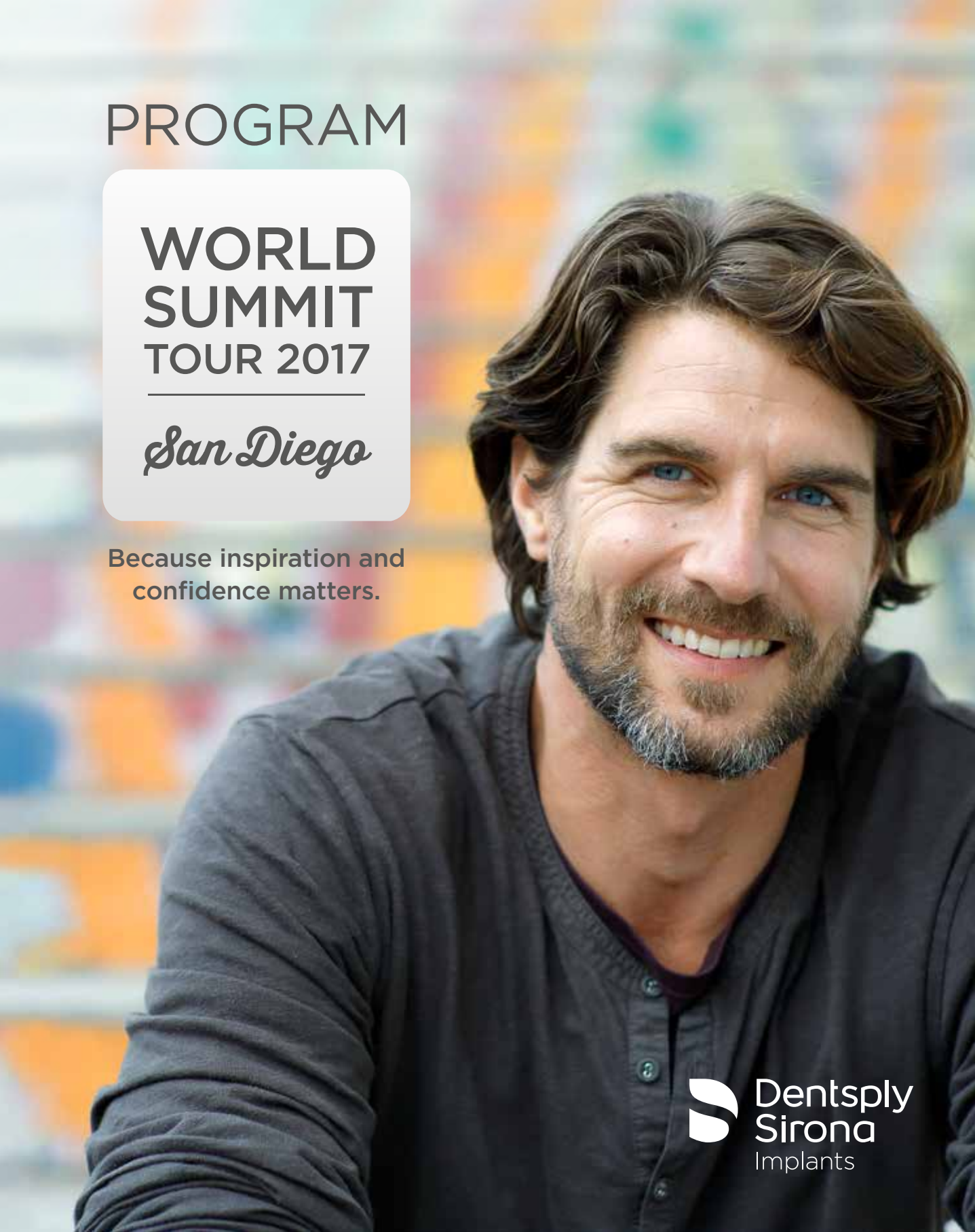
PROGRAM

WORLD SUMMIT TOUR 2017

San Diego

Because inspiration and confidence matters.



Dentsply Sirona Implants

CONGRESS PROGRAM

ABSTRACT BOOK

World Summit Tour app

Stay up-to-date on all the latest information for the San Diego tour stop.

Download the World Summit Tour 2017 in AppStore or Google Play.

One tour.
Four stops.
Endless inspiration.

We are happy to welcome you to the World Summit Tour 2017 —the scientific congress on implant dentistry.

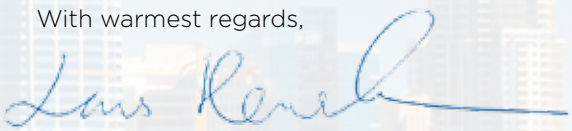
During the next two days, we will take a journey of discovery with a scientific committee of industry leaders and renowned international and regional speakers; a journey led by our shared passion for implant dentistry and a commitment to science, documentation, education and innovation.

We meet here in San Diego as a part of our goal for creating a world where everyone can eat, speak, and smile with confidence. The driving forces of our daily work are not only to restore missing teeth, but to help give back quality of life and to restore happiness.

Through the presentation of clinical evidence and strategies for treatment success, as well as peer-to-peer discussions, we hope to further instill your confidence in knowing you are providing your implant patients with the best treatment solutions available.

We are truly grateful for your partnership and participation, and we hope to exceed your expectations in these coming days.

With warmest regards,



Lars Henrikson
Group Vice President
Dentsply Sirona Implants

Ok, let's go

A journey in science

Science is the foundation for all technology, it is a must for peace of mind and predictability.

Science in itself is without meaning, it only adds value when it is applied. Our dedication and devotion to the facts of science, not the whim of opinion, comes down to one thing—the best results possible for the benefit of your patients. Because they deserve scientifically-proven products and solutions that will last a lifetime.

You are about to experience a scientific program that brings together the best of science and clinical care, where current scientific news and the latest clinical and digital development within implant dentistry come together.

Featuring outstanding speakers and moderators and with a focus on the many aspects of implant dentistry and predictable clinical results, you can rest assured—everything you and your team need for inspiration and confidence is right here.

THE INTERNATIONAL SCIENTIFIC COMMITTEE

Read more about our committee members.

MAY
11

All pre-congress programs run from 1.00–5.00 PM.


MARK LUDLOW


JOSH CAMPBELL

Demystifying the fully digital implant patient

Room Aqua 310 AB

Lecture/hands-on

Speakers: **Mark Ludlow, Josh Campbell**


CHRISTOPHER A. BARWACZ

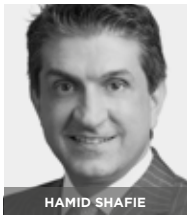

GUSTAVO AVILA-ORTIZ

Photography and dentistry— a comprehensive workshop

Room Aqua Salon EF

Lecture/hands-on

Speakers: **Christopher A. Barwacz, Gustavo Avila-Ortiz**

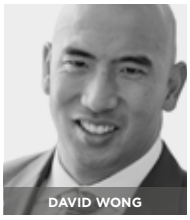

HAMID SHAFIE

From what is expected to what is exceptional— the difference of legendary implant services in your office

Room Aqua Salon C

Lecture

Speaker: **Hamid Shafie**

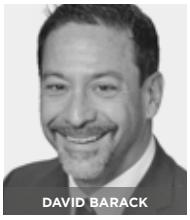

DAVID WONG

Implant-related bone grafting for the management of everyday soft tissue defects

Room Aqua Salon D

Lecture/hands-on

Speaker: **David Wong**


DAVID BARACK

Evolution on dental implant therapy— achieving superior functional and esthetic results with a sloped implant

Room Aqua Salon AB

Lecture/hands-on

Speaker: **David Barack**

Refer to pages 30-34 for abstract details.

MAY 12

7.30 AM Doors open

7.50 AM OPENING CEREMONY

8.00–9.30 AM Partnering for health and well-being

9.30–10.00 AM Coffee break—Poster Gallery and Inspiration Hub

10.00–11.30 AM Individualized protocols for patient-centered outcomes

10.00–11.30 AM Practice success with the patient in focus

11.30 AM–1.00 PM Lunch—Poster Gallery and Inspiration Hub

1.00–3.00 PM Life restored—solutions for the fully edentulous patient

1.00–3.00 PM The reality of complications

3.00–3.30 PM Coffee break—Poster Gallery and Inspiration Hub

3.30–5.30 PM Inspiration TALKS—precision speaks for itself

MAY 13

8.00–9.45 AM Digital blueprint—beginning from the end

8.00–9.45 AM Creating a sound biological foundation

9.45 AM–10.15 AM Coffee break—Poster Gallery and Inspiration Hub

10.15 AM–12.00 PM Outlook on a bright future (with Poster Competition Award ceremony)

CLOSING CEREMONY

7.50 AM OPENING CEREMONY


CLARK STANFORD


TORD BERGLUNDH


CHRISTOPH HÄMMERLE


LYNDON COOPER

Partnering for health and well-being

8.00–9.30 AM Room Sapphire A-C

In broad terms, health can be looked at as something that is more than just the absence of disease. Healthy living consists of a good diet and physical exercise, but a happy and healthy life is also influenced by the individual balance that we achieve, and by finding comfort and joy in our social environment.

A key aspect of health is realized when we can eat, speak and smile with confidence. As a dental professional who provides implant care, you can make a significant difference for your edentulous patients by restoring function and esthetics. Together, let us examine the possibilities in our partnership and commitment to improved health, well-being—and overall quality of life.

Moderator: **Clark Stanford,** *USA*

Speakers:

Tord Berglundh, *Sweden*
Patient-centered outcomes—patient-reported and patient-based

Christoph Hämmerle, *Switzerland*
Digital implant dentistry—present and future

Lyndon Cooper, *USA*
Teeth for a lifetime

9.30–10.00 AM Coffee break—Poster Gallery and Inspiration Hub

Refer to pages 35-56 for abstract details.


JACINTHE PAQUETTE


MARK SPATZNER


SERGIO RUBINSTEIN


OLIVER C. PIN-HARRY

Individualized protocols for patient-centered outcomes

10.00–11.30 AM Room Sapphire A-C

At the infancy of implant dentistry, there was a one-size-fit-all approach to treatment. With advancements in technology and clinical protocols, patients today are able to receive solutions that are as unique as they are. But does such an individualized approach also mean an increase in complexity? Or can digital processes and new procedures help to simplify and streamline workflows so that optimal, patient-centered outcomes can be achieved without compromise to quality?

Moderator: **Jacinthe Paquette,** *USA*

Speakers:

Mark Spatzner, *Canada*
Implant design—adaptation to natural anatomy

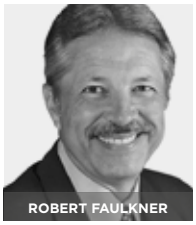
Sergio Rubinstein, *USA*
Management of esthetic dilemmas—how to achieve outstanding results

Oliver C. Pin-Harry, *Canada*
Emulating the natural dentition—an elusive quest?


THOMAS MCGARRY


RYAN COOK


GARY JONES


ROBERT FAULKNER

Practice success with the patient in focus

10.00–11.30 AM Room Sapphire D

What are the key factors that can make a difference in the development of a dental practice? A successful practice is the result of happy and satisfied patients. But the culture of happiness, communication and collaboration must begin in the practice among the clinician and all members of the team.

Moderator: **Thomas McGarry,** *USA*

Speakers:

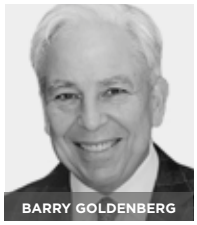
Ryan Cook, *USA*
Assimilation of anterior implant esthetics and digital dentistry

Gary Jones, *USA*
Marketing strategies for the implant specialist

Robert Faulkner, *USA*
Building a referral-based practice with dental implants—a prosthodontist's perspective

11.30 AM–1.00 PM Lunch—Poster Gallery and Inspiration Hub


BARRY FRANZEN


BARRY GOLDENBERG


STEPHEN JACOBS


GARY JONES


MARK MONTANA


MARCO BRINDIS


MICHAEL S. BLOCK

Life restored—solutions for the fully edentulous patient

1.00–3.00 PM Room Sapphire D

There is a variety of solutions designed to meet the individual needs of fully edentulous patients. These options take into account clinical situations, financial requirements and patients' expectations. Despite the different considerations and final method of treatment selected, what remains the same is the goal of restored ability for patients to eat, speak and smile with confidence.

Moderator: **Barry Franzen,** *USA*

Speakers:

Barry Goldenberg, *USA*
Options for complete arch rehabilitation with implants—prosthodontic and biomechanical principles

Stephen Jacobs, *United Kingdom*
Gary Jones, *USA*
Full-arch fixed treatment option utilizing tilted implants

Mark Montana, *USA*
The limitations of applied restorative concepts for edentulous implant patients

Marco Brindis, *USA*
Why I no longer use fixed detachable screw-retained full arch prostheses

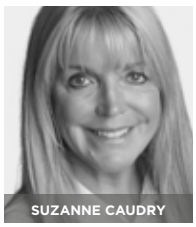
Michael S. Block, *USA*
Flangeless solutions for maxillary edentulous patients

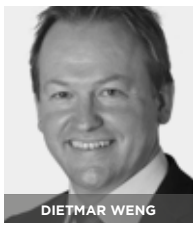

JOSEPH SCHMIDT


RACHEL GARRAWAY


SAMEH EL-EBRASHI


BARRY LEVIN


SUZANNE CAUDRY


DIETMAR WENG

The reality of complications

1.00–3.00 PM Room Sapphire A-C

Complications are an inevitable clinical reality, both technically and biologically. What are the most frequent problems we see? How can complications be managed once they have happened? And what measures can be taken to prevent them from happening?

