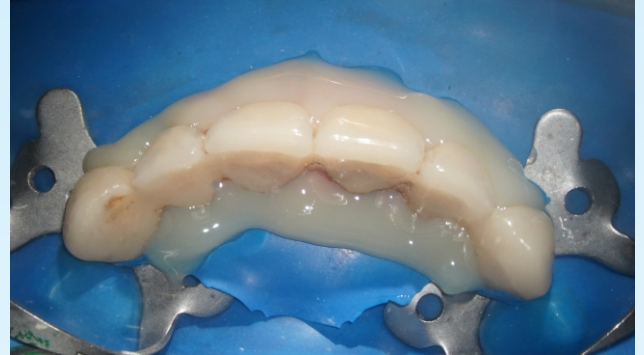
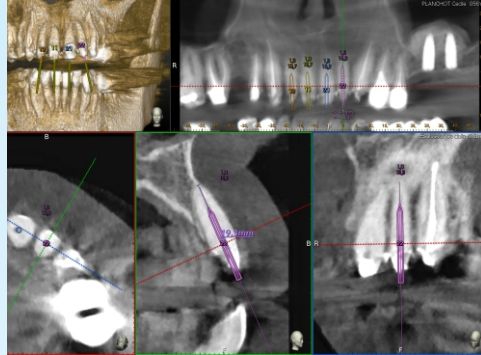
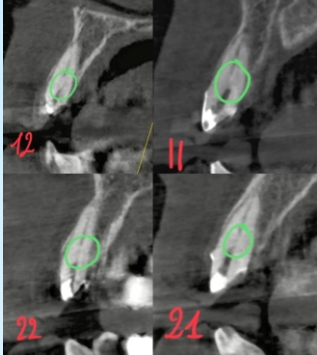
Dynamically navigated accesses were prepared significantly faster than freehand preparations (2.2 vs 7.06 minutes)² Slow-speed burs through a static- guided approach in simulated calcified canals required on an average 11 minutes compared with an average drilling time of 58 seconds.³

REPRODUCIBILITY

All operators located a total of 156 canals, obtaining an overall success of 93% without a difference between operator experience.⁵ Differences in substance loss between an more experienced operator (10.3 mm³) and a novice (10.6 mm³) were not significant.⁴

CLINICAL CASE

56 yo female patient, with no systemic condition is referred for performing the root canal treatment of the 4 superior incisives. The practitioner didn't find the accesses and RCTs need to be done regarding the anterior prosthetic rehabilitation in progress. The choice of computer guided navigation over a static guided approach is based on the possibility of modifying the axis in real-time, the facility of the workflow (only a CBCT needed) and the use of all kind of burs, not just endodontic guided drills.



S1 PULP CANAL COMPLICATIONS

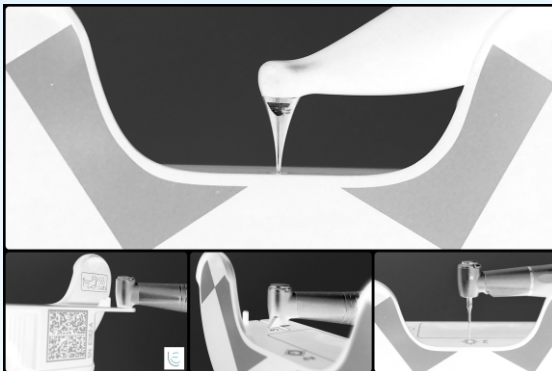
Initial CBCT
12-11 : 1-2-1 root canal typology
21-22 : narrowed root canal

S2 PULP CANAL COMPLICATIONS

Planification
4 virtual axis are planified with the minimal size (1mm) and the root length are mesured for information (temporary crowns don't allow us to measure precisely)

