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The 12th International Symposium on Periodontics & Restorative Dentistry

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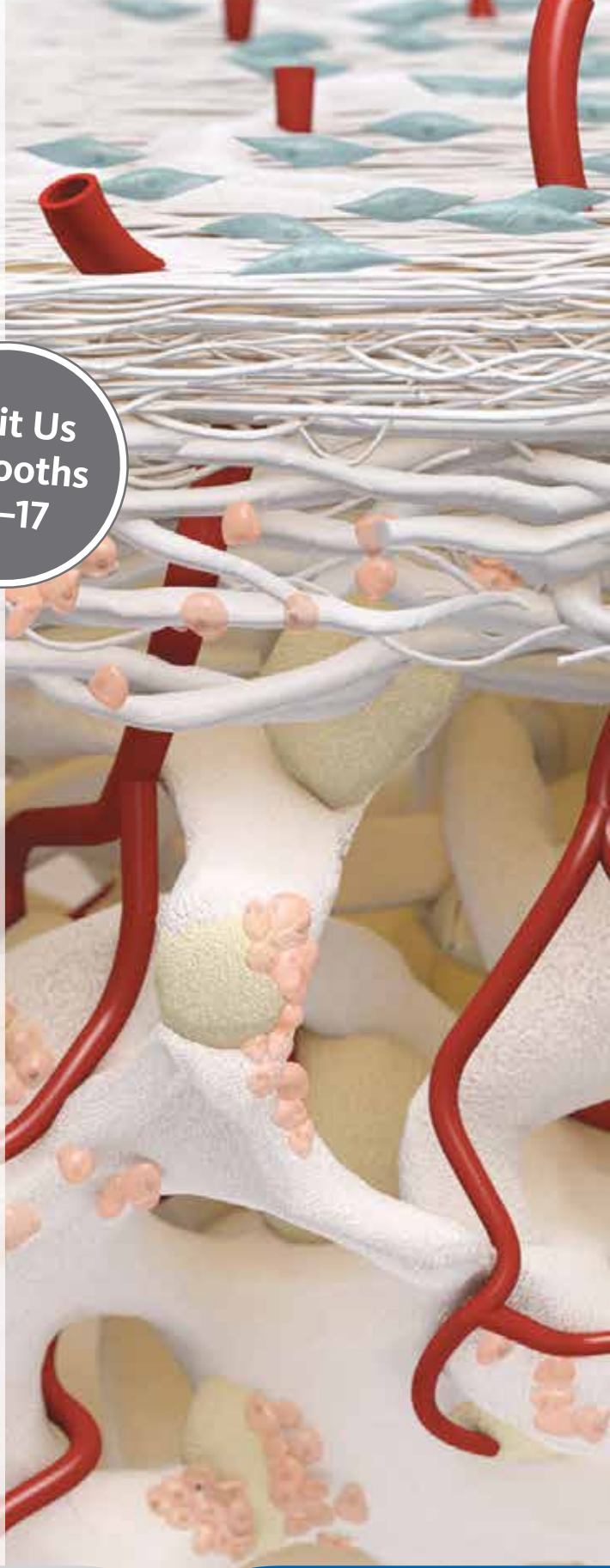

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WELCOME



Dear Colleague,

This gathering of the International Symposium on Periodontics & Restorative Dentistry marks our 12th effort to highlight the clinicians, researchers, and educators who have set extraordinary benchmarks in their pursuit of excellence in dentistry. True innovation requires unyielding commitment and considerable effort in pursuit of developing advances to help clinicians improve patient care.

This event once again represents a joint endeavor between the Quintessence Publishing Group and the American Academy of Periodontology. Every effort has been made to address contemporary therapeutics and provide insight into the future practice of dentistry. Multidisciplinary topics include presentations by 85 opinion leaders in periodontics, oral surgery, restorative dentistry, endodontics, and orthodontics. Their ideas have the potential to evolve into optimal treatment plans for our patients.

We welcome you to Boston, which is at its best in June, and invite you to enjoy our special environment and the opportunity to meet with colleagues from the international community of dentistry. Plan on taking home new ideas, innovations, and enthusiasm that can immediately benefit your patients.

Cordially,

Myron Nevins, DDS
Program Co-Chair

Marc L. Nevins, DMD, MMSc
Program Co-Chair

Wayne A. Aldredge, DMD
President, American Academy of Periodontology

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References: 1. Xu T, Deshmukh M, Barnes VM, et al. *Compend Contin Educ Dent.* 2004;25(Suppl 1):46-53. **2.** Kraivaphan P, Amornchat C, Triratana T. *J Clin Dent.* 2013;24:20-24. **3.** Fine DH, Sreenivasan PK, McKiernan M, et al. *J Clin Periodontal.* 2012;39:1056-1064. **4.** Riley P, Lamont T. *Cochrane Database Syst. Rev.* 2013 Dec 5; 12:CD010514. doi: 10.1002/14651858.CD010514.pub2.