Moderator: **Joseph Schmidt,** *USA*

Speakers:

Rachel Garraway, *Australia*
Biological complications—minimizing the risks

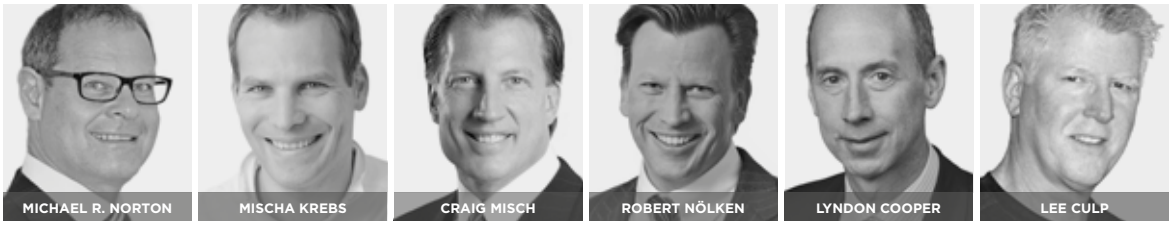
Sameh El-Ebrashi, *USA*
Screw vs cement retention in clinical practice

Barry Levin, *USA*
Complications related to immediate implant surgery—short- and long-term results affected by surgical technique

Suzanne Caudry, *Canada*
Adaptive treatment planning to reduce implant complications

Dietmar Weng, *Germany*
Key factors of design-induced periimplant bone loss—the TissueCare concept revisited

3.00–3.30 PM Coffee break—Poster Gallery and Inspiration Hub



Inspiration TALKS—precision speaks for itself

3.30–5.30 PM Room Sapphire A-C

Precision is a word that creates expectations for both clinicians and patients. However, both predictable outcomes and happy patients can be a reality as a result of successful implementation of a precisely outlined diagnosis and treatment planning.

Digital and analog processes and the tools that support treatment must be therefore precisely engineered and continuously evaluated to ensure the maintained level of accuracy that clinicians and patients desire. Precision speaks for itself throughout the treatment process and when its long-term impact on treatment care is understood.

Moderator: **Michael R. Norton,** *United Kingdom*

Speakers:

Mischa Krebs, *Germany*
Absolute precision—a prerequisite for single visit reconstructions and outstanding clinical success

Craig Misch, *USA*
The use of biomaterials for precision in hard and soft tissue management

Robert Nölken, *Germany*
Enhanced tissue support in extraction sockets and sloped ridges-grafting or guidance?

Lyndon Cooper, *USA*
Lee Culp, *USA*
The power of precision—discovering new success in implant dentistry

Refer to pages 35-56 for abstract details.


DAVID GUICHET


LARS BOUMA


JAY REZNICK


INGEBORG DE KOK


ETHAN PANSICK

Digital blueprint—beginning from the end

8.00–9.45 AM Room Sapphire A-C

Let's begin at the end. With digital dentistry, we can! It allows us to define the final desired result and to plan the treatment needed to achieve it. Digital connectivity lends to expanded solutions and the ability to provide treatment to more patients—all while starting with the end result in mind.

Moderator: **David Guichet,** *USA*

Speakers:

Lars Bouma, *USA*
End with excellence in mind—digital restorative for teeth and implants

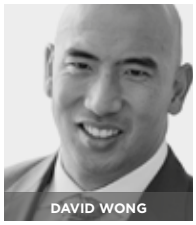
Jay Reznick, *USA*
CBCT-CAD/CAM integration—the blueprint for dental implant success

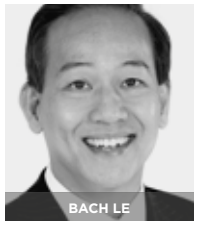
Ingeborg De Kok, *USA*
Supporting your vision—the digital abutment design

Ethan Pansick, *USA*
Simplifying complex restorative situations with CAD/CAM abutments


BOBBY BUTLER


TARA AGHALOO


DAVID WONG


BACH LE


GEORGIOS ROMANOS

Creating a sound biological foundation

8.00–9.45 AM Room Sapphire D

When the host body alone does not provide enough support, different biomaterials with different characteristics and "tasks" play an important role in the preparation of an implant site. For both simple and complex implant cases, the building of, and ability to maintain a solid biological foundation can contribute to the long-term, cost-effectiveness and efficiency of the overall treatment outcome.

Moderator: **Bobby Butler,** *USA*

Speakers:

Tara Aghaloo, *USA*
Challenges and complications in grafting procedures

David Wong, *USA*
Hopeless teeth, ridges and implants—case reviews of various biomaterials for successful treatment

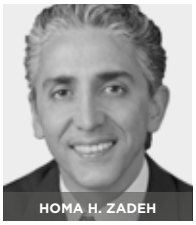
Bach Le, *USA*
The use of tenting screws for alveolar reconstruction

Georgios Romanos, *USA*
Immediate loading and grafting—do they connect?

9.45 AM–10.15 AM Coffee break—Poster Gallery and Inspiration Hub

Refer to pages 35-56 for abstract details.


MICHAEL R. NORTON


HOMA H. ZADEH


MARK LUDLOW


CLARK STANFORD

Outlook on a bright future

10.15 AM–12.00 PM Room Sapphire A-C

The statement, "beauty is in the eye of the beholder," implies that the perception of beauty is subjective. The outlook on the future of implant dentistry is full of unexplored possibilities and new opportunities for patients and clinicians.

Today, dental implant treatment is already making a huge difference for millions of people in their physical and emotional well-being. New solutions and possibilities designed to further improve the treatment process and outcomes continue to be developed and introduced. With a deeper understanding of patient desires and the increasing ability to meet or even exceed those, patients are happier. As a dental professional, you can be proud of the stories of inspiration that you are helping to create and the improved quality of life that you contribute to each day.

Together, let's make the future brighter.

Moderator: **Clark Stanford,** *USA*

Speakers:

Michael R. Norton, *United Kingdom*
Evolution of an implant system—a better understanding of primary stability

Homa H. Zadeh, *USA*
Minimally invasive implant surgery—can bone augmentation be avoided by short or sloped implants?

Mark Ludlow, *USA*
Why digital, why now?

Clark Stanford, *USA*
Implant dentistry—where are we and where do we need to go?

Poster Competition Award Ceremony

The award will be presented at the beginning of the session before the lecture program.

CLOSING CEREMONY

Opening hours
Friday
6.00 AM–5.30 PM
Saturday
6.00 AM–1.00 PM

Inspiration Hub

Let's meet at the point where inspiration, knowledge and confidence come alive in dental implant treatment solutions.

Discover the latest products and protocols. Network with colleagues and friends—and get inspired.

Play to win

Join the Click Photo Challenge through the World Summit Tour event app to win great prizes.

Refer to page 21 for details.

Innovation and highlights

Discover the latest highlights and innovations from our comprehensive portfolio for all phases of implant dentistry.

mySimplant® Planning Service

A digital treatment planning service for guided surgery that enables clinicians to treat more patients with enhanced safety, and predictability.

Symbios® Xenograft Granules

A porcine bone mineral providing more space for new bone deposition.

OsseoSpeed® Profile EV

A unique dental implant specifically designed for efficient use of available bone in sloped ridge situations.

SmartFix® concept

Providing edentulous patients with an immediate fixed, full-arch prosthetic, supported by four implants.

Atlantis® CustomBase solution

The first true patient-specific, two-piece, screw-retained solution.

Live presentations and hands-on sessions

MAY 12

7.00–7.30 AM **José Antonio Alonso**

Digital flexibility at your fingertips—treat more patients through digital implant planning service for guided surgery

7.30–8.00 AM **Arnold Rosen**

Utilizing Atlantis solutions for best treatment outcomes and productivity

9.30–10.00 AM **Scott Van Dam**

Owning the slope—guided surgery for OsseoSpeed Profile EV

11.40 AM–12.10 PM **Stephen Jacobs, Jan Leven**

SmartFix concept for Astra Tech Implant System EV (lecture and hands-on)

12.20–12.50 PM **Stephen Jacobs, Jan Leven**

SmartFix concept for Astra Tech Implant System EV (lecture and hands-on)

3.00–3.30 PM **Jay Reznick**

3D technology facilitating immediate implant placement and immediate provisionalization in the dental implant practice

MAY 13

7.00–7.30 AM **Arnold Rosen**

Utilizing Atlantis solutions for best treatment outcomes and productivity

7.30–8.00 AM **José Antonio Alonso**

Digital flexibility at your fingertips—treat more patients through digital implant planning service for guided surgery

Guided digital tours

Get connected with a first-hand look at the innovation of a digital workflow.

FRIDAY 12.00–12.30 PM
SATURDAY 9.45–10.15 AM

Regenerative solutions

Discover Symbios grafting materials, membranes and instruments to support you for all kind of restorative needs.

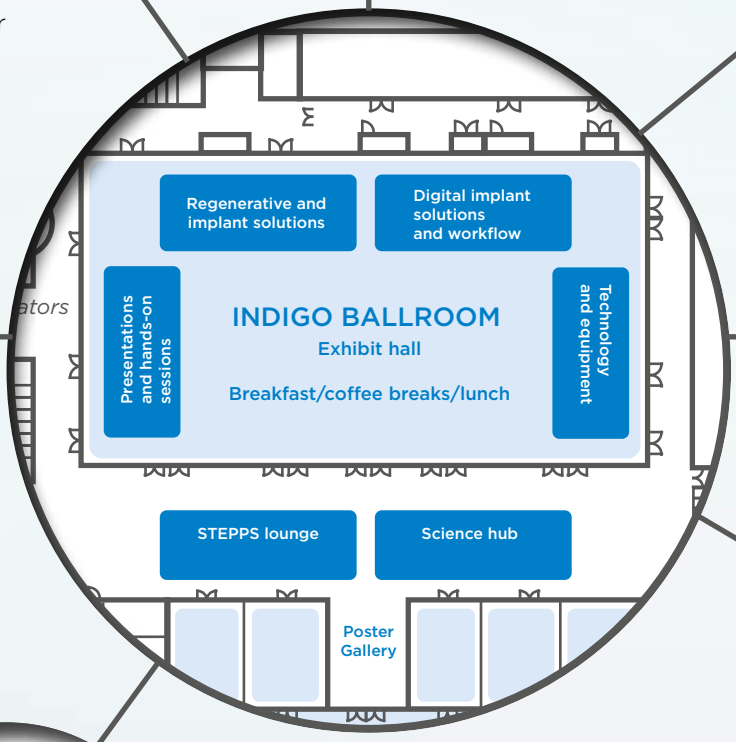
Implant solutions

Ankylos, Astra Tech Implant System and Xive—our implant systems are well documented and clinically proven for life.

Learn about unique protocols and latest innovations.

Innovations and hands-on sessions

Experience the latest innovations and join us for practical hands-on sessions.



STEPPS™ lounge

Partnership and support matters. Re-energize at the STEPPS Lounge and speak with one of our representatives about services, CE opportunities and marketing support available to you as our valued partner.

Digital implant solutions

Unlock your digital potential with Simplant computer guided implant treatment and patient-specific Atlantis abutments and suprastructures.

Explore the complete digital workflow live with solutions that only Dentsply Sirona can provide.

Inspiration and confidence

Delivering the best results to implant patients require products and treatment concepts that offer you the freedom to create long-lasting, individualized solutions.

At Dentsply Sirona Implants, we are dedicated to providing clinically-proven products of the highest quality and backed by extensive documentation because we believe this is the level of commitment you deserve for delivering opitimized care.

Technology and equipment

Dentsply Sirona produces innovative and reliable solutions that empower dental professionals to provide better, safer, faster dental care. Our impressive line of technologies, like CEREC and Galileos, enables dental professionals to deliver the best possible care to their patients for years to come. Discover how our technologies can enhance the workflow of your practice and experience first-hand the power of innovation.

Science hub

Meet our science and research experts to learn about our clinical solutions and emerging innovations and how they are backed by sound science.

Experience a close encounter with our implant surfaces and biomaterials through the Virtual Reality glasses and get to know more about our global clinical research experts and discover our scientific material supporting all our product and solution areas.

Let´s go forward together—backed by sound science.

Join the Poster Competition winners as they bask in the light of success

No scientific congress would be complete without the all-important Poster Competition, where aspiring scientists and experienced clinicians showcase their posters.

During the lunch break on May 12, the Scientific Committee will do a poster walk and the poster presenters will be available at their posters to answer questions.

On May 13, the scientific committee will present the winning posters in the categories Clinical Application and Research. The winners will go on to the Global Poster Competition.

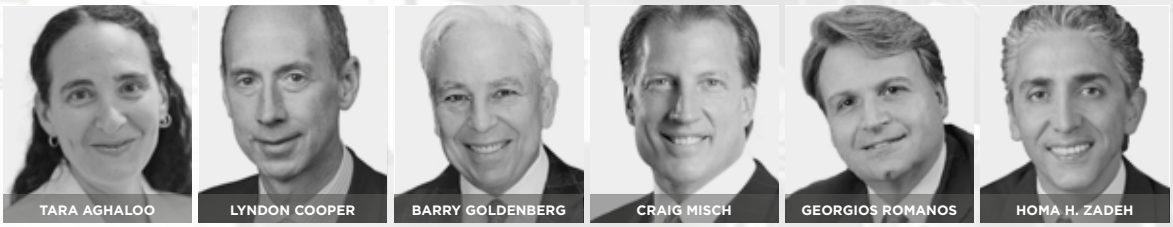
Join us and celebrate the best of the best in the Poster Gallery.

Refer to pages 57-70 for Poster Competition abstracts.