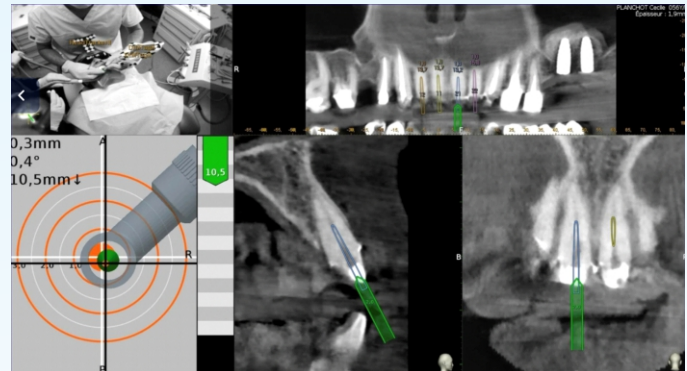
S3 PULP CANAL COMPLICATIONS

Rubber Dam Isolation
Temporary crowns are sealed with a self-curing composite material (Structur 3, Voco)



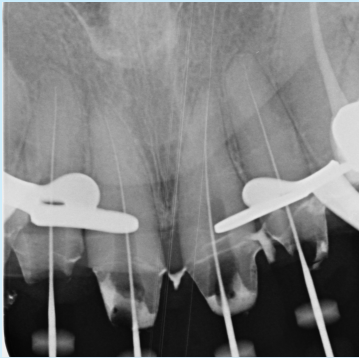
S4 PULP CANAL COMPLICATIONS

Calibrations
As required by the software, calibration of the tracer, the high speed contra-angle and the endodontic bur.



S5 PULP CANAL COMPLICATIONS

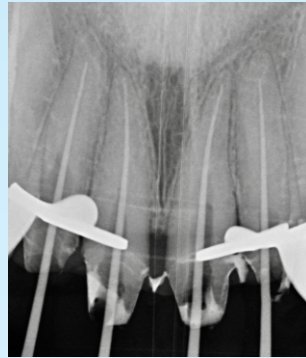
Drilling Part
The first step is marking on the surface the access point for each tooth, with a high speed round diamond burr and a contra-angle held by 2 hands, to prevent slipping during the drilling.



S6 PULP CANAL COMPLICATIONS

X-Ray Control

Verification of the permeability with a K10 file in each canal
Registration of the working length with an apex locator (EndoPilot, Komet)



S7 PULP CANAL COMPLICATIONS

Root Canal Shaping

Use of the Reflex Komet System (Endopilot + Procodile Q) with a constant irrigation of 2,5 % NaOCl
Verification with Gutta Percha cones of the apical adjustment



S8 PULP CANAL COMPLICATIONS

Root Canal Filling

Use of the Gutta-Smart (Dentsply) to perform the warm condensation vertical technique and temporary obturation with a Cavit (3M)

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The Aspects Of Digital Workflow In Implant Dentistry:

GEORGE LAPSANIS

Completion of studies at Dental department of National Kapodistrian University of Athens., 2001: Clinical dental-surgical exercise at Larissa Military 404 Hospital (6 months)2002: Private practice at N.Smirmi Athens orientated on implant and aesthetic rehabilitations2008: Focus on computer guided implantology using software for planning and surgical guides manufacturing in every day practice 2009: Founding member of ICOI Hellas.2017: Member of Dental 3D Education Group in medicine school of Athens2018 – today: Utilizing Intraoral Scanner for digital impression and software for digital prosthetic design and manufactureEducation / Training : 2007: Implant training at Hellenic Implant Company training center 2011 (Naples, Italy): Received the Fellow Title of ICOI2013-2014: Advanced implant training at Baden Baden implant training center2015 (Berlin): Nominated with the title of ICOI DIPLOMATE2019: Education in soft tissue surgery contemporary protocols utilizing digital software in diagnosis and execution