*Over time, triclosan is slowly released from the copolymer to provide sustained antibacterial activity for 12 hours.
†vs non-antibacterial fluoride toothpaste 12 hours after brushing.
‡vs non-antibacterial fluoride toothpaste in 15 clinical studies from 6 to 7 months in duration.

CONTENTS

See the Technical Exhibits insert for the exhibit floor map and a list of sponsors and exhibitors.

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Case courtesy of Cary A. Shapoff, DDS (Surgical); Jeffrey A. Babushkin, DDS (Restorative)

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1. Radiographic Analysis of Crestal Bone Levels on Laser-Lok Collar Dental Implants. CA Shapoff, B Lahey, PA Wasserlauf, DM Kim, *IJPRD*, Vol 30, No 2, 2010. 2. Please see Laser-Lok Clinical Overview (Biohorizons document ML0606). 3. Human Histologic Evidence of a Connective Tissue Attachment to a Dental Implant. M Nevins, ML Nevins, M Camelo, JL Boyesen, DM Kim. *The International Journal of Periodontics & Restorative Dentistry*. Vol. 28, No. 2, 2008. SPMP09051 REV H FEB 2016

REGISTRATION

All participants of the 12th International Symposium on Periodontics & Restorative Dentistry must register and obtain a badge before attending symposium events. You will not be allowed into the lecture ballrooms unless you display your badge.

Wednesday, June 15	1:00 PM–6:00 PM
Thursday, June 16	7:00 AM–5:00 PM
Friday, June 17	7:00 AM–5:00 PM
Saturday, June 18	7:00 AM–5:00 PM
Sunday, June 19	7:00 AM–3:00 PM

Please wear your badge at all times. Admission to the scientific sessions and receptions is by badge only.

COFFEE BREAKS

Coffee breaks will be held each morning and afternoon. Complimentary coffee, tea, and soft drinks will be available during break times in the 3rd-floor exhibit area.

LECTURE ROOMS

All general sessions will be held in the Grand Ballroom (4th floor) of the Boston Marriott Copley Place. The special Hands-on Workshops will be held in the Simmons Room (3rd floor).

TECHNICAL EXHIBITS

Technical exhibits, located on the 3rd and 4th floors, are open during the hours listed below. All participants are invited to visit the exhibits to observe the latest developments in dental products offered by the leading manufacturers. See the list of exhibitors and floor map in the Technical Exhibits insert.

Thursday, June 16	9:30 AM–6:30 PM
Friday, June 17	9:30 AM–6:30 PM
Saturday, June 18	9:30 AM–6:30 PM

SPECIAL EVENTS

Wine and Cheese Reception, Thursday, June 16, 5:00 PM–6:30 PM, in the exhibit area located on the 3rd floor.

Welcome Reception, Friday, June 17, 6:30 PM–8:30 PM, in the Grand Ballroom. Plan to spend a fun evening to renew friendships and meet colleagues from around the world. Winners of the poster presentations will be announced during this reception, and the Distinguished Clinician Award will be presented to its recipients.

PROFESSIONAL VIDEOTAPING

Several lecturers have agreed to have their presentations recorded. Flash drives containing Thursday, Friday, and Saturday presentations (by day and session) will be available for purchase on-site; you will find an order form in your registration packet. Sunday sessions may be ordered on-site or through the Quintessence website (www.quintpub.com) and will be shipped after the conclusion of the meeting. Please note that not every lecturer has agreed to videotaping; refer to the flash drive order form for availability.

CONDUCT AT SYMPOSIUM

The Boston Marriott Copley Place prohibits smoking throughout its property. Cellular telephones and other electronic devices must be turned off or switched to silent mode during all sessions. Photography, audiotaping, and videotaping are also prohibited during the sessions. Please be courteous to other attendees.

If an attendee engages in unacceptable behavior, symposium organizers reserve the right to take any action they deem appropriate, including expelling offending persons from the symposium without further notice or refund.

POSTER SESSION

The poster presentations will be held in front of the Grand Ballroom, located on the 4th floor, from Thursday, June 16, through Saturday, June 18. Winners will be announced during the Welcome Reception on Friday evening in the Grand Ballroom. Cash awards of $1,500, $1,000, and $500 will be given for first, second, and third place, respectively. Winners will also receive a recognition plaque and a refund of their symposium registration fee.