Inspiration for the future

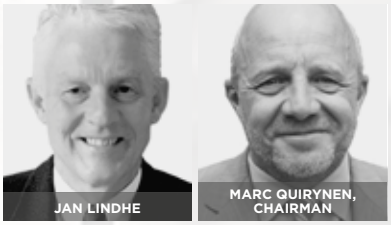
The scientific committee will award the winners in each category with USD 1,700. The winners will be announced in the Poster Competition Award ceremony, held during the closing session on Saturday, May 13. Did your favorite poster and author win?

The Scientific Committee San Diego



The Scientific Committee reviews abstracts and selects the Poster Competition winners at the San Diego tour stop.

Global Poster Competition Committee

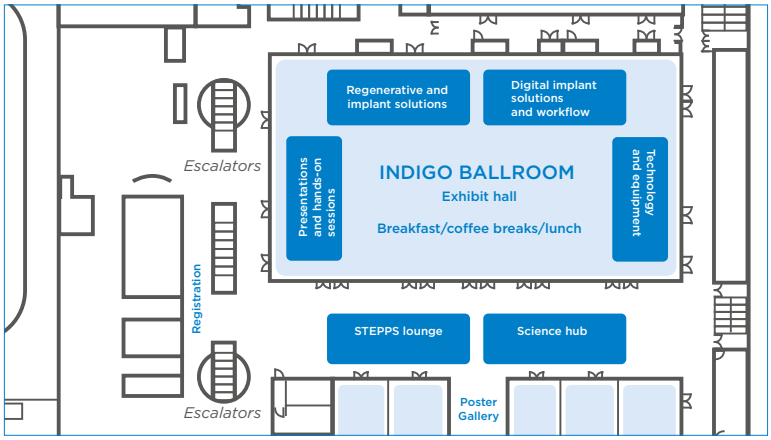


The Global Poster Competition Committee selects two global winners, one in each category, from the four tour stops. The global winners will be announced in December 2017.

Indigo Level

Registration and Inspiration Hub

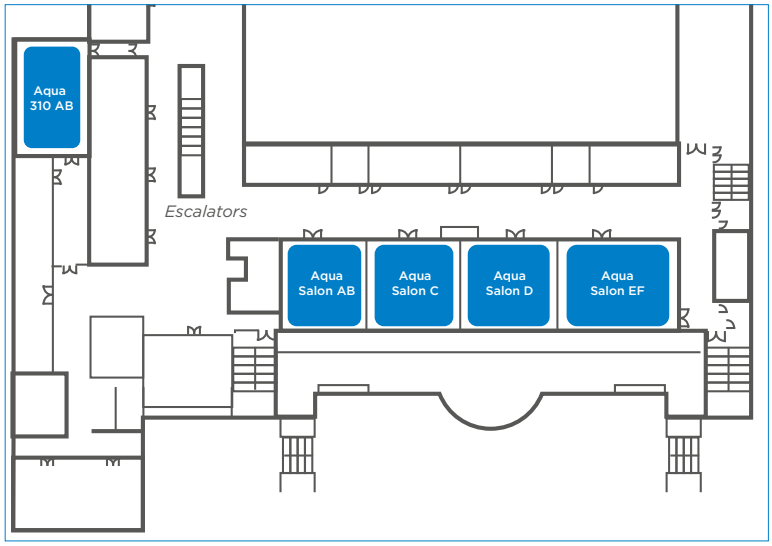
Second floor



Aqua Level

Pre-congress program

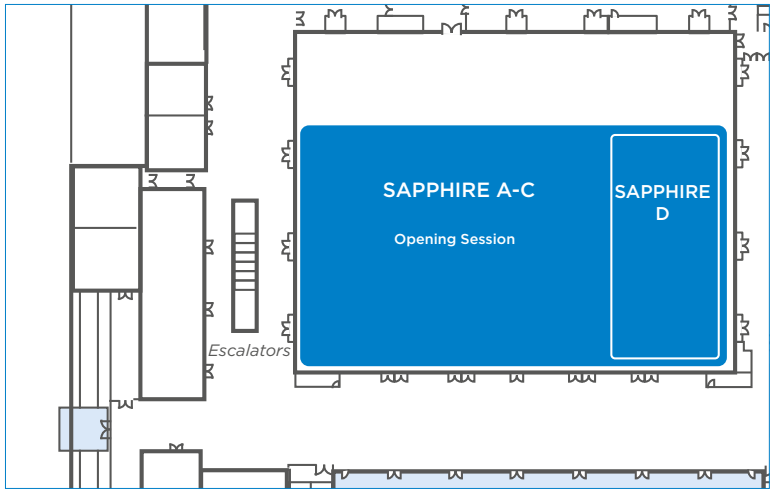
Third floor



Sapphire Level

Scientific program

Fourth floor



World Summit Tour app

Stay up-to-date on all the latest information for the San Diego tour stop.

Download the World Summit Tour 2017 app in the AppStore or Google Play.

Don't have iOS or Android?

Scan the QR code and verify your account to use the mobile web version of the app instead.

Inspiration Hub

Find opening hours and get a description for what you can find at each of the different areas.

Information

Whether information about the company, the app, the event, activities, local restaurants and things to do around town—you can find it all here.

Schedule

Get an overview of the schedule for each day, or create your own schedule by adding the programs you are most interested in under the "My Schedule" tab.

Speakers

Speakers are listed in alphabetical order by last name, so you can easily find the details, program times and locations of their presentation.

Inspiration TALKS

Use the app to submit questions up to one hour before and 30-minutes after this session.

Play Click and win

Join the Click Photo Challenge through the World Summit Tour app to win great prizes.

Complete the challenges by exploring the Inspiration Hub and snap photos to share in the app's live photo feed.

When you have completed all challenges in a category, you will earn a badge. The first three participants to complete all challenges and earn all badges will win a prize!

There is no better time than now, so accept the challenge to win.

Click here in the app for more details.

A night of inspiration & light

Friday, May 12, 7.00 PM–11.00 PM Coasterra

Join us on the San Diego Bayfront for a memorable evening with friends and colleagues. Revel in the amazing view, the beautiful sunset, and the delectable food and drink while enjoying the evening's entertainment.

Dress code: Smart casual
Cost: USD 299
Registration necessary

Transportation to the event starts at 6.30 PM at the Hilton Bayfront Promenade level.

Getting around

Relax and enjoy yourself. We've worked hard to make getting around as easy as possible, so you can explore and be inspired at your leisure.

Hotel

Hilton San Diego Bayfront
1 Park Boulevard
San Diego, CA 92101
Phone: +1 619 564 3333

Registration opening hours

The registration desk is located outside of the Indigo Ballroom (lobby level) of the hotel and open during the following hours:

Wednesday, May 10
12.00–7.00 PM

Thursday, May 11
8.00 AM–8.00 PM

Friday, May 12
6.30 AM–6.00 PM

Saturday, May 13
7.00 AM–2.00 PM

Name badges

Please have your name badge with you and visible at all times, as this is your pass to the World Summit Tour program and exhibition. If you lose your badge, please stop by the Registration Desk.

Lost & found

Lost and found items will be handled by the registration desk.

Photography & videotaping

Please note that photography and videotaping is prohibited during all scientific sessions.

Breaks

Please note that breakfast, lunch and coffee breaks will be served in the exhibition area.

Friday, May 12
Breakfast: 6.00–8.00 AM
Coffee break: 9.30–10.00 AM
Lunch: 11.30 AM–1.00 PM
Coffee break: 3.00-3.30 PM

Saturday, May 13
Breakfast: 6.00–8.00 AM
Coffee break: 9.45–10.15 AM
Lunch: 12.00–1.00 PM

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Please note the emergency exits and routines at the congress venue and hotels. Please do not leave valuables, including laptops, unattended at any time. Please do not leave sensitive information or congress material behind at the venues or in the hotel room. Please report any lost or stolen property to the registration desk, or to the evening event security staff.

Emergency

In case of emergency, please call 911 and immediately notify the nearest congress/event/hotel staff.

Tickets

If you are registered for the evening event, a symbol indicates this on your name badge. The name badge is also your ticket to the evening event at Coasterrra, so don't forget to bring it with you. For more info, please visit the registration desk.

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TARA AGHALOO

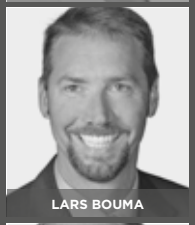

GUSTAVO AVILA-ORTIZ


DAVID BARACK


CHRISTOPHER A. BARWACZ


TORD BERGLUNDH


MICHAEL S. BLOCK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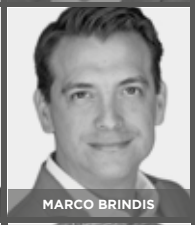
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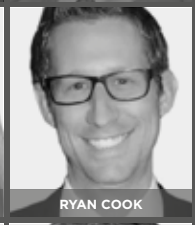
SUZANNE CAUDRY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LYNDON COOPER


LEE CULP


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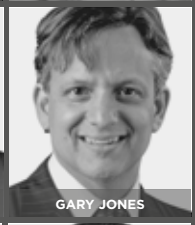
SAMEH EL-EBRASHI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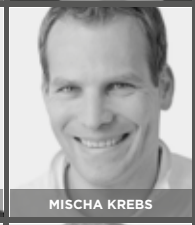
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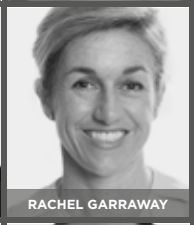
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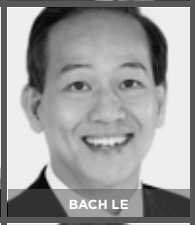
STEPHEN JACOBS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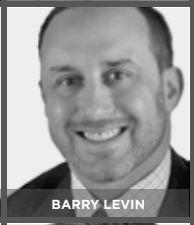
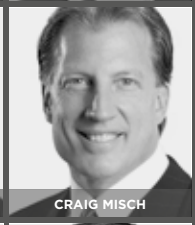

BARRY LEVIN


MARK LUDLOW


THOMAS MCGARRY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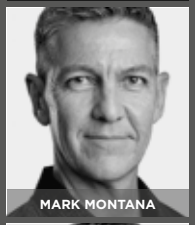
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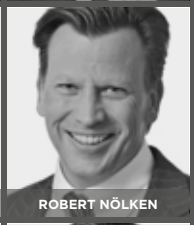
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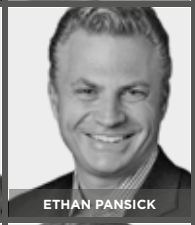
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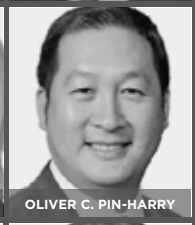
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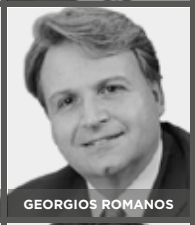
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SERGIO RUBINSTEIN


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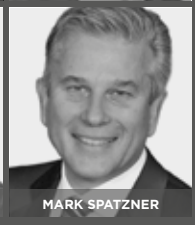
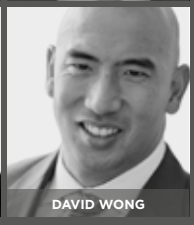
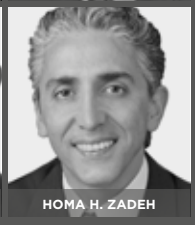
HAMID SHAFIE


MARK SPATZNER


CLARK STANFORD


DIETMAR WENG


DAVID WONG


HOMA H. ZADEH

Faculty

The World Summit Tour is proud to feature renowned international and regional speakers and moderators that are committed to the latest research, innovations and clinical data in their area of expertise.

Tara Aghaloo, *USA*
Gustavo Avila-Ortiz, *USA*
David Barack, *USA*
Christopher A. Barwacz, *USA*
Tord Berglundh, *Sweden*
Michael S. Block, *USA*
Lars Bouma, *USA*
Marco Brindis, *USA*
Bobby Butler, *USA*
Josh Campbell, *USA*
Suzanne Caudry, *Canada*
Ryan Cook, *USA*
Lyndon Cooper, *USA*
Lee Culp, *USA*
Ingeborg De Kok, *USA*
Sameh El-Ebrashi, *USA*
Robert Faulkner, *USA*
Barry Franzen, *USA*
Rachel Garraway, *Australia*
Barry Goldenberg, *USA*
David Guichet, *USA*
Christoph Hämmerle, *Switzerland*
Stephen Jacobs, *United Kingdom*
Gary Jones, *USA*
Mischa Krebs, *Germany*
Bach Le, *USA*
Barry Levin, *USA*
Mark Ludlow, *USA*
Thomas McGarry, *USA*
Craig Misch, *USA*
Mark Montana, *USA*
Michael R. Norton, *United Kingdom*
Robert Nölken, *Germany*
Ethan Pansick, *USA*
Jacinthe Paquette, *USA*
Oliver C. Pin-Harry, *Canada*
Jay Reznick, *USA*
Georgios Romanos, *USA*
Sergio Rubinstein, *USA*
Joseph Schmidt, *USA*
Hamid Shafie, *USA*
Mark Spatzner, *Canada*
Clark Stanford, *USA*
Dietmar Weng, *Germany*
David Wong, *USA*
Homa H. Zadeh, *USA*

Noteworthy

Abstract book

Pre-congress program and Faculty

David Barack
USA

Evolution of dental implant therapy—achieving superior functional and esthetic results with a sloped implant

David Barack *has been practicing periodontics since 1984. His research has been published in peer-reviewed dental journals and he lectures about periodontics and implant dentistry. One of Dr. Barack's priorities is staying abreast of the latest research and treatment modalities available in implant dentistry today.*

The success of an implant treatment is defined not only by function, but also by esthetics and the maintenance of peri-implant health. Much of this success is a function of how the surrounding hard and soft tissues are constructed and maintained following placement of the implant and the supported restoration. While a properly planned surgical approach is critical, the design of the implant design plays a critical role for achieving predictable results.