CASE REPORT

MALE PATIENT 40 YEARS
OLD NON SMOKER
SEVERE MOBILITY #21



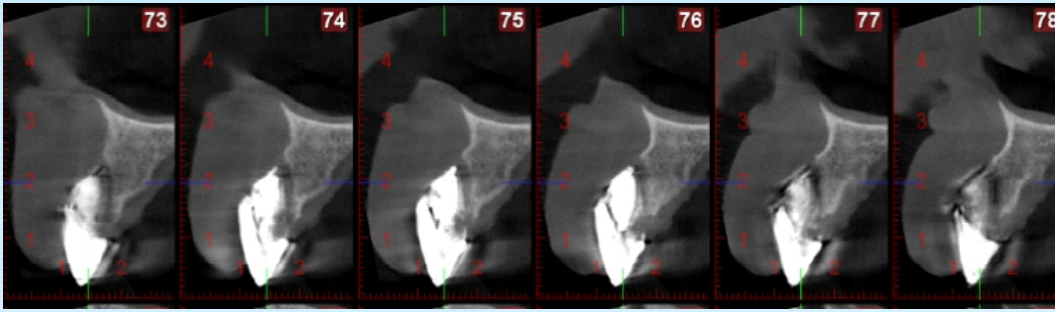
ORIZONTAL AND VERTICAL
BONE AND SOFT TISSUE
LOSS #21



TREATMENT PLAN

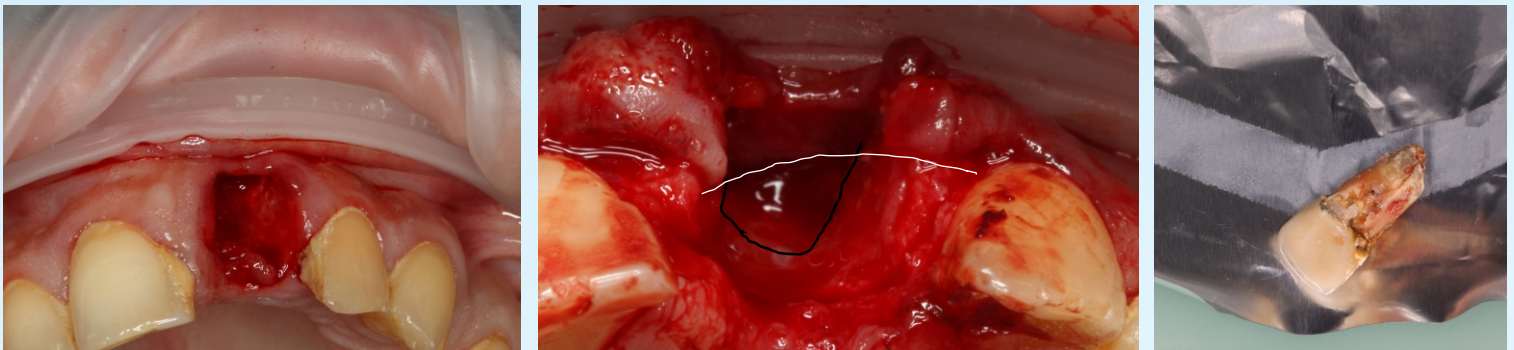
- EXTRACTION OF TOOTH #21
- BONE GRAFT AT TIME OF EXTRACTION
- SIX MONTHS AFTER HEALING IMPLANT PLACEMENT UTILIZING TEETH SUPPORTED SURGICAL GUIDE
- AFTER SIX MONTHS PERIOD PROVISIONAL CROWN
- FINAL PROSTHESIS AFTER SOFT TISSUE MATURATION

