OT EQUATOR PROSTHETICS



SCIENTIFIC EVENT WITH THE OFFICIAL PATRONAGE OF



Università degli Studi di Ferrara

Educational catalog for dentists and dental technicians



THE DUAL PROSTHETIC SOLUTION





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DIGITAL IMPLANTOLOG

PROFILE

and Clinic Director

Dentist

Scientific director of the OT Bridge protcol since 2012 Rhein83 international speaker for Europe and Asia since 2014

EXPERIENCES

EDUCATION

Dentistry Degree by the Palermo University - Italy (2003) 110/110 credits Reconstructive dentistry and aesthetic course (2004) Endodonthicannual master (2005) Implant prosthesis annual master (2006) Post-graduate advanced implantology master by the Modena and Reggio Emilia University 2005/2009 Clinic owner and director: Palermo - Italy 2009/2023 Ot Dental Studio clinic director Bologna Italy

DENTIST Gabriele Vaccaro



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Dental Technician and Laboratory owner

PROFILE

EXPERIENCES

Dental Laboratory specialist (implant prosthetic) since 1994 Unilab Dental Laboratory director since 2000 Candulor official international trainer since 2012 Rhein83 official international trainer since 2016 Italian Dental Technology Association official trainer since 2018

EDUCATION

L. Dehon Dental Technology Institute Degree 1993 Total Prosthesed Advanced Master course 1995-1997 (Ivoclar - Dt Zollo) Garber Technique Master Course 2002 - 2004 (Candulor - Dt Nadalini) Basic and Advanced Training course in Removable Prosthesis 2008 - 2010 (Rhein83) New techniques for individualized assembly in mobile prostheses course 2012 - 2014 (Ruthiunium) "Implant-supporting prosthetics" 2016 - 2017 (Dt Borromeo)

DENTAL TECHNICIAN *Luca Cattin*



DIGITAL IMPLANTOLOG

Natural teeth and implant retained overdenture

In the last few years there has been a change in the awareness of dental professionals towards the overdenture implant-prosthetic treatments.

For a long time considered to be a fair compromise between economic and biological factors, the importance of solving clinical cases to improve the quality of life of our patients is growing more and more. However, it's necessary to distinguish between mandibular and maxillary restauration as they follow different protocols.

> At a time when the average age of patients is increasing and their needs are high and of high quality, we need a treatment that is fast, safe, practical and of an excellent standard. It seems almost impossible for one treatment to match all these aspects.

The literature, however, reveals that overdenture is a treatment with a high success for both natural roots, implant and prosthetic parts and above all it's a very good level treatment.

In this course we will analyze the diagnostic aspects, the surgical and technical working phases for the realization of the various types of overdenture prosthesis.

Gabriele Vaccaro Luca Cattin





We will begin with the analysis of overdenture protocols for natural teeth and roots applications. Both partial and full-overdenture restorations require biological, technical, prosthetic and managerial steps to consider in reaching the complete patient's satisfaction.





IMPLANT SUPPORTED PROSTHETICS

DIGITAL IMPLANTOLOGY AND GUIDED SURGERY



Both natural teeth and roots overdenture should be considered as first aid or permanent solutions? In each type of solutions we need to adapt the denture's retention in order to offer the ultimate level of comfort to the patient. Our attachments have to consider the proper plan of insertion in orde to preserve the NATURAL TEETH AND IMPLANT RETAINED OVERDENTURE

IMPLANT SUPPORTED PROSTHETICS

HYBRID FIXED IMPLANT PROSTHESIS

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Roots overdenture restorations start with a proper preparation of the roots channel counting on the correct tools and procedures. We can count on different options in terms of pivots lengths allowing to adapt perfectly to the patient's situation. Each pivot will count on the same connection on top making the practice simple and effective counting on the same components and tools.