This program will focus on surgical and restorative protocols for implant placement in extraction and healed sites, utilizing an innovative-sloped implant design. The program will illustrate with science and clinical case presentations, the impact of design on esthetic outcomes along with the maintenance of form and function.

A table clinic will provide hands on experience with surgical and restorative components and protocols along with the use of PerioDerm as an enhancement to the soft tissue contour for maximum esthetic outcomes.

At the completion of this course, participants will be able to:

- Understand the different surgical and restorative approaches to healed and extraction sites when placing implants in the esthetic zone.
- Recognize the role of the OsseoSpeed Profile EV Implant and how it relates to longevity in successful implant therapy
- Understand the rationale for provisional and permanent prosthetic abutment selection.

Gustavo Avila-Ortiz
USA

Christopher A. Barwacz
USA

Photography and dentistry—a comprehensive workshop

Gustavo Avila-Ortiz *is an Associate Professor in the Department of Periodontics at the University of Iowa College of Dentistry. His clinical research is mainly focused on the understanding of the influence of local and systemic individual patient factors on healing dynamics following bone grafting, particularly in relation to therapeutic strategies for implant site development, such as alveolar ridge preservation and sinus floor elevation.*

Christopher A. Barwacz *is an Assistant Professor with a dual appointment in the Craniofacial Clinical Research Program (CCRP) and Department of Family Dentistry at the University of Iowa College of Dentistry & Dental Clinics. He currently maintains a faculty practice in restorative and implant dentistry in Iowa City, IA. His clinical research is mainly focused on understanding the influence that various implant transmucosal factors have in peri-implant mucosal outcomes and long-term stability, health, and esthetics.*

Over the past two decades, the advent and maturation of digital photography and its associated workflows has been widely adopted in dentistry. Digital photography provides clinicians with a unique and powerful tool that can rapidly aid in diagnosis and treatment planning, enhance patient and interdisciplinary communication, serve as a medico-legal record, and facilitate documentation for educational, scholarly or promotional uses. In order to maximize the benefits that digital photography can bring to one's practice, it is incumbent on the clinician to become proficient and comfortable with operating digital photographic equipment.
This course will provide a didactic, general overview of digital photography and its applications within dentistry for both surgical and prosthetic applications. Participants will also have the opportunity to practice with different patient photographic setups, retraction methods, and protocols for troubleshooting challenging clinical photographic scenarios.

Objectives:

- Understand principles of digital photography, contemporary equipment options, and the advantages that this tool can have in your practice's workflow.
- Discuss protocols for leveraging surgical and restorative digital documentation to facilitate improved interdisciplinary and patient communication, serve as a medico-legal record of treatment, and promotion of clinical achievements for educational, scholarly, or practice management purposes.
- Complete a hands-on workshop that will enable the participant to execute various clinical photographic protocols.

Josh Campbell
USA

Mark Ludlow
USA

Demystifying the fully digital implant patient

Josh Campbell *practices the full scope of Oral and Maxillofacial Surgery, however his main focus is on replacing teeth with dental implants. He enjoys using the best techniques and technology available to provide the best care for simple and complex challenges when replacing teeth. Simple and complex bone grafting and gum grafting are also areas of focus. He performs virtual surgery prior to most of the more complex procedures with CBCT and 3D modeling software.*

Mark Ludlow *is the Division Director of Implant Prosthodontics and Assistant Professor at the College of Dental Medicine at the Medical University of South Carolina. Dr. Ludlow has been involved in various research projects along with product development and alpha/beta testing and has lectured nationally on a variety of topics involving surgical implant placement and restoration, guided implant surgery, digital dentistry, and fixed prosthodontics. Dr. Ludlow's passion is in the development and integration of digital technology in the practice of everyday implant and restorative dentistry.*

As digital technology becomes more pervasive in everyday practice, there is an increased demand to apply it in ever more expanding clinical situations. This presentation will help demystify the full application of digital technology in the implant patient from initial diagnostics to the final restoration. This course will intermix didactic instruction and hands-on training as the digital workflow is presented in all phases of implant dentistry. Hands-on exercises will include treatment planning with computer-guided software, guided implant placement, intra-oral scanner use and final restoration design.

At the conclusion of this course, attendees will be able to understand:

- How to use and apply digital treatment protocols in in their practice.
- Digital technologies that enhance treatment outcomes and reduce chair time.
- Computer-guided implant treatment planning tools including realistic implants, measurements, localization of vital structures, collision detection, bone quality and many others.
- How to predictably implement and execute digital implant treatment plans in everyday clinical practice.

Hamid Shafie
USA

From what is expected to what is exceptional—the difference of legendary implant services in your office

Hamid Shafie *currently is the President of the American Institute of Implant Dentistry, a not for profit teaching institution, in Washington DC. He is the Director of Postdoctoral Implant Training at Washington Hospital Center Department of Oral and Maxillofacial Surgery. He lectures nationally and internationally about innovative aspects of implant dentistry and is renowned for his unique way of making implant dentistry fun to learn for both specialists and general dentists.*

We must regain prospective about the reality of today's dental implant market. Most clinicians today, including most implant practices, do not have a clinical competency problem. They have a communication and focus problem. While innovations in implant therapy, practice design and implementing different technologies will always be important, nothing comes closer than Quality of Patient Experience for increasing the case acceptance rate in an implant practice. You have to learn to "treat patients, not just replacing their missing teeth".

There is a big difference between treating a patient vs. replacing missing teeth. There's a huge gap here, and we can't expect dentists to learn how to provide legendary implant services in their offices 'on the go.' To address this issue, The American Institute of Implant Dentistry has teamed up with the Ritz Carlton Leadership Center. Together they customized the Ritz's unique and successful methodology and introduced the Legendary Implant Services concept. During this presentation, Dr. Shafie will preview the methodology and philosophy of engaging the entire team as crucial elements of creating a successful culture and an upscale implant practice.

David Wong
USA

Implant-related bone grafting for the management of everyday soft tissue defects

David Wong *is a board-certified Periodontist in private practice in Tulsa, Oklahoma. Dr. Wong received his undergraduate education and dental training at the University of Oklahoma. He then went on to complete a three year residency in periodontics at the University of Missouri-Kansas City. He is a Diplomate of the American Board of Periodontology as well as a Fellow in the International Congress of Oral Implantologists. He is a published author in several peer-reviewed dental journals but has also reached a mainstream audience in media such as Fox News and the Wall Street Journal.*

Studies have shown that tooth loss can lead to up to 40-60% bone loss in the first 1-3 years after extraction. This can negatively affect the outcome of implant and restorative dentistry. One of the most predictable ways to avoid this bone loss is by placing a socket graft. However, not all socket grafts are simple. This course will introduce socket grafts beyond simply "filling a hole with bone" and expand the clinician's knowledge into how to manage fenestrations and "blown-out" facial plates. An introduction into ridge augmentation procedures will also be presented along with how to manage failed implant "sockets".

While bone grafting is critical to the success of dental implants, soft tissue grafting is rapidly playing a larger role in restorative, esthetic, and reconstructive dentistry. While conventional grafting techniques had several limitations, newer grafting materials and techniques make it easier for patients to say "yes" to the treatment they truly need and desire. In this portion of the course, Dr. Wong will introduce these various techniques and materials using a combination of live surgery videos and case studies, with a hands-on exercise concluding the program. Soft tissue allografts are quickly becoming a "game-changer" in dentistry, making optimum dentistry more than an ideal... it's a reality.

At the conclusion of this course, attendees will be able to understand:

- The 3 types of sockets and the various ways which they are grafted.
- An introduction into guided bone regeneration (GBR) procedures.
- Techniques for root coverage and other oral plastic surgery procedures

Abstract book

Scientific program and Faculty

Tara Aghaloo
USA

Member of Scientific
Committee San Diego

Challenges and complications in grafting procedures

Tara Aghaloo *is Professor in Oral and Maxillofacial Surgery at the UCLA School of Dentistry. Her research areas of interest include basic bone regeneration, alveolar ridge augmentation, growth factors, and osteonecrosis of the jaws. Her clinical practice focuses on bone and soft tissue regeneration and dental implants.*

Dental implants are a known and predictable treatment option for missing teeth, where most patients today desire this therapy. Although implant survival is extremely high, these favorable outcomes depend greatly on proper case selection, careful diagnosis, comprehensive treatment planning, skillful execution of prosthodontic and surgical techniques, and proper implant maintenance. Hard and soft tissue grafting is often required to perform restoratively driven implant placement. However, challenges and complications with grafting are not uncommon, and often leave the patient and clinician with compromised results. This presentation presents less than ideal results after grafting and lack of implant maintenance.

Tord Berglundh
Sweden

Patient-centered outcomes—patient-reported and patient-based

Tord Berglundh *is Professor and Chairman at the Department of Periodontology, Sahlgrenska Academy, University of Gothenburg, Sweden. His research areas include etiology and pathogenesis, epidemiology and treatment of diseases in periodontal and peri-implant tissues. A particular focus is on peri-implantitis, combining research in experimental models, human biopsy material and large clinical trials.*

Patient-reported outcome measures (PROMs) are an essential part of assessments of treatment outcomes in implant dentistry. While information on the benefits of restorative therapy using dental implants may be underlined by PROMs, communication on treatment outcomes must also include results from clinical assessments presented on the patient level. Thus, patient-centered outcomes embrace both PROMs and patient-based clinical data. The presentation will address patient-centered outcomes from a nation-wide project on effectiveness of implant therapy in Sweden.

Michael S. Block
USA

Flangeless solutions for maxillary edentulous patients

Michael Block *is in Private Practice in Metairie, Louisiana. He was Professor in the Department of Oral & Maxillofacial Surgery at the LSU School of Dentistry. He continues to actively publish research findings and clinical methods, with over 200 publications including 5 books, recently the 4th edition of The Color Atlas of Dental Implant Surgery. He serves as Section Editor on Implants in the Journal of Oral & Maxillofacial Surgery, and is Chairman of the CCEPD Subcommittee on Dental Implant Conferences for AAOMS. Michael is particularly interested in the translation of technology for efficient and predictable reconstruction of the jaw to provide ideal bone for implant placement and esthetic replacement of missing teeth, the use of multiple techniques and implants to reconstruct significant atrophic conditions, and interceptive strategies for rehabilitating the patient with implant restorations.*

Patients who have lost teeth and have teeth in need of removal want to be restored with a natural appearing, functional, and long lasting set of teeth. The use of intraoral scanning, combined with guided surgery, can result in planned implant placement which allows for a prosthesis that meets these goals. This presentation will outline an algorithm which is practical and provides steps that reduces technology into all of our practices.

Lars Bouma
USA

End with excellence in mind—digital restorative for teeth and implants

Lars Bouma *is a Diplomate of the American Board of Prosthodontics, a Fellow of the ACP, holds an academic appointment at the Oklahoma University College of Dentistry and is an active teacher, lectures nationally and is on the Board of Directors of the American College of Prosthodontists. He maintains a private practice limited to prosthodontics and implant dentistry in Oklahoma.*

With Digital Dentistry we can start, finish or intervene with Contemporary Dentistry at any time. We can see and morph the restoration before final production and this media allows us to print or mill the restoration in acrylic or wax so that it can be bifunctionally altered and modified prior to completion. The world of CAD/CAM design is extremely robust presenting diversified solutions and this presentation will focus on the design and production of simple to complex restorations of tooth and implant borne foundations.

Marco Brindis
USA

Why I no longer use fixed detachable screw-retained full arch prostheses

Marco Brindis *is the Interim Chairman of the Prosthodontics Department of Louisiana State University, where he also maintains an intramural restorative practice devoted to esthetics and implants with an interdisciplinary approach. He did a Preceptorship in Dental Implants at the Dental School at the UT Health Science Center in San Antonio in 2002. He got his Certificate in Prosthodontics at LSU School of Dentistry in the Department of Prosthodontics in 2007. He is a member of several organizations including the Academy of Osseointegration, American College of Prosthodontist, the Pierre Fauchard Academy and the American Academy of Restorative Dentistry.*

The *"fixed detachable screw-retained full arch prostheses"* has been a breakthrough in implant dentistry for over 15 years. This popular prosthesis like any other dental procedure has its limitations and complications. One of the main disadvantages of this type of prosthesis is its inability to be removed by patients. This leads to complications with hygiene and maintainability. The introduction of a "telescopic fixed detachable friction-retained full arch prosthesis" largely addresses these concerns while keeping the same desirable features of the previous generation of hybrid dentures.

Bobby Butler
USA

Moderator

Creating a sound biological foundation

Bobby Butler *practiced periodontics and implant dentistry in Seattle for 21 years. Prior to this he served 4 years in the United States Navy Dental Corps. He now practices in Rancho Mirage, California. His practice philosophy reflects his emphasis on cosmetic microsurgery techniques, regenerative periodontal therapy, and implant esthetics. He obtained his Doctor of Dental Surgery from the University of Oklahoma and his residency in Periodontology from the University of Florida.*

Suzanne Caudry
Canada

Adaptive treatment planning to reduce implant complications

Suzanne Caudry *is an Associate in Dentistry in the department of Periodontics at the University of Toronto and a lecturer and clinical instructor in the Graduate Periodontal program. She is an internationally recognized speaker who focuses her lectures on evidence-based implant treatment. She maintains a private specialty practice in Toronto, Canada, where her passion is implant surgery, periodontics, and sedation.*

A wide variety of conditions affect implant outcomes. Taking these into consideration, implant complications can be minimized with diligent treatment planning. Scientific evidence is constantly changing, and the development of fluid check lists that evolve and adapt to unique patient conditions is essential. This presentation will focus on the critical thinking required for developing sophisticated and stringent treatment planning methods to increase success.