ORIZONTAL AND VERTICAL BONE AND SOFT TISSUE LOSS

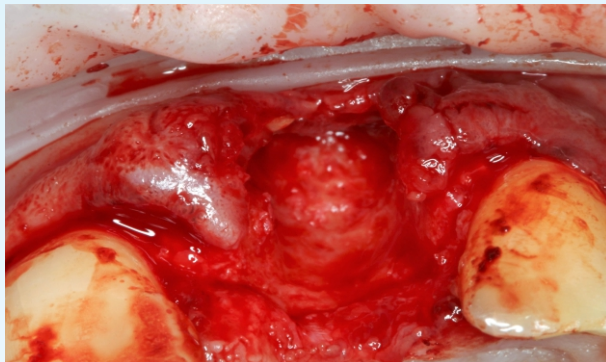


CBCT INDICATING
THE AMOUNT OF BONE
LOSS TO BE REGENERATED

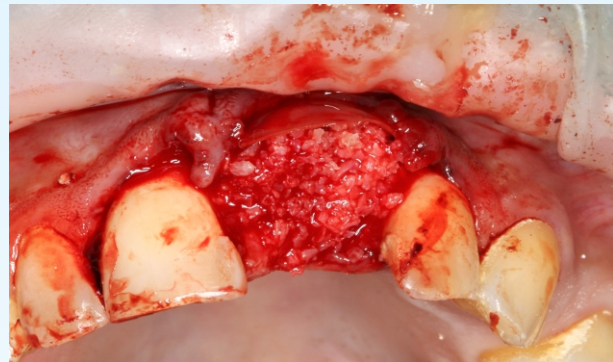
EXTRACTION #21



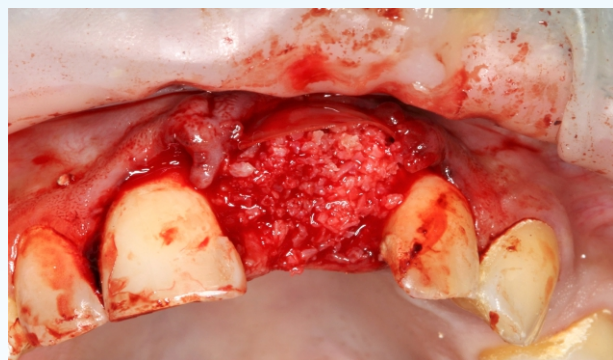
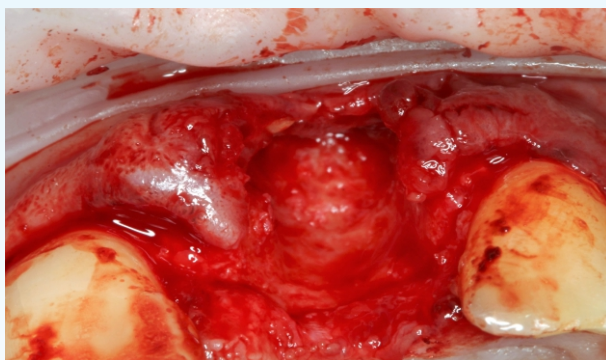
THE BONE IS CLEANED AFTER EXTRACTION