Once the pivots are cemented, we can count on different elastic options to
adapt according to the patient's features.The divergence among the elements can be easily solved by choosing between
two different options in terms of metal housings:
Standard housing will be used with divergence from 0° up to 30°.
Smart box housing will be used with divergence from 30° up to 50°.
Both housings will use the same OT Equator elastic caps.123



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The correct prosthetic work-flow for overdenture restorations following the fixtures insertion has to be precise and well guided. Removable dentures today can be developed both with traditional and digital implant-prosthetic work-flow.

The correct gingival profile in overdenture should be always above the gingival area.



AND GUIDED SURGERY



DIGITAL IMPLANTOLOGY AND GUIDED SURGERY



The proper impression procedure, both manual or digital, allows to determine the correct spaces to consider in the prosthesis preparation.

DIGITAL IMPLANTOLOG

PROFILE

EXPERIENCES

EXPERIENCES

University Professor and Dental Clinic Director Winner of the Brugg's Gymnasium 2015 competition. Member of the editorial board of the "Journal of International Dental and Medical Research". Member of the editorial board of the "Global Journal of Oral Science". Author of publications in national and international journals. Co-author of the book entitled "Clinical-technical aspects of the combined prosthesis" Prosthesis Professor by the Ferrara Dentistry Univeristy

EDUCATION

Dentistry Degree by the University of Bologna (2005). PhD title in Dentistry for the Disabled affected by Ectodermal Dysplasia. Dentistry University of Bologna official researcher dealing mainly with prosthetic and implant-prosthetic rehabilitation of young patients. Course specialization in implant and regenerative surgery, periodontal surgical and non-surgical therapy, mucogingival surgery, piezoelectric surgery, prosthetics and implant-prosthesis.

DOCTOR Marco Montanari



PROFILE

Dental Technician and Laboratory owner Dental Laboratory owner since 2003. Speaker and opinion leader of different dental companies. First prize winner at the "1st Friends of Trasformer Competition" Rhein83 National and International speaker with multiple courses, conferences and articles-researches. Exo-Cad expert trainer since 2022.

EDUCATION

High School Diploma in Dental Technician with full marks from the I.P.S.I.A. Gaslini of Genoa. Numerous specialization courses on removable prostheses, with particular attention to total prostheses according to the method of Prof. A. Gerber and Prof. G. Passamonti and, in parallel, on implant-supported prostheses and their techniques of realization. He devoted himself to the study of composite layering techniques, then applying them to the removable prosthesis.

DENTAL TECHNICIAN Simone Fedi



Implant supported prosthetics

Edentulism represents a chronic, irreversible and mutilating pathology and it's necessary to consider the aesthetic, functional and psychological outcomes. In choosing a correct therapy as well as a well-designed prosthetic design (fixed or removable prosthesis) the aesthetic factors such as the support of the perioral tissues, he nose-labial angle and the position of the incisors play an important role. Accordingly, when the aesthetics of the face are to be optimized an implant supported

> overdenture is considered the gold standard therapy. This, in fact, allows to support the perioral tissues restoring the harmony of the face, improving phonetics and at the same time giving the patient the feeling of having a fixed prosthesis. In other cases, when the tissues are better preserved, the fixed prosthesis represents the best choice also because there is a high acceptance by the patient from a psychological point of view. During the presentation all the parameters necessary for the correct choice of the type of rehabilitation (fixed and removable) will be examined as well as presented a simple and effective innovative protocol for passivating the structures on a full arch rehabilitations. Special focus will be dedicated to the digital workflow necessary to reach the ultimate standards in terms of aesthetic and functionality.

Marco Montanari Simone Fedi







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Detailed diagnostic examination in combination with patients' needs and expectations should be the basis to choose the appropriate type of restoration before the surgical procedure has been started. Newer technologies such as computer-assisted template-based implant placement may play an important role in achieving predictable results from an esthetic and functional point of view. Implant-supported prostheses can be either fixed or removable. Each option offers different levels of function and comfort with its own indications and contraindications.