Ryan Cook
USA

Assimilation of anterior implant esthetics and digital dentistry

Ryan Cook *currently serves as the Graduate Prosthodontics Program Director at the University of North Carolina, Chapel Hill. He is one of only four individuals in the US that is board certified in both Periodontics and Prosthodontics. He strongly believes in evidence-based dentistry as it allows him to give his patients the highest quality of care.*

Comprehensive diagnosis and treatment planning is paramount in achieving optimal esthetic outcomes in anterior implants restorations. Digital dentistry has enhanced a clinician's ability to formulate a thorough treatment plan and execute the proposed treatment with a high degree of accuracy. Incorporating digital dentistry allows clinicians to optimize soft tissue contours at the perio-restorative interface. This presentation discusses and demonstrates how digital dentistry enhances surgical implant placement, soft tissue management and fabrication of implant restorations in an organized fashion that allows for easy assimilation into private practice.

Lyndon Cooper

USA

Member of Scientific Committee San Diego

Lyndon Cooper *is the Associate Dean for Research, and Head of the department of Oral Biology at the University of Illinois at Chicago (UIC). His research areas deal with osteoblast immune system interactions, and dental implant therapy. His passion is to work in multidisciplinary teams and the mentorships of students and young faculty.*

Teeth for a lifetime

In an era where so much attention is placed on immediate therapies in implant dentistry and product innovation is so rapid, there is little time to step back and ask “what about our future?” Is it possible to provide implant supported “teeth for a lifetime”? This presentation will examine the current knowledge regarding longer term dental implant therapeutic outcomes and suggest emerging challenges and some key opportunities to address improvements in the longevity of implant treatment. Today, in the 4th decade of experience with endosseous dental implant therapy, we acknowledge this responsibility of providing implant-supported “teeth for a lifetime”.

The power of precision—discovering new success in implant dentistry

As dentistry quickly evolves into the digital world, the successful incorporation of computerization and new technologies will provide more efficient and precise methods of communication, diagnosis/treatment planning and fabrication of the final prosthesis and this is today evident in new workflows that simplify complex dental implant therapies. These new newfound precise processes benefit the entire therapeutic team and they are realities that are currently being released to further revolutionize the quality of dental care that is being delivered in contemporary implant therapy.

Lee Culp

USA

The power of precision—discovering new success in implant dentistry

Lee Culp *is a Certified Dental Technician and the CEO of Sculpture Studios, a dental laboratory, education, research and product development center, for new and innovative digital dental technologies, and their applied applications to diagnostic, restorative and surgical dentistry. He is a leading resource/inventor for many of the materials, products, and techniques used in dentistry today, and holds numerous patents for his ideas and products. Lee writes many articles per year, and his writing, photography, and teaching style have brought him international recognition, as one of today’s most exciting lecturers and innovative artisans in the specialty of digital dentistry, dental ceramics and functional esthetics.*

As dentistry quickly evolves into the digital world, the successful incorporation of computerization and new technologies will provide more efficient and precise methods of communication, diagnosis/treatment planning and fabrication of the final prosthesis and this is today evident in new workflows that simplify complex dental implant therapies. These new newfound precise processes benefit the entire therapeutic team and they are realities that are currently being released to further revolutionize the quality of dental care that is being delivered in contemporary implant therapy.

Ingeborg De Kok
USA

Supporting your vision—the digital abutment design

Ingeborg De Kok *is an Associate Professor at the Department of Prosthodontics, University of North Carolina. Her major research interests include dental implants complications, patient outcomes with dental implant therapy, and epigenetic changes around peri-implantitis.*

CAD/CAM dental implant restorations, supported by patient specific CAD/CAM processed abutments, have transformed the way we approach restorative treatment for our patients. This presentation will focus on the digital integration of the abutment solution and how this technology provides a workflow to properly restore dental implants starting from the planning stage.

Sameh El-Ebrashi
USA

Screw- vs cement-retention in clinical practice

Sameh El-Ebrashi *is a Prosthodontist in Portland, OR, USA. He is part of a multidisciplinary group treating a complex cohort of patients using an immediate implant placement and immediate temporization approach whenever possible. He is dedicated to serving his patients with clinical excellence, humility, and empathy.*

This lecture will focus on the basics of screw vs cement retention using the best available evidence to discuss the pros and cons of each approach. It will conclude with evidence - based clinical recommendations regarding each approach, and when to use cement retention vs screw retention. At the conclusion of the lecture participants will be able to:

- Understand the relationship between excess cement and bone loss
- Comprehend why implants are vulnerable to cement-induced bone loss
- Correctly design abutments and crowns with cement removal in mind
- Select appropriate cements, and application methods to minimize problems
- Successfully use both techniques in daily clinical practice

Robert Faulkner
USA

Building a referral based practice with dental implants—a Prosthodontist's perspective

Robert Faulkner *graduated from The Ohio State University in 1980. Following a one year hospital residency, he practiced general dentistry in northwest Ohio until 1990, when he returned to an advanced graduate residency program in prosthodontics at the U.C.L.A. School of Dentistry. Dr. Faulkner received his certificate in prosthodontics in 1992 as well as a certificate in maxillofacial prosthetics in 1993. In addition, he received full training through the U.C.L.A. Implant Center during his three year residency training programs. Dr. Faulkner resides in Cincinnati, Ohio where he maintains a private practice limited to fixed and removable prosthodontics, maxillofacial prosthetics, and implant prosthodontics.*

This presentation will investigate the dilemma of whether a prosthodontist can provide implant surgery to his patient base without affecting his referral sources. We will also discuss how to build a referral based practice when the restorative dentist does not wish to place dental implants. The benefits (and risks) of both choices will be explored.

Barry Franzen
USA

Moderator

Life restored—solutions for the fully edentulous patient

Barry Franzen *is a member of the American College of Prosthodontics, the Academy of Osseointegration, the Academy of Osseointegration Newsletter Editorial Committee, the 2014 AO Annual Meeting Planning Commitee and a Fellow member in the International Congress of Oral Implantologists. He maintains a private practice in Milwaukee, Wisconsin, which includes all phases of prosthodontics and Implant restorative dentistry as a primary focus.*

Rachel Garraway
Australia

Biological complications—minimizing the risks

Rachel Garraway *is a specialist Periodontist in private practice in Brisbane, Australia. She is particularly interested in the biological complications associated with implant therapy. Rachel is the current president of the Australian and New Zealand Academy of Periodontists.*

While dental implants enjoy high success rates, biological complications can result in failure. Is this the fault of the implant, the patient or the clinician? What strategies can we adopt in clinical practice to reduce the risk of biological complications.

Barry Goldenberg
USA
Member of Scientific Committee San Diego

Options for the complete arch rehabilitation with implants implants—prosthodontic and biomechanical principles

Barry Goldenberg *explores computer utilization in the diagnosis and treatment planning for implant dentistry during his lectures. He is a member of the American College of Prosthodontists, the ADA and the Academy of Osseointegration. He is also a fellow in the ICOI and a Master in the IPS section of the ICOI. Dr. Goldenberg has been restoring implants since 1986 in his St. Louis County private practice, which is limited to Prosthodontics and Implant Reconstruction.*

Restoring the edentulous arch presents many options. Conditions for each patient treatment depend on a variety of different factors. This presentation will help clinicians and their laboratory partners gain understanding and confidence in recognizing and restoring these patients. An overview of restorative procedures will be given so that the team will be able to decide on the appropriate solution for achieving optimal results for each individual.

David Guichet
USA

Moderator

Digital blueprint—beginning from the end

David Guichet *is a Diplomate of the American Board of Prosthodontics and Program Chair for the Pacific Coast Society for Prosthodontics. He is the Director of Continuing Professional Education for the American College of Prosthodontics. He maintains a prosthodontic practice in Orange, California, where he has developed and installed a comprehensive digital clinical records process.*

Christoph Hämmerle
Switzerland

Digital implant dentistry—present and future

Christoph Hämmerle's *clinical and research focus is on the comprehensive treatment of complex, partially edentulous patients applying all available options of reconstructive dentistry including implants. He has published numerous scientific articles and has lectured widely internationally on implant dentistry.*

For optimal functional and esthetic outcomes initial diagnosis and treatment planning are mandatory. For this purpose patient data are captured including intra- and extra-oral scans as well as 3-D radiographs. Computer aided planning software allows optimal placement of the implants. Thereafter, the digital data obtained are transferred into modern industrialized processes for manufacturing of the final prosthetic reconstruction.

Stephen Jacobs
United Kingdom

Full-arch fixed treatment option utilizing tilted implants

Stephen L Jacobs *is in private practice in Glasgow, United Kingdom. He is a Past President of the Association of Dental Implantology (UK), a Fellow of the Academy of Osseointegration and the Chair of the AO Global Program Development Committee. His special interests are implant stability and immediate loading, from single units to full arch restorations.*

This session will provide an overview on full-arch fixed cases utilizing tilted implants to provide a more optimal dental arch in cases of limited bone height. Patient evaluation, work-up, surgical procedure, conversion to all-acrylic fixed provisional and options for final restorations will be addressed. An emphasis will be placed on the relationship and communication between the surgeon, restorative doctor and laboratory technician.

Gary Jones
USA

Gary Jones *was the staff surgeon at Womack Army Medical Center and received the Meritorious Service Medal. He is the Founder and Director of the Fayetteville Implant Dentistry Study Club and the Central Carolina Dental Continuum. He is also an Adjunct Assistant Professor at VCU School of Dentistry. Dr. Jones has been in private practice in North Carolina for the last 15 years with a primary focus on jaw reconstructive surgery and dental implant placement.*

Marketing strategies for the implant specialist

With increasing competition in the dental marketplace, specialists may find themselves marketing to the general public. Creating a comprehensive integrated marketing program is essential for a good return on your investment. This presentation will focus on the online component of a marketing program.

Full-arch fixed treatment option utilizing tilted implants

This session will provide an overview on full-arch fixed cases utilizing tilted implants to provide a more optimal dental arch in cases of limited bone height. Patient evaluation, work-up, surgical procedure, conversion to all-acrylic fixed provisional and options for final restorations will be addressed. An emphasis will be placed on the relationship and communication between the surgeon, restorative doctor and laboratory technician.

Mischa Krebs
Germany

Absolute precision—a prerequisite for single visit reconstructions and outstanding clinical success

Mischa Krebs *is assistant professor in the department of oral surgery and implant dentistry of the Goethe University, Frankfurt, Germany and private practitioner. His research focuses on clinical trials and new digital technologies. His passion is to improve clinical results and patient comfort with new digital workflows.*

Minimal invasive, safe, time and cost effective treatment concepts that is what our patients dreamed of concerning reconstructions of missing teeth with dental implants.
Thanks to the amazing possible precision of full digital workflows in planning and in guided surgery we have for the very first time in surgery the possibilities to fulfil these dreams. The precise transfer of a virtually planned surgery into the patient allows for prefabrications of patient individual abutments and provisional single-tooth reconstructions. Besides 3D-imaging and planning can help to avoid grafting and reduce patient morbidity. Additionally these concepts are followed by an amazing soft-tissue response which leads to outstanding clinical results - clinical success.

Bach Le
USA

The use of tenting screws for alveolar reconstruction

Bach Le *is a Clinical Associate Professor at the Herman Ostrow School of Dentistry. He Holds a Fellowship at the American and International College of Dentists. He Is a Diplomate of the American Dental Society of Anesthesiologist and the International Congress of Oral Implantologists. He holds a Fellowship at the American and is a Diplomate at the international Associations of Oral and Maxillofacial Surgeons. He is a main podium speaker at numerous national organizations. Dr. Le maintains a private practice in Whittier, CA.*

The use of titanium screws and biomaterial for tenting of the periosteum and soft tissue matrix can assist in maintaining space and reducing resorption of augmented sites. The use of this “screw tent-pole” technique with biomaterial offers predictable functional and esthetic reconstruction of localized alveolar defects without the use of autogenous bone. This lecture will focus on the principles of guided bone regeneration with tenting screws to improve long-term clinical success with dental implants.

Barry Levin
USA

Complications related to immediate implant surgery—short- and long-term results affected by surgical technique

Barry Levin *is a Diplomate of the American Board of Periodontology and a Clinical Associate Professor of Periodontology at the University of Pennsylvania. He maintains a private specialty practice in Jenkintown, PA. His clinical research and writings focus on new and novel methods of tissue regeneration and immediate implant placement.*

The manner in which immediate implants are placed can have devastating biologic and esthetic complications. Proper maintenance/augmentation of hard and soft tissues preserves esthetics. Excessively high insertion torque as a prerequisite for success is controversial. An investigator initiated study (IIS) published in Int J Perio Restorative Dent will be presented which questions the necessity of high ITV to achieve predictable outcomes.

Mark Ludlow
USA

Why digital? Why now?

Mark Ludlow *is the Division Director of Implant Prosthodontics and Assistant Professor at the College of Dental Medicine at the Medical University of South Carolina. Dr. Ludlow has been involved in various research projects along with product development and alpha/beta testing and has lectured nationally on a variety of topics involving surgical implant placement and restoration, guided implant surgery, digital dentistry, and fixed prosthodontics. Dr. Ludlow's passion is in the development and integration of digital technology in the practice of everyday implant and restorative dentistry.*

Digital technology is becoming ever more pervasive in implant dentistry and has limitless possibilities to better our practices and our patient's lives. Come explore how to take your implant practice into not only the cutting edge present, but the future. There is no better time than now to learn, utilize, and benefit from the application of digital implant technology.