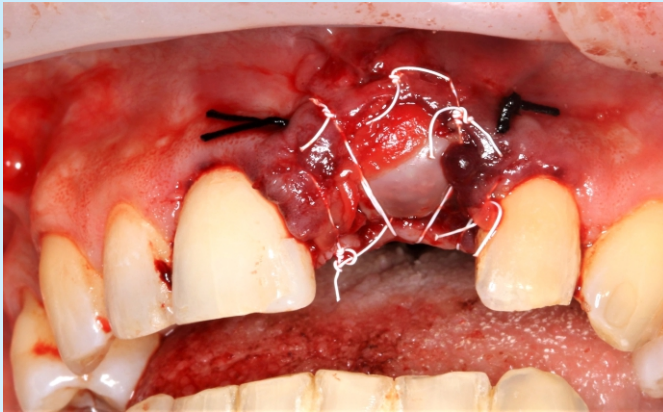


THE BONE IS CLEANED
AFTER EXTRACTION



HUMAN GRAFT COLLAGEN
MEMBRANE AND A-PRF PLACED
AT THE SITE OF EXTRACTION

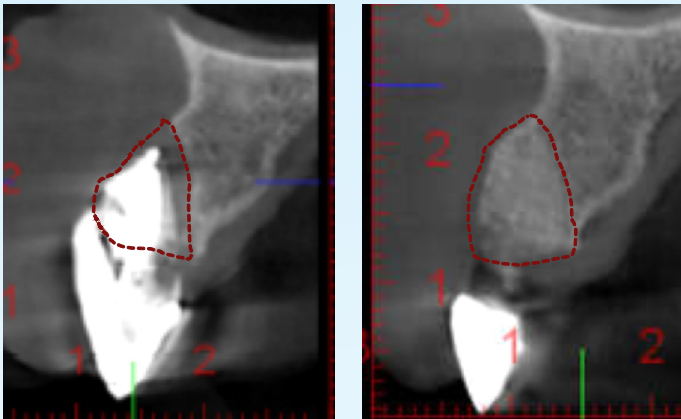




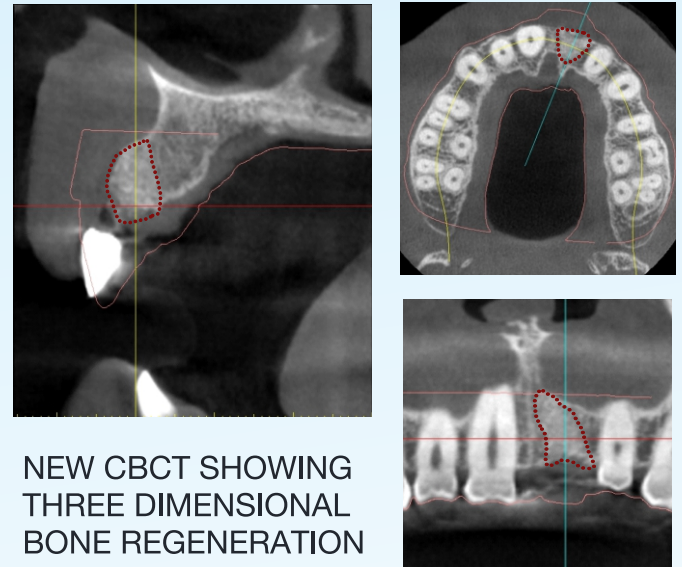
NO VERTICAL INCISIONS A-PRf
MEMBRANES SUTURED AT THE SITE



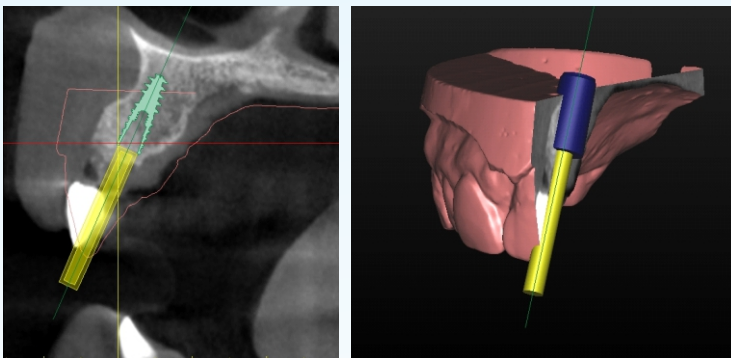
PROVISIONAL RESTORATION AT
DISTANCE OF SOFT TISSUE IN ORDER
TO AVOID PRESSURE



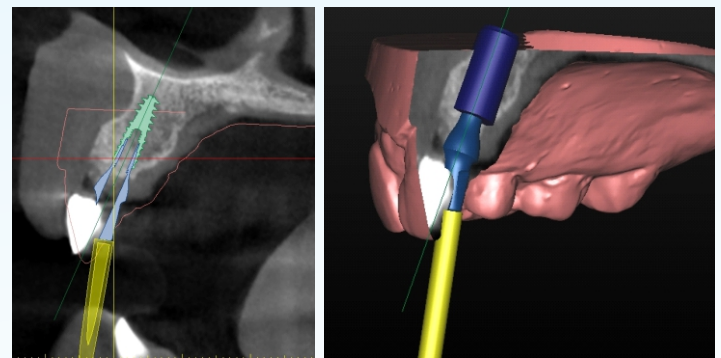
BONE REGENERATION AFTER SIX MONTHS



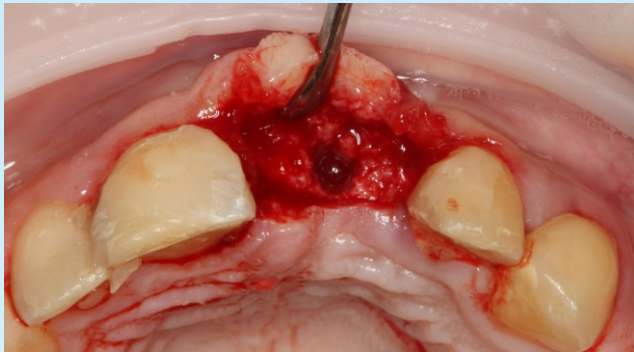
NEW CBCT SHOWING
THREE DIMENSIONAL
BONE REGENERATION