HYBRID FIXED IMPLANT PROSTHESIS
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IMPLANT SUPPORTED PROSTHETICS The presence of adequate lip support is one of the most important criteria in the selection of a fixed versus removable implant-based restoration. Removable implant prostheses included either implant-retained or implant-supported options. An implant-retained overdenture with single attachments requires a minimum of two implants in the mandible and four implants in the maxilla. The masticatory forces are transferred to the alveolar mucosa and consequently the underlying bone, while the dental implants provide retention to the denture. An implant-supported overdenture with a bar requires a minimum of four implants in both mandible and maxilla. The masticatory forces are transferred completely to the dental implants, increasing

patients' comfort, but it can be removed by the patient to maintain proper oral hygiene.



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Completely edentulous patients often present with moderate to high bone resorption. Clinical research demonstrated that in the majority of patients, the available space between the prosthetic crown and the implant platform had to be compensated with the prosthetic material, making a buccal flange needed to provide lip and facial support. For the latter, the need for perioral soft tissue support with a prosthetic flange should always be considered even if implants can be placed in a proper position. Moreover, a removable implant supported prosthesis may be a feasible option to overcome the technical complications of other treatment options.

Finally, this type of implant-supported restoration gives high patient's satisfaction with the advantage of retrievability just like screw-retained prosthesis, making oral hygiene and maintenance easier.





NATURAL TEETH AND IMPLANT RETAINED OVERDENTURE

IMPLANT SUPPORTED PROSTHETICS

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#### PROFILE

Dentist and Clinic Director

IANYUP program - New York University teacher University of Genova removable prosthesis teacher Multicenter Retrospective Analysis of Implant Overdentures co-author University of Brescia fixed prosthesis teacher National and international speaker for different dental companies Rhein83 official speaker since 2017

#### **EDUCATION**

Dental technology degree by the L. Dehon Institute – 1991 Dentistry degree by the Bologna University - 1996 1996-2008 annual courses and advanced courses in Italy and abroad with Dr. A. Fonzar, T. Testori, A. Scipios, R. Barone and C. Clauser, U. Covani, P. Malo, S. Wallace, D. Turnow. New York University "American postgraduate certificate in implantology and oral rehabilitation-2012





Dental Laboratory Owner

PROFILE

**EXPERIENCES** 

**EXPERIENCES** 

ANTLO Association (national Italian dental technicians) teacher: scientific program for fixed prosthesis and digitalization. Since 2016 he was author and co-author of multiple publications of articles in prestigious national and international dentistry magazines. Since 2018 he became an official Rhein83 speaker attending multiple national and international courses, conferences and scientific study groups traveling to Europe and Asia.

#### **EDUCATION**

L. Dehon Dental Technology Degree - 1995 1995-2001 Complete and partial prosthetic dentures advanced courses 2002 Fixed prostheses and casting solutions course.

2002 - 2009 advanced courses dealing with fusion techniques, zirconium and gnathology. 2009 - 2020 Advanced digital prosthetic courses focusing on fixed and removable dentures

#### **DENTAL TECHNICIAN** Emanuele Giunchi



DIGITAL IMPLANTOLOG

#### Hybrid fixed implant prosthesis.

We will start with the guidelines on how to solve common issues related to the implant practice like the removal of broken screws from the fixtures.

This will allow to introduce the innovative concept of fixed prosthetic named OT Bridge. We like to consider this type of restoration "hybrid" as the traditional prosthetic work-flow, counting on Mua components, is no longer necessary. Supported by an unique component,

OT Equator abutment, we will present both the traditional and

most advanced digital procedures with a detailed analysis of the differences in the patient's rehabilitation with fixed prosthesis.

The aim is to define the advantages both on the clinical and laboratory prospective with a special focus on the improvements offered by the digital cad-cam applications. Going through the different components available both in the clinical and laboratory working phases we will present the precise step by step necessary in the planning and realization of different clinical situations.