Thomas McGarry
USA

Moderator

Practice success with the patient in focus

Thomas McGarry *has led innovative changes in the specialty of Prosthodontics throughout his career such as the Classification of Prosthodontic Diagnosis (PDI), Parameters of Care, development of the current definition of the specialty of Prosthodontics and American College of Prosthodontists Education Foundation New Vision Capital Campaigns.*

He maintains a full time specialty prosthodontic practice, directs an implant teaching center, MII, and is currently an examining member of the American Board of Prosthodontics. Development of catalytic initiatives that create profound change has been his life-long goal.

Craig Misch
USA
Member of Scientific Committee San Diego

The use of biomaterials for precision in hard and soft tissue management

Craig Misch *is a dual specialist in oral and maxillofacial surgery and prosthodontics in Sarasota, Florida. His practice Misch Implant Dentistry focuses on implant replacement therapy. He has published and lectures extensively on bone augmentation for dental implants. He is actively involved in clinical research and has faculty appointments at several dental schools.*

There are several techniques and materials available for implant site development. The choice may depend on a number of factors including size of the defect, osseous morphology, costs and surgeon or patient preferences. The trend today is to reduce patient morbidity but still provide predictable outcomes. This lecture will discuss contemporary approaches to hard and soft tissue management for implant replacement.

Mark Montana
USA

The limitations of applied restorative concepts for edentulous implant patients

Mark Montana *is certified in Advanced Prosthodontics, is a member of the American College of Prosthodontists, the Academy of Osseointegration and Fixed Prosthodontics, the Pacific Coast Society for Prosthodontics and the American and Arizona Dental Associations. He is a pre-clinical and clinical instructor at the Arizona School of Dentistry and has lectured on implant, fixed and removable prosthodontics. He emphases fixed, removable and implant prosthodontics at private practice in Tempe, AZ.*

Accepted implant restorations for edentulous patients are generalized as fixed and removable concepts. Overlap between these applications often results in functional, esthetic and hygienic compromises. This presentation exposes the limitations in current restorative design and suggests a resolution is available.

Michael R. Norton
United Kingdom

Moderator Inspiration TALKS—Precision speaks for itself

Evolution of an implant system—a better understanding of primary stability

Michael R. Norton *is an oral surgeon in specialist practice in London and is Adjunct Clinical Professor at the University of Pennsylvania Dental School. He is President Elect of the Academy of Osseointegration (AO) and Past President of the Association of Dental Implantology (ADI), UK. His specialist interests include implant design and immediate loading protocols.*

Primary stability is not about rotational friction but much more important is axial stability. This lecture will present the Astra Tech Implant System EV which has been developed to maximise axial stability utilising the stepped drilling approach to ensure that the implant attains a high initial ISQ. With optional drilling protocols it is possible at the same time to reduce critical pressure to the bone.

Robert Nölken
Germany

Enhanced tissue support in extraction sockets and sloped ridges—grafting or guidance?

Robert Nölken *is an oral surgeon in private practice in Lindau/Lake Constance and Master of Science in periodontology and implant dentistry. Additionally Dr. Noelken serves as senior physician and researcher at the Department of Oral and Maxillofacial Surgery of the University Medicine of Mainz in Germany.*
His research area deals with innovative implant designs and immediate insertion protocols in the esthetic zone as well as in posterior regions. His passion is to work minimal-invasive under the view of an operation microscope and to improve the esthetic outcome while reducing treatment time and trauma for the patient.

The main objective in modern implant therapy is to maintain and support the peri-implant osseous and soft tissue structures in combination with long-term osseointegration with an esthetic and natural looking peri-implant mucosa. With increasing demands of faster and less invasive protocols immediate loading and immediate implant placement are more in use. This session will present strategies for achieving enhanced soft tissue support on sloped ridges and extraction sockets using a sloped implant design. Long-term results from prospective studies will be presented.

Ethan Pansick
USA

Simplifying complex restorative situations with CAD/CAM abutments

Ethan Pansick *realized that the intricacies of complex oral rehabilitation demanded further training so with an Advanced Education in General Dentistry from Columbia-Presbyterian Medical Center, he completed the University of Michigan's specialty program in Prosthodontics, receiving a certificate and Master of Science degree in Prosthodontics. He has been in private practice in Delray Beach, Florida, since 1995.*

While the advent of digital treatment planning has simplified and idealized dental implant placement, there are many clinical situations where implant positions can present challenges to the restorative dentist. Atlantis CAD/CAM abutments can be utilized to simplify the restoration of these implants while maintaining ideal soft tissue contours, esthetics, and controlling the location of the prosthetic finish line. This presentation will demonstrate the use of the Atlantis Abutment in both simple and complex conditions.

Jacinthe Paquette
USA

Moderator

Individualized protocols for patient-centered outcomes

Jacinthe Paquette *is a prosthodontist in private practice in Newport Beach, California. She is immediate past president of the Pacific Coast Society for Prosthodontics and is currently serving as the president-elect of the American Academy of Esthetic Dentistry and serves on the Editorial Council of the Journal of Prosthetic Dentistry. She has made numerous contributions in the dental literature on the subject of esthetic and implant rehabilitation.*

Oliver Pin-Harry
Canada

Emulating the natural dentition—an elusive quest?

Oliver Pin-Harry *is a Diplomate of the American Board of Prosthodontics as well as Fellow & Examiner of the Royal College of Dentists of Canada. He is the founder and owner of Burlington Prosthodontics, a referral based clinic where he dedicates himself to Dental Implants and Prosthodontics. He is a regularly invited speaker to national and international meetings on implant and esthetic dentistry.*

The ultimate goal in implant therapy, and probably an elusive quest, is to emulate the healthy natural dentition, which remains the “gold standard” when measuring function and aesthetics. In spite of tremendous advances in evidence-based treatment protocols and technology, we are still confronted with tough challenges without ideal solutions.
An enriched clinical format of treated cases will be presented to provide an overview of contemporary implant reconstructive modalities while recognizing challenges encountered.

Jay Reznick
USA

CBCT-CAD/CAM integration—the blueprint for dental implant success

Jay Reznick *is the Director of the Southern California Center for Oral and Facial Surgery in Tarzana, California. He has extensive clinical expertise in the areas of facial trauma, jaw and oral pathology, dental implantology, sleep disorders medicine, laser surgery, and jaw deformities. He was an early practitioner in the integration of digital photography and 3D imaging in clinical practice.*

The integration of CAD/CAM technology with cone beam CT imaging has solidified the concept of Restoratively-Driven dental implant planning and surgery in clinical practice and we have got tools that aid in the collaborative effort between the surgical and restorative specialist. We can now accomplish comprehensive treatment planning to maximize function and esthetics by considering, before surgery, all the variables that will affect dental reconstruction with implant-supported prostheses. We place dental implants to replace missing teeth, and now we can truly plan treatment with the end result in mind.

Georgios Romanos
USA
Member of Scientific Committee San Diego

Immediate loading and grafting—do they connect?

Georgios Romanos *is Professor of Periodontology at the Stony Brook University, NY and Professor of Oral Surgery and Implant Dentistry at the Univ. of Frankfurt, Germany. His research focus is on immediate loading of dental implants, treatment concepts for crestal bone stability, periimplantitis therapy, soft tissue management around teeth and lasers in dentistry. He has published extensively and lectured in more than 40 countries on Implant Dentistry.*

The purpose of this lecture is to present the requirements for immediate loading in conjunction with bone grafting techniques and to present long term data for such clinical protocols. Effects of loading forces in various clinical protocols will illustrate the response of the bone at the bone-implant interface.

Sergio Rubinstein
USA

Management of esthetic dilemmas—how to achieve outstanding results

Sergio Rubinstein *was selected as the only Prosthodontic resident in a specialty program in Periodontal Prosthesis at the University of Illinois College of Dentistry. He enjoys the challenges, management and simplification of complex multidisciplinary cases, especially when it relates to aesthetics, implants, function and minimally invasive Dentistry.*

Complex cases must be accurately diagnosed followed by a detailed treatment plan and meticulous execution. To achieve the desired goals one must recognize implant design and the implications of proper soft-hard tissue management. This frame is crucial in order to obtain the most favorable esthetic and healthy outcomes. Understanding the prosthetic alternatives in addition to excellent communication among the entire team is imperative. Lecture objectives: Upon completion of this presentation participants should be able to:

- Understand the cross-disciplinary diagnosis and treatment planning as an essential key for optimal results.
- Comprehend the different implant and prosthetic designs to achieve the desired results.
- Realize the complexity of restoring a single tooth.

Joseph Schmidt
USA

Moderator

The reality of complications

Joseph Schmidt *received his D.D.S. from Marquette University and has been in private practice for over twenty years with a focus on dental implants. Dr. Schmidt is a member of numerous dental associations and enjoys lecturing on dental implants with an emphasis on reconstruction with osseointegrated implants.*

Mark Spatzner
Canada

Implant design—adaptation to natural anatomy

Mark Spatzner *has been on the forefront of Periodontics and Implant Therapy since 1987 in his Montreal based practice. He has been using the Astra Tech Implant System since 1991 and was the first to use the system in Canada. He has dedicated much of his time to advanced education in the field of Implant and regenerative science and has published and lectured worldwide. Dr. Spatzner can guide you through the evolution of the Astra Tech system from its origins to its current state.*

This presentation will address the challenge of implant placement in edentulous spaces that are not ideally suited for a standard cylindrical implant fixture. Tooth extraction and ensuing bone resorption often leave the clinician with a residual ridge that may require osseous augmentation to adapt to a standard shaped cylinder. However, a sloped implant fixture is now available and is designed to adapt to the compromised anatomy, *engaging 100% of the implant in bone* without the need for bone augmentation. We now have an implant that adapts to nature in all its forms. The clinical versatility *and success* of this product will be the focus of this presentation.

Clark Stanford
USA

Moderator Opening–Partnering for health and well-being

Moderator Closing–Outlook on a bright future

Implant dentistry—where are we and where do we need to go?

Clark Stanford *is the Dean at the University of Illinois at Chicago (UIC), College of Dentistry and UIC Distinguished Professor. His research areas deal with osteoblastic gene expression, signally pathways, medical device designs and human clinical trials. His passion is to work with talented interdisciplinary investigators and clinicians to develop innovative approaches to improve patient care.*

The science and clinical application of implant dentistry is changing oral health care for our patients. While we are seeing some issues with long-term outcomes, especially as our patients are aging, we are able to provide solutions. We know that through application of robust designs, careful patient assessment and rehabilitation followed by careful, patient-oriented maintenance programs, we create a sustainable, high quality therapy for our patients.

Dietmar Weng
Germany

Key factors of design-induced periimplant bone loss—the TissueCare concept revisited

Dietmar Weng *runs a private practice in Starnberg, Germany, with special focus on esthetic implant dentistry, prosthodontics and periodontics. He is a Guest Lecturer at the University of Kiel, where he has received his Ph.D., and Vice President of the German Society of Dental, Oral and Craniomandibular Sciences which issues national treatment guidelines for dentistry. Implant-abutment connections and their biologic responses are one of his favorite research fields.*

Periimplant bone loss can be triggered by a variety of causes. Once the bone has disappeared, it will be difficult to achieve bone regeneration or even reosseointegration. It is our task as clinicians to know and control as many of these factors as possible. This presentation will focus on bone-resorbing factors induced by the implant design and describe pathways and solutions to control them.

David Wong
USA

Hopeless teeth, hopeless ridges, and hopeless implants—case reviews of various biomaterials for successful treatment

David Wong *is a board-certified Periodontist in private practice in Tulsa, Oklahoma.*
Dr. Wong received his undergraduate education and dental training at the University of Oklahoma. He then went on to complete a three year residency in periodontics at the University of Missouri-Kansas City. He is a Diplomate of the American Board of Periodontology as well as a Fellow in the International Congress of Oral Implantologiests. He is a published author in several peer-reviewed dental journals but has also reached a mainstream audience in media such as Fox News and the Wall Street Journal.