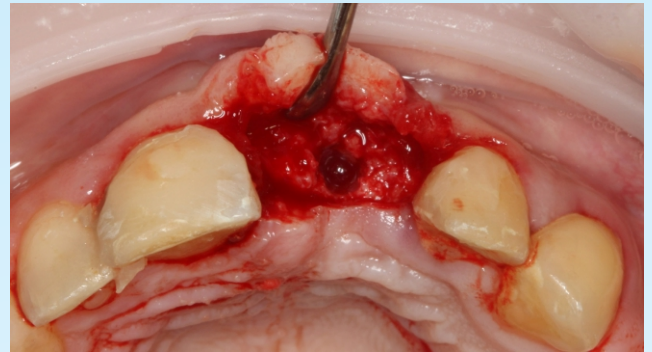
VIRTUAL IMPLANT PLACEMENT BASED
ON THE ANATOMY, BONE VOLUME AND
THE FUTURE RESTORATION



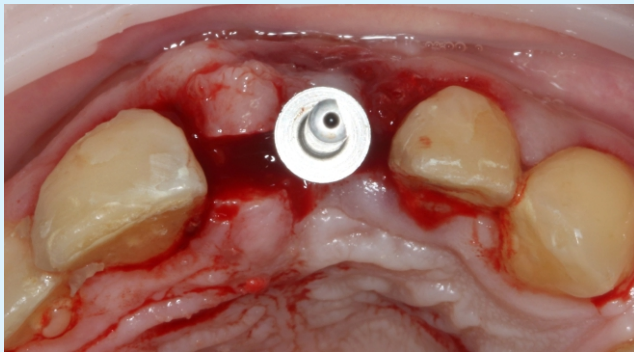
VIRTUAL ANGULATED ABUTMENT PLACEMENT
BASED ON SOFT TISSUE VOLUME AND TOOTH
ANATOMY FOR A CEMENTED SINGLE CROWN
RESTORATION