Emiliano Ferrari Emanuele Giunchi





A broken screw fragment inside an implant is a delicate issue to face in the clinic often causing problems and discomfort to the patients. Counting on the procedure we will present each type of broken fragment can be removed from the implant if it has not been cemented or if the threads inside the fixture have not been damaged in a previous removal attempt. In 90% of attempts the broken screw can be easily unscrewed, but the operation must be completed following precisely the protocol.







NATURAL TEETH AND IMPLANT RETAINED OVERDENTURE

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IMPLANT SUPPORTED PROSTHETICS

The OT BRIDGE tech counting on the applicat This without using, and the The protocol lead due to the In addition, the 1

The OT BRIDGE technique allows to create fixed and passive screwed dentures and, counting on the application of the SEEGER ring components, to overcome divergence over 80°. This without using, and therefore managing, the correct orientation of the traditional angled MUA. The protocol leads to a greater speed of execution and better aesthetic results due to the smaller dimensions of the OT EQUATOR abutment. In addition, the presence of the SEEGER ring allows to eliminate some of the screw holes in the aesthetic areas.



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1,8 mm

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Straight abutment for immediate load temporary dentures with screw and lateral holes for titanium wire are available in one diameter and two heights. They are recommended when it is necessary to create quicklya provisional denture in the immediate loading technique without creating tension on the implants. In case of inclined implants, the Extra-grade flairing can be created by hand in towards the undercut area of the OT Equator with a simple laboratory drill.

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NATURAL TEETH AND IMPLANT RETAINED OVERDENTURE



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Savings in materials, instruments and working time are the fundamental aspects for the clinic and the laboratory, which can count on the use of the OT EQUATOR - OT BRIDGE technique both with traditional protocols and with a fully digital workflow. Both dentists and dental technician can approach the OT Bridge protocol using all different types of digital programs and libraries currently available in the market. This increases the versatility of the protocol and simplifies the procedure as we will use a singles Scan-body component for all the different impressions.



With the designed tool we are able to determine exactly the height of the transmucosal route for any implant system with any connection, internal or external. This facilitates the choice of the proper OT Equator abutment to apply according to the clinical case offering complete flexibility with multiple heights available. We are able to place the OT Equator abutment in any angulation counting on the Seeger ring by keeping the same dimensions and diameter of the abutment.







IMPLANT SUPPORTED PROSTHETICS

NATURAL TEETH AND IMPLANT RETAINED OVERDENTURE

IMPLANT SUPPORTED PROSTHETICS

IMPLANT SUPPORTED PROSTHETICS

DIGITAL IMPLANTOLOGY AND GUIDED SURGERY

The OT Bridge protocol is allowing to drastically reduce the necessary number of prosthetic screws in the practice. Counting on a "round" prosthetic connection, without hexagons, having the Seeger component as an horizontal foot hold allowing to unify all the advantages offered by the standard fixed prosthetic solution (passivation, solidity of the connections, correct implant-hexagon placement). The traditional systems can not offer the same advantages reason why we consider the OT Bridge protocol a real and effective advantage both in the clinic and dental lab.






#### **EXPERIENCES**

#### **University Professor** and Dental Clinic Director

PROFILE

Associate Professor at the University of Ferrara, holder of the course of Dental Prosthetics I, II, III; professor of Dental Materials and Prosthetic Technologies; holder of the teaching of Gnathology at the Master's Degree Course in Dentistry and Dental Prosthesis of the University of Ferrara Holder of the teaching of Dental Prosthetics; Dental materials in the degree course in Dental Hygiene at the University of Ferrara. He carries out clinical, teaching and research activities in the field of dental prostheses and craniomandibular disorders.

#### **EDUCATION**

Graduated in Medicine and Surgery and Specialized in Odontostomatology at the University of Turin.