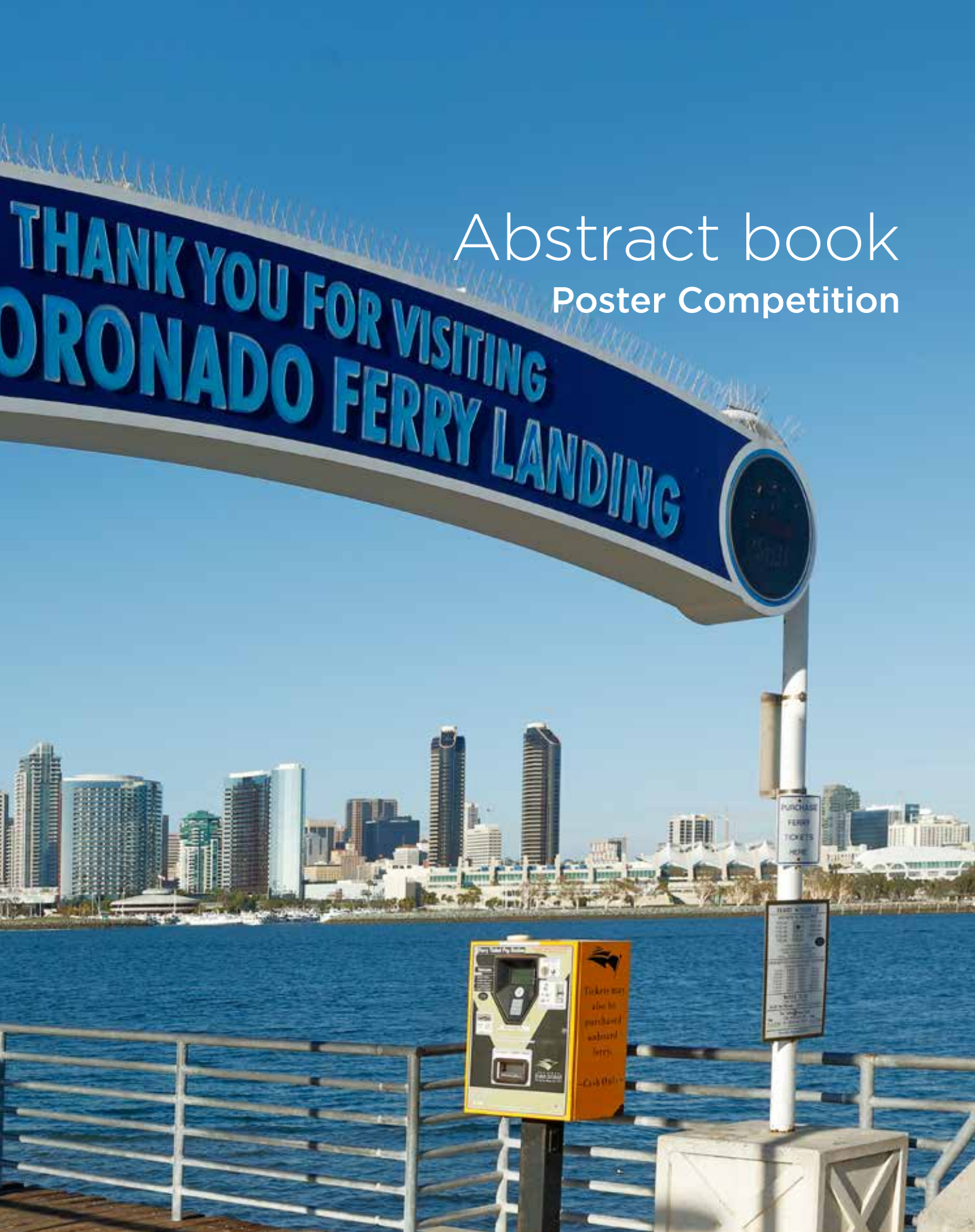
Numerous treatment options exist for hard and soft tissue grafting implant cases involving hopeless teeth, ridges, or implants. In the absence of adequate host tissues, the use of biomaterials may be necessary. This presentation is a summary of multiple cases outlining various materials and their appropriate indications.

Homa H. Zadeh
USA
Member of Scientific Committee San Diego

Minimally invasive implant surgery—can bone augmentation be avoided by short or sloped implants?

Homa H. Zadeh *is a tenured Associate Professor and the director of the post-doctoral periodontology program at the University of Southern California (USC), Herman Ostrow School of Dentistry and a diplomate of the American Board of Periodontology. Dr. Zadeh's clinical and research expertise focus on tissue engineering of bone and soft tissues, as well as minimally invasive implant therapy protocols to avoid augmentation.*

Post-extraction atrophy of the alveolar bone leads to loss of alveolar bone height, width and sloped ridge crest. An array of therapeutic options is available for managing these scenarios, including ridge augmentation, sinus augmentation in the maxilla, nerve repositioning in the mandible and tilted implants. Short or narrow implants have been systematically evaluated as minimally invasive alternatives to bone augmentation in sites with vertical or horizontal alveolar ridge atrophy with favorable clinical outcomes. Sloped implants may also be applied for situations with sloped crest or for immediate placement into sockets with scalloped bone. Decision making for selection of appropriate therapeutic modality for sites with alveolar ridge atrophy has to consider biomechanical, surgical, prosthetic and esthetic considerations.



Abstract book

Poster Competition

USA-001

CAD-CAM implant abutments: Peri-implant hard and soft tissue responses after a follow-up of 4 years

Diego Lops

Background: The aim of the present study was to evaluate the prognosis of CAD-CAM implant abutments and the respective peri-implant soft tissues response.

Material and Methods: The clinical trial was designed as a multicenter study. Adults in need of one or more implants replacing teeth to be removed in the maxilla and mandible within the premolar region were recruited. Only implants restored by means of CAD-CAM abutments were selected. Zirconia, Titanium and Gold-Hue titanium abutments were included. Fixed single crowns (117) and partial dentures (102) were fabricated. Each patient was followed for 2 years at least after the definitive prosthesis installation. Clinical (PI, Plaque index, BoP, bleeding on Probing Index, and Papilla Index) and radiographical (MBL, Marginal Bone Level) parameters were assessed at the yearly follow-up visit. Moreover, prosthetic complications were recorded. Statistical analysis was used to compare any difference in biological and radiographical parameters between different CAD-CAM abutments. Descriptive statistics were used to analyze the changes over time of clinical and radiographical parameters from baseline to the last follow-up.

Results: A total of 123 patients were included into the measurements sample. 54 implants supporting ZZ zirconia, 178 titanium and 59 Gold-Hue titanium abutments completed the follow-up examination. No implant, reconstruction, and abutment failure were recorded: therefore, the prosthetic survival after 4-years of function was 100% for all the abutments and restorations. No significant differences in biological and radiographical indexes were found between different abutments when compared each other and from baseline to the last follow-up examination.

Discussion and/or Conclusion: The short-term survival of CAD-CAM abutments was reliable no matter of the material used for the manufacturing. Nevertheless, long-term evaluations are needed to confirm this finding.

USA-002

Peri-implant mucosa dynamics around divergent and concave Atlantis Abutment transition profiles

Madeline Swenson, Christopher Barwacz, Gustavo Avila-Ortiz, Deborah Dawson, Keyla Pagan-Rivera

Background: An implant abutment serves as a transitional prosthetic component, traversing the soft tissues and affecting the peri-implant mucosal architecture. The objective of this study was to compare the influence of two different Atlantis® abutment facial transition zone morphologies on mid-facial soft tissue dynamics associated with maxillary anterior single-tooth implant restorations one year after abutment connection.

Material and Methods: Of 56 subjects in the study population, 29 who have completed the one-year follow-up were included in this report. Subjects were randomized to receive either a "divergent" or "concave" abutment transition profile design for their screw-retained implant-supported restoration. A standardized digital stereotactic photography device that orients the patient in a repeatable position was used to record mid-facial soft tissue dynamics at the time of abutment delivery, and at 1, 3, 6, and 12 months thereafter. One calibrated, blinded examiner measured changes in the apico-coronal dimension of the peri-implant mucosal zenith on clinical photographs using ImageJ software. Intraclass correlation was used to assess intra-rater reliability. Signed Rank, Wilcoxon-Mann-Whitney, and Kruskal-Wallis statistical analyses were performed.

Results: There was a significant increase in mid-facial mucosal height at 12 months in both the concave (mean=0.32mm; p=0.0067) and divergent (mean=0.34mm; p=0.0085) abutment groups. The difference between the two groups was not statistically significant (p=0.71). Tissue phenotype was considered; however, the difference in mid-facial mucosal height at 12 months between subgroups defined as "thick" versus "thin" tissue phenotype was not statistically significant (p>0.50).

Discussion and/or Conclusion: A significant gain in the apico-coronal dimension of the mid-facial peri-implant mucosa was observed in both groups with no statistically significant differences between groups at one year post-functional loading. Therefore, it seems that mid-facial abutment morphology does not play a crucial role in the position of the buccal gingival zenith in this subset of our study cohort.

Treatment (Abutment Type)	Tissue Phenotype			Descriptive statistics for change in mid-facial mucosal zenith level at 12-month recall (mm)						
	Thick	Thin	TOTAL	Mean	SD	Minimum	Lower Quartile	Median	Upper Quartile	Maximum
Concave	10	5	15	-0.32	0.38	-1.06	-0.63	-0.25	-0.07	0.32
Divergent	6	8	14	-0.34	0.36	-0.81	-0.58	-0.42	-0.17	0.47
TOTAL	16	13	29							

USA-003

Evaluating temperature differences resulting from osteotomies performed using a digitally designed surgical guide with a modified access point for irrigation

Sausha Toghranegar

Background: To maintain accuracy of digitally planned surgical guides, the space between the components of the guide and the drills are designed to match as much as feasible. This allows for minimal deviation of the drill. Some concerns have been expressed as to whether these irrigation and temperature control of the osteotomy could be hampered by using a guide. Applying a hole on the stent may allow for irrigation to directly access the drill and surgical site, bypassing the potential issues of irrigating through the osteotomy guide hole.

Aim was to evaluate and visualize temperature differences around the osteotomy when using a modified Simplant surgical guide to allow for irrigation through a separate irrigation access hole.

Material and Methods: 15 freeze dried blocks of bovine femur were prepared with retentive grooves. Bone was scanned and information was used to create a surgical guide using Simplant to place a single 4mmx10mm osteotomy in the bone. A thermocoupler, for the purpose of measuring temperature changes, was placed at each end of the osteotomy approximately 1 mm from osteotomy. A thermal video camera was placed perpendicular to the osteotomy. 5 guides were modified by placing a separate hole connecting to the base of the guided hole. The irrigation hose was removed from motor and attached to the modified hole to allow for an alternative irrigation point.
5 samples were done with a modified surgical guide, 5 with an unmodified guide, and 5 free-hand.

Results: Thermal camera demonstrates different temperature changes when using the guide with a modified irrigation access point. Further results are pending statistical analysis of thermocoupler data.

Discussion and/or Conclusion: Using a surgical guide may alter the irrigation of the osteotomy. As a result, the temperature of the surrounding bone around the osteotomy may increase. Irrigating through a separate access hole may help reduce these temperature differences.

USA-004

Digital CAD-CAM fabrication of customized abutment and PMMA provisional crown for immediate implant loading utilizing “One-abutment, One-time concept”: A case report

Bashar Adeinat, Theofilos Koutouzis

Background: “One-abutment one-time” concept has been described in literature with several studies showing favorable outcomes in terms of less marginal bone loss.

The use of CAD-CAM custom abutments offers better advantages over prefabricated abutments in terms of optimal support of final restoration, optimal emergence profile, and ability to place margins more coronal for more efficient removal of excess cement.

The aim of this report is to describe a workflow that allows the use of custom CAD-CAM abutments at the day of implant surgery.

Material and Methods: A 35-year old male patient presented with #5 edentulous ridge. Preliminary impression using polyvinyl siloxane, bite registration and CBCT were taken.

Implant placement was planned using Simplant Software and Simplant Safe guide obtained. CAD-CAM permanent Atlantis abutment was planned using Virtual Abutment Design software (Atlantis, DENTSPLY). A custom titanium CAD-CAM abutment and two temporary PMMA CAD-CAM crowns were milled.

At the day of surgery, a full-thickness flap was reflected and a 3.5 *14 Implant (Ankylos, Dentsply Sirona Implants) was placed using guided surgery (Simplant, Dentsply Sirona Implants). A custom CAD-CAM Atlantis abutment was torqued to 15 Ncm and the temporary crown cemented. At 3-months a final abutment level impression was taken using the remainder temporary crown. Patient received the final E-max crown after 4 months.

Results: At 3 months the implant was integrated with no signs of peri-implant bone loss and infection. The final restoration placed successfully and was overall pleasing. Atlantis abutment margin remained unexposed. Patient was very pleased with esthetics and functions of his restoration.

Discussion and/or Conclusion: Using a digital workflow to plan implant placement, CAD-CAM custom abutment and temporary crown yielded successful and predictable results esthetically and functionally.

Utilizing this technique allowed us to be able to apply the concept of “One-Abutment, One-Time” and to not disturb mucosal seal around implant-abutment interface.

USA-005

Immediate Smile clinical application

Brian Hamel, Adam Fritzgerald, Mohamed Tarek Omran, Robert Blackwell, Gary Fischer, Randall Duncan

Background: The Immediate Smile concept from Dentsply Sirona Implants allows patients to receive customized restorations in a faster, safer manner than traditional techniques. The process allows for guided implant placement with a patient-specific CAD/CAM abutment and a provisional restoration delivered at the time of surgery. This technique allows for minimal tissue trauma, and soft tissue healing to the customized provisional restoration.

Material and Methods: A patient presented for replacement of tooth #8 using the Immediate Smile workflow. PVS impressions and a CBCT were taken to plan the case. A conversion prescription, the CBCT DICOM data, and .STL files of the dental arches and a wax-up were uploaded to Simplant.

Restorative-driven treatment planning in Simplant allowed the contours of the final restoration to be planned, and the ideal position of the implant was determined. A Simplant SAFE Guide was fabricated, as well as an Atlantis abutment and cement-retained provisional crown. On the day of surgery, the guide was placed and the implant placement protocol was followed. The Atlantis abutment was placed, and the provisional was cemented.

After osseointegration, the provisional was removed and a torque test was performed. A Sirona CEREC Omnicam was used to impress the abutment and an IPS e.max crown was milled chairside. The restoration was adjusted, glazed, fired, and cemented. The Atlantis abutment was never removed from the implant, from day of implant placement to final restoration.

Results: The patient received a high-quality implant restoration with an expedited workflow. The patient was very pleased with the process and restoration.

Discussion and/or Conclusion: This procedure facilitated a flapless surgical protocol with minimal discomfort to the patient.

The elimination of platform-level componentry changes reduces the risk of microbe infiltration and adverse sequelae. Immediate Smile reduced patient visits, and achieved the desired results faster and safer than traditional techniques.

USA-006

Immediate Smile: Restoration ready in your palm before surgery

Pranai Nakaparksin, Christina Vasconez, Mark Ludlow, Edgar O'Neill

Background: Dental implant is a predictable treatment, but it takes an extended period of time. During treatment, the provisional is one of the highest concern of the patient, especially in the esthetic zone. Immediate temporization can be utilized to improve both patient esthetics and soft tissue healing. Immediate provisionals can be fabricated intraorally as screw-retained or cement-retained restorations, which subsequently increase chair time and treatment process on the day of the surgery. However, modern technological advances (CBCT, digital planning, guided surgery CAD/CAM) have contributed to streamlining and shortening the treatment process.