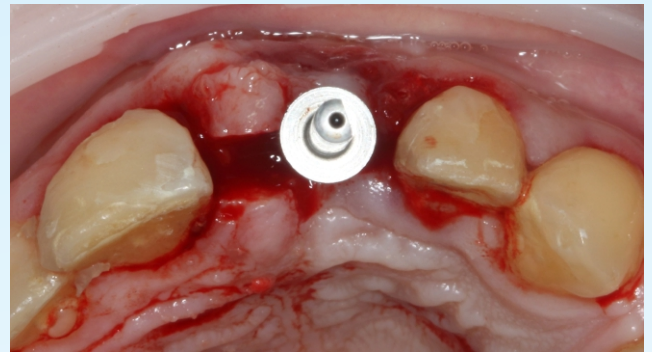
FLAP RAISED WITH
ORIZONTAL INCISION



PILOT SURICAL GUIDE

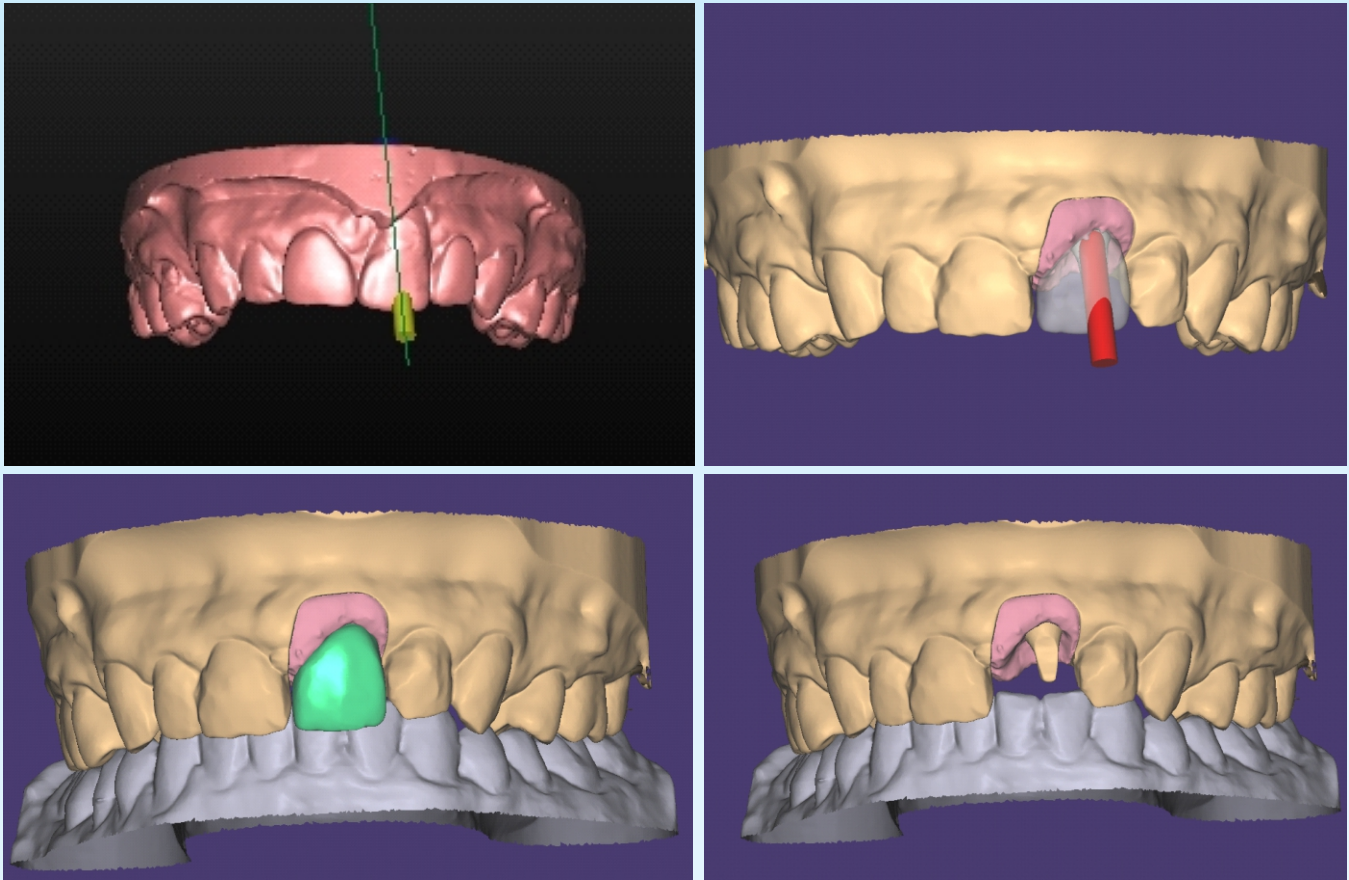


IMPLANT PLACEMENT UTALIZING
VERSAH DRILLS



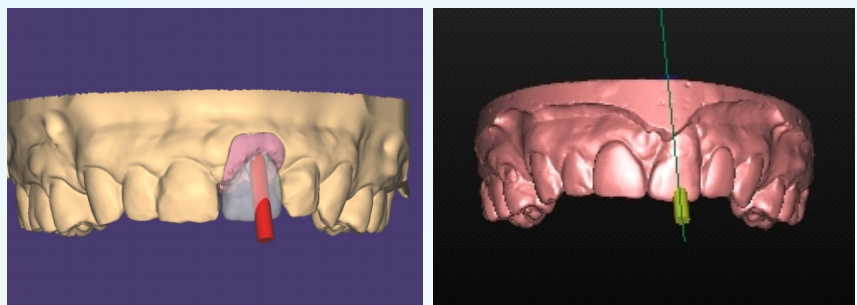
ROLE FLAP TECHNIQUE





THE VIRTUAL PLANNING IS CORRESPONDING TO
THE DIGITAL MODEL PRODUCED AFTER THE INTRAORAL SCANNING

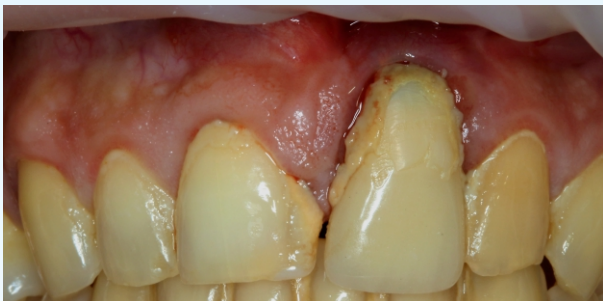
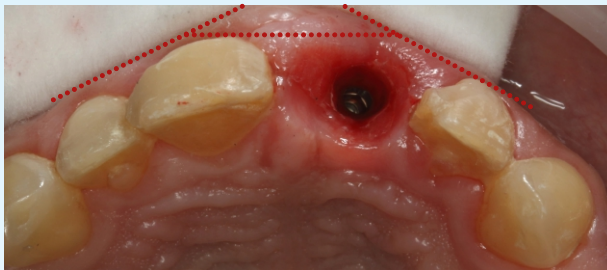
THE PRINTED PROVISIONAL
IS ATTACHED ON A TI
ABUTMENT TO PRODUCE
A FINAL TEMPORARY
PROSTHESIS



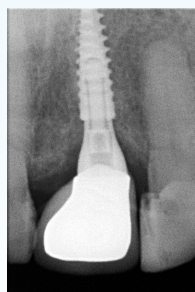


THE PROVISIONAL SCREWED ON THE IMPLANT

SOFT TISSUE MATURATION
ALLOWS FOR FINAL
PROSTHESIS
MANUFACTURING



FINAL PROSTHESIS SEATED
IN THE MOUTH





**INTERNATIONAL MEETING
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Nazzareno Cappelli, Italy
Ucer Cemal, United Kingdom
Riccardo Ciolli, Italy
Marco Conti, Italy
Roberto Giuseppe D'Ambrogio, Italy
Arturo D'Arienzo, Italy
Panagiotis Diamantopoulos, Greece
Rolf Ewers, Austria
Sandro Fabbro, Italy
Abou Ahmed Foul, United Arab Emirates
Scott Ganz, Usa
Vladimir Garcia Lozada, Spain
Stefano Granata, Italy
Stefano Grecchi, Italy
Michele Jacotti, Italy
Salvatore Longoni, Italy
Paulo Malo, Portugal
Michele Manacorda, Italy
Mauro Marincola, Italy
Silvio Meloni, Italy
Maurice Mommaerts, Belgium
Gernot Obermair, Italy
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Uday Reebye, USA
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General Information

REGISTRATION

The Registration is free. Registration can be made by completing the Registration Form and forwarding it to the Organizing Secretariat by e-mail at info@adbcongressi.it.