#### PROFESSOR Santo Capatano



# HYBRID FIXED IMPLANT PROSTHESIS

### PROFILE

**Specialized Dental Technicinan Dental Laboratory** Director

#### **EXPERIENCES**

In 1988 he started his own business as owner of the Laboratory, where he specialized in the construction of prostheses on implants, also with Cad - Cam systems. Over the years he has had the opportunity to get to know and make professional agreements with some companies in the sector who teach him about the materials they produce, making him an expert in product categories, ceramics and plant structures.

#### **EDUCATION**

Dental Technology Degree Prosthetic reconstruction course on implants held by R. Polcan. Power course for ceramization held by Oliver Brix. In 1996 Oral Design course held at the Zurich laboratory of Mr. Willi Geller. ANTLO Dental Technology association official instructor.

#### **DENTAL TECHNICIAN** Carlo Borromeo



# DIGITAL IMPLANTOLOGY AND GUIDED SURGERY

#### Digital implantology and guided surgery.

The presentation will describe the Full Digital Workflow for Prosthetic Full-Arch Immediate loading Rehabilitation Using OT-Bridge Protocol. Nowadays, digital technologies have brought very important advancements in clinical prosthetic dentistry. However, a full digital workflow is still considered to be challenging in the management of full-arch implant cases with immediate prosthetic loading.

> The aim of this presentation is to show a full-digital workflow for the fabrication of an implant-prosthetic fixed provisional prosthesis for immediate loading on seven implants in the upper maxilla. The static guided implant surgery and the OT Bridge prosthetic system were used to rehabilitate the patient. In this way, the combination of a well-known surgical technique with a peculiar prosthetic system that allows for a certain degree of tolerance resulted in it being useful for full-arch immediate loading.

Santo Capatano Carlo Borromeo





In the last decade, scientific innovations have brought significant advantages to the "conventional loading" protocol originally proposed by Branemark. The immediate loading of dental implants has gained widespread popularity because of its reduced treatment times and improved esthetics and patient acceptance. In addition, considering the earlier factors for success, immediate loading with a fixed prosthesis in edentulous jaws seems to be a predictable treatment in terms of implant survival. Immediate loading seems to induce bone remodeling, generating new bone around implants, with a better healing of hard and soft tissues. Furthermore, the rigid prosthetic framework prevents implants micromovements, favoring their stability and an appropriate distribution of occlusal forces. The OT Bridge protocol allows to reach this standard on all types of implant platforms.







The operative sequence is structured with a precise step by step procedure counting on the constant communication between the dental clinic and the laboratory. Digital planning for static guided implant surgery planning is a crucial part of the procedure in order to reach the proper standard. The laboratory workflow for the realization of the provisional prosthesis follows precise guidelines allowing to ensure the stability and functionality of the provisional.

Surgical phases of the implant insertions and immediate loading of the provisional prosthesis are also developed keeping a constant communication between lab and clinic.







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Narrow-profile OT Equator abutments are selected and placed in the virtual environment on the corresponding implants. The height of each OT-Equator is selected on the basis of tissue levels previously measured in the implant planning, types, and implant depth. Counting on different gingival profiles (0,5 mm 1,0 mm 2,0 mm 3,0 mm 4,0 mm 5,0 mm 6,0 mm 7,0 mm) we can choose the proper height according to the surgical results with complete flexibility and adaptability to the clinical situation. 2



In the dental laboratory the white Seeger rings are inserted in the extra-grade abutments following the precise line of referment of the undercuts. These components will allow the perfect passivation of the structure with an effective correction of all the degrees of divergence among the elements. Once completed the prosthesis is then sent to the clinician for the final check and application in the patient mouth. Counting on the reduced dimensions of the components we are able to reach a superior aesthetic result with perfect adaptability to the implant system used by the dentists.







NATURAL TEETH AND IMPLANT RETAINED OVERDENTURE



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