The use of cone-beam computed tomography (CBCT) and computerized planning have made possible to efficiently incorporate restoration-driven implant surgery in relation to surrounding anatomical structures. In combination with the CBCT, implant planning software has made it possible to virtually plan the optimal implant positions in relation to surrounding vital anatomical structures and future prosthetic needs.

This information can then be transferred to the surgical phase by using a guided surgical template. Moreover, provisionals can be fabricated with a predetermined implant position and have them ready even before the day of the surgery.

Material and Methods: Case report; a 66-year-old male presented with missing teeth #7, 8. A Simplant guided surgical template was designed and fabricated using patient's CBCT and scanned stone model. Screw-retained implant provisionals were prefabricated prior the surgery; utilizing a guided surgical template to predetermine implant position on the model. After implant placement, screw retained provisionals were inserted with minimal adjustment.

Results: Summary of advantages, disadvantages, indications, contraindications, and limitations of prefabricated immediate provisionals.

Discussion and/or Conclusion: The immediate smile design concept may optimize treatment processes with appropriate training, experience, and pre-surgical planning. It can be successfully incorporated in situations when immediate restoration and minimally invasive surgery is desired.

USA-007

Clinical and radiographic outcomes of immediate placement and function of Astra Tech Implant System EV dental implants: Case series

Bruna Tanello, Rodrigo Neiva

Background: Immediate implant placement has gained popularity due to reduced treatment time and patient discomfort. However, temporization depends on optimal implant primary stability. Implant design and thread pattern has shown to influence implant primary stability. The Astra EV implant system was developed to overcome a known deficiency of traditional Astra TX implants, suboptimal primary stability to allow for immediate placement and temporization. This case series aimed to evaluate clinically and radiographically the outcomes of Astra EV implants in cases where implants were immediately placed and temporized.

Material and Methods: 10 patients underwent minimally traumatic extraction of anterior teeth. Inclusion criteria: intact bony walls within the socket, adequate tooth position, presence of residual alveolar ridge apical to the socket. Exclusion criteria: dehiscences, fenestrations, suppuration, severe soft tissue inflammation, anatomical limitations. Osteotomies aimed to achieve three millimeters of implant engagement apical to the extraction socket, and crestal position of the implant platform at least 3 millimeters below adjacent CEJs. Patients were re-evaluated at 2 weeks and four months. All implants were restored with custom CAD/CAM titanium Atlantis abutments and PFM crowns.

Results: Optimal primary stability and RFA values were seen in all cases. Bone grafting was necessary in 60% of the cases. Successful osseointegration was confirmed in all cases. Fracture of the temporary restoration was seen in two patients, at approximately 8 weeks after implant placement. Temporary screw loosening was seen in one patient at 2 weeks. Radiographically, all sites have remained stable since implant placement with crestal bone at the level of the implant/abutment junction in 90% of the cases.

Discussion and/or Conclusion: Results of this case series show that Astra EV implants provide optimal clinical and radiographic outcomes when immediately placed in fresh extraction sockets and immediate function is provided, with a high degree of predictability.

USA-008

A comparison of early loading and delayed loading of delayed Astra Tech Implant System placement in the anterior region

Wang Yuanqin

Background: The aim of present study was to analyze the prosthodontic outcomes of early and delayed loading following delayed single-tooth implant placement in the anterior region of maxilla.

Material and Methods: A total of 40 patients who meet the inclusion criteria was selected randomly and signed the informed consent. Then 40 OsseoSpeed implants was inserted into the anterior region. 20 of the implants (test group) received restoration procedure 6 weeks after surgery while the other 20 (control group) received the restoration procedure 12 weeks after surgery. Evaluation of the implant stability quotient, the marginal bone level and the pink esthetic score was taken 12 months after permanent restoration of both the early loading group and the delayed loading group. All parameters between two groups was statistically analyzed thereafter.

Results: One-year implant success rate of both groups was 100%. Implant stability at baseline was 68.7±5.6 for the test group and 77.6±3.6 for the control group, and was steadily increased to 78.7±3.1 for the test group and 80.2±2.6 for the control group one year later. Continuous and significant bone loss was observed, reaching 0.82±0.40 mm for the test group and 1.06±0.30mm for the control group in the first postoperative year. The PES of the study group was 8.50±1.20, while the control group was 8.23±0.97, which the differences had no statistical significance (P>0.05).

Discussion and/or Conclusion: The prosthodontic outcomes of early and delayed loading of OsseoSpeed implants placed in the anterior region of maxilla was well acceptable. There was no statistical differences between two groups in the implant stability, the marginal bone loss and the pink esthetic score.

USA-009

The socket shield technique in the esthetic zone, optimizing anterior esthetics for implant restorations

Thani Alsharari, Luana Oliveira-Haas, Bashar Adeinat, Theofilos Koutouzis

Background: The socket shield technique as described by Hürzeler I is characterized by partial tooth extraction leaving buccal root fragment followed by immediate implant placement.

Material and Methods: A 39-year old female patient presented to clinic with external and internal root resorption on tooth #7 and internal root resorption on #8. Tooth #7 was deemed as non-restorable and tooth #8 as having a high risk of future fracture because of the extensive internal resorption, also confirmed by CBCT exam.

Patient presented high lip line, triangular tooth shape, high scalloped and thin biotype which categorized her case as Complex SAC classification II.

Treatment plan consisted of extraction of both teeth #7 and 8 using socket shield technique combined with immediate implant placement of #8. Tooth #7 as cantilever.

Tooth #8 socket shield technique was done and a 4.2 x 13 mm Astra EV implant placed with grafting the space between tooth fragment and implant using Bio-Oss®. Customized healing abutment was placed. Tooth #7 pontic shield technique was done and grafting of socket with Bio-Oss.

At 3-month follow-up appointment, temporary was fabricated using Anatomical Shell Technique III. Patient is still using temporary restoration for soft tissue development.

Results: Post-operative healing was uneventful. The surgical sites after implant placement showed minimal swelling, no inflammation, no suppuration, no bleeding and no signs of complications such as a peri-implant infection or mucosal recession.

An overall pleasing esthetic treatment outcome was achieved with the temporary restoration. Patient was very pleased with esthetic and function with high pink and white esthetic scores.

Discussion and/or Conclusion: This case report shows that using the Socket shield technique to replace teeth in the esthetic zone with complex SAC classification II yielded good and successful results esthetically and functionally. The anatomical shell technique offers simple and innovative method to guide and accurately predict the esthetic outcome.

USA-010

Digital planning and construction of an implant supported removable dentoalveolar prosthesis (ISRDP) for full arch restoration

Anthony Prudenti, Lyndon Cooper, Lee Culp

Background: Key to providing lasting implants for at risk patients, is providing access for hygiene. Providing robust and esthetic prostheses that may be removed for hygiene access, demands alternatives to current implant prostheses. This presentation will introduce a removable prosthesis that is fully supported by widely distributed implants and retained by use of paralleled conical abutments. When using multiple 5 degree tapered conical abutments for retention and support, digital precision in planning, manufacture and delivery is required.

Material and Methods: Four goals in prosthesis manufacture must be met: 1) robust and rigid to provide strength and reciprocation, 2) durability and unit construction to provide for lasting function and economical revision, 3) esthetics that meet standards of existing fixed prostheses, and 4) hygienic design that permits in situ hygienic performance and daily removal for cleansability. The solution envisioned requires the incorporation of retentive copings (gold) within a rigid framework that supports an esthetic veneer replacing teeth and alveolar mucosa.

Results: In preparation, implant placement should be planned based on a defined tooth and mucosal form that provides esthetics and function. Construction of the Implant Supported Removable Dentoalveolar Prosthesis (ISRDP) involves a stepwise approach that will be detailed in the presentation. Delivery requires careful assessment of occlusion and the patient's ability to remove the highly retentive ISRDP.

Discussion and/or Conclusion: The main advantage of the ISRDP approach for full arch restoration is provision of home care access to hygiene on a daily basis, and at maintenance appointments. The digital workflow illustrated provides for a clinically simplified procedure and production of a well-fitting, highly esthetic and robust prosthesis. Potential disadvantages of the ISRDP approach (compared to conventional overdentures) include cost related to the complexity of manufacture. When patients request a non-denture solution in the context of maintenance of higher risk scenarios, this approach merits consideration.

USA-011

Replacement of fixed maxillary hybrid prosthesis with removable overdenture using the Atlantis Conus Concept: A clinical case report

Robert Santosa

Background: Management of the edentulous maxilla cannot be one size fits all. A comprehensive diagnostic workup followed by careful, restorative- driven and patient - mediated treatment planning is still the most important aspect of treating edentulous patients. The practitioners' team must consider maxillary/ mandibular ridge relationship, quality and quantity of available hard and soft tissue, lip support, ability to maintain adequate oral hygiene before deciding on fixed or removable full arch, maxillary implant prostheses.

Material and Methods: A 57 years old female patient was presented with problems cleaning under her 4 years old, maxillary fixed hybrid prosthesis. The prosthesis was constructed of acrylic veneered metal framework and supported by 4 implants, two of which are distally tilted. The prosthesis was designed with buccal and labial acrylic flange to provide adequate lip and cheek support due to the atrophic maxilla. This design severely prevents adequate cleaning on the intaglio surface. A decision was made to replace the fixed hybrid prosthesis with removable overdenture using the Atlantis Conus concept.

Results: A step by step method converting the fixed hybrid to a removable prosthesis retained by a friction-fit prosthetic connection between conical abutments and retaining caps is presented.

Discussion and/or Conclusion: The Atlantis Conus solution was found to be a cost-effective treatment for satisfying the patient's requirements for stability, restored function and aesthetics, and easy hygiene maintenance.

USA-012

Evaluation of patient satisfaction comparing conventional, overdenture and palateless overdenture using guided maxillary implant placement

Kimberly Schlam, Ingeborg De Kok, Lyndon Cooper, Ryan Cook, Glenn Reside

Background: Placement of implants for improvement in quality of life is well documented in mandibular dentures as well as partial removable dental prostheses. However, reports for the treatment of the edentulous maxilla are limited. Increased patient satisfaction has been reported with fabrication of a new conventional denture attributable to esthetics, comfort, and chewing ability regardless of improved retention. Separately, palateless dentures suggest increased gustation and comfort. As patients continue to request treatment to increase retention and comfort of their prostheses, placement of 4 implants in the maxilla for an overdenture continues as a routinely desired treatment.

Material and Methods: In this single cohort prospective study, Oral Health Impact Profile (OHIP-49) questionnaires were distributed at different time points to evaluate changes in patient satisfaction for 15 maxillary edentulous patients that were restored with 4-implants and palateless maxillary overdentures. New conventional dentures were made and the placement of maxillary implants was completed using a mucosa borne fully guided approach. After 12-week healing, locator abutments were attached to the conventional denture and patients given 10-weeks to wear and evaluate the implant retained denture. Palateless implant retained overdentures were inserted and patients allowed the same time for evaluation. A linear mixed model will test the statistical significance of change in OHIP-49 severity score from the baseline scores at the three follow-up times: at 10-week of: post-insertion of conventional denture; post-pickup of locators in complete denture; and post-insertion of palateless overdenture.

Results: Preliminary results are undergoing statistical comparison, however, initial findings suggest increase satisfaction with every consecutive procedure.

Discussion and/or Conclusion: Preliminary data supports the treatment of the edentulous maxilla with a 4-implant retained overdenture as a viable option to improve patient's satisfaction. Differences between prostheses, once compared statistically, will aid in determining which stage of treatment correlates to the greatest effect on improvement in satisfaction.

USA-013

Restoring congenitally missing maxillary lateral incisors using Astra Tech Implant System after ortho treatment: A clinical report

Khalid Motlaq

Background: The maxillary lateral incisor is the second most common congenitally absent tooth. 1 Dental implants are an appropriate treatment option for replacing missing maxillary lateral incisor teeth in adolescents when their dental and skeletal development is complete. This case report presents the treatment of a patient with congenitally missing maxillary lateral incisors using dental implants with Custom abutments.

Material and Methods: 27-year-old female patient presented to Post Graduate Operative clinic with congenitally missing maxillary lateral incisors. Orthodontic Phase was completed Patient was referred to OMFS department to place 2 implants at site #7, 10. At the day of surgery, intrasulcular incisions were made and full thickness flaps were reflected. Implant were placed in the correct three-dimensional position using surgical stent. #7, 10 received OsseoSpeed TX 3.5 X13. Cover screw placed. Tension-free primary wound closure was achieved with non-resorbable sutures. During the healing period, the patient wore Hawley retainer with an acrylic provisional teeth. After three months, at the second stage surgery, cover screws were removed, provisional crowns for #7 were fabricated using the acrylic provisional teeth from hawley retainer. At 4-momths patient received the final PFM crowns. Occlusion and contacts checked.

Results: Post-operative healing was uneventful. The surgical sites after implant placement and uncover showed minimal swelling, no inflammation, no suppuration, no bleeding and no signs of complications such as a peri-implant infection or mucosal recession, and an overall pleasing esthetic treatment outcome. Patient was very pleased with esthetic and function with high pink and white esthetic scores.

Conclusion: The dental implant treatment of a patient with congenitally missing maxillary lateral incisors was performed using narrow diameter implants. At the 1-year follow-up, it was concluded that treatment using provisional crown and PFM were satisfactory for the patient's esthetic expectations. Interdental papilla levels were increased gradually and improved natural appearance.

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