For online registration please follow this link

https://www.adbcongressi.it/CAI_Academy_2022.aspx

Registration for the Congress must be forwarded within November 12, 2022 after this date only on site registration will be accepted.

CONGRESS SITE

Auditorium CTO Careggi Hospital

Largo Piero Palagi 1
50139 Florence (Italy)

CME ACCREDITATION

The Meeting has been assigned n. 11,2 Italian CME credits for Dentist, Physicians (Maxillofacial surgery, Radiology), Nurses, Radiology technicians, Dental hygienists.

The CME accreditation is valid for the Clinical program only and it does not cover the Workshop.

Training objective: Technical-professional content (knowledge and skills) specific to each profession

Florence, Italy
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XV ANNUAL MEETING

CME PROVIDER

GVM CAMPUS SRL (6028)

The Provider will send CME certificates to the participants after the Congress .

POSTER SESSION - CALL FOR ABSTRACTS

The Meeting welcomes the submission of abstracts of original contributions to the field.

To submit an abstract, please request the Abstract Form to info@adbcongressi.it or visit this link

https://www.adbcongressi.it/evento_1058_adbcongressiedeventi

and follow the instructions for Authors.

The abstract must be saved with the name of the Presenting Author. Please note that at least the First Author should be duly registered in the Meeting.

OFFICIAL LANGUAGE

Italian and English are the official languages of the Congress. Simultaneous translation will be provided.

ATTENDANCE CERTIFICATES

Attendance certificates will be made out upon request to all participants at the end of the Congress

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