SPECIAL RECOGNITION AWARDS

The Distinguished Clinician Award is given to two clinicians who have contributed to advancements in periodontics and restorative dentistry. This year's recipients are Dr Burton Langer and Dr David Garber. The Award Ceremony will be held during the Welcome Reception on Friday evening in the Grand Ballroom.

CONTINUING EDUCATION CREDIT INFORMATION

One hour of continuing education (CE) credit is offered for every hour of program attendance. Continuing education credit can be recorded on the CE Form included in your symposium registration packet. One copy of the completed CE Form should be returned to the continuing education counter located in the registration area. Be sure to retain a copy of this completed form for your records; you will receive no further documentation. The American Academy of Periodontology will maintain one copy of the form for 4 years but will not send CE information or CE forms to state boards.

CE credit awarded for participation in a course or activity may not apply toward licensing renewal in all states. It is the responsibility of each participant to verify the requirements of his or her state licensing board. Meeting attendees are responsible for ensuring that their education credits are current and on file with their respective state board or other licensing/regulatory agency.

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8:00 | 8:30 | 9:00 | 9:30 | 10:00 | 10:30 | 11:00 | 11:30 | 12:00 | 12:30

Thursday, June 16

Grand Ballroom (Salon A–E)

Session I: The Implant Future Is Now

Moderator			Break			Lunch
	Lee	Amato		Cardaropoli	Chu	

Grand Ballroom (Salon G–K)

Session II: Strategies for Predictable Regenerative Therapies

Moderator			Break		Lunch
	Camargo	Scheyer		Kim	

Grand Ballroom (Salon F)

Session III: The Role of Technology in Managing Inflammatory Diseases: Lessons

Moderator			Break		Lunch
	Paquette	Giannobile		Reynolds	

Simmons Room

Workshop: Vertical and Horizontal Augmentation of the Atrophic Alveolar Ridge

	Lunch
Urbán	

Friday, June 17

Grand Ballroom (Salon G–K)

Session I: The Ceramic Solution: Premium Esthetics for Longevity

Moderator			Break		Lunch
	Garber	Gürel		Malament	

Grand Ballroom (Salon E–F)

Session II: Esthetic Management of Compromised Extraction Sites

Moderator			Break		Lunch
	Hämmerle	Cooper		M. L. Nevins	

Grand Ballroom (Salon A–D)

Session III: Periodontal Regeneration: Saving Teeth

Moderator			Break		Panel	Lunch
	McClain	Rasperini		Ricci		

Saturday, June 18

Grand Ballroom (Salon G–K)

Session I: Prevention, Treatment, and Management of Peri-Implantitis: Myth or

Moderator			Break		Lunch
	Dahlin	Berglundh		Piñeyro	

Grand Ballroom (Salon A–E)

Session II: Treatment Planning for Complex Cases Involving Dental Implants and

Moderator			Break		Lunch
	Buser	M. Nevins		Herman	

Grand Ballroom (Salon F)

Session III: Predictable Solutions for Ridge Augmentation: Let It Grow!

Moderator			Break		Lunch
	Salama	Merli		Pikos	

Simmons Room

Workshop: Soft Tissue Plastic Surgery in the Esthetic Zone:

	Lunch
Zucchelli	

Sunday, June 19

Grand Ballroom (Salon A–E)

Session I: Surgical Solutions for Root Coverage Procedures: Optimize Your Succ

Moderator			Break			Lunch
	McGuire	Allen		Zucchelli	Pasquinelli	

Grand Ballroom (Salon F)

Session II:Prosthetics 2020: Digital or Analog

Moderator			Break			Lunch
	Strub	Coachman		Sailer	Fradeani	

Grand Ballroom (Salon G–K)

Session III: Implant Solutions for the Edentulous Patient

Moderator			Break			Lunch
	L. Langer	Parel		Neugarten	Testori	

SCIENTIFIC SESSIONS TIMETABLE

1:00 | 1:30 | 2:00 | 2:30 | 3:00 | 3:30 | 4:00 | 4:30 | 5:00 | 5:30 | 6:00 | 6:30

Baumgarten | Testori | *Break* | Jimenez | *Panel*

Wallace | Rocchietta | *Break* | Velásquez | *Panel*

Learned, Opportunities Ahead

Fiorellini | Rosen | *Break* | Tinti/Parma-Benfenati | *Panel*

Urbán

Wine and Cheese Reception (5:00–6:30) Exhibit Hall

EXHIBITS

Winter | Blatz | *Break* | Meyenberg | *Panel*

Linkevičius | B. Langer | *Break* | Grunder | *Panel*

Session IV: Orthodontics for Optimal Esthetics: Face, Smile, and Teeth

Moderator: Sarver | Janakievski | *Break* | Wise | *Panel*

Welcome Reception (6:30–8:30) Grand Ballroom

EXHIBITS

Reality?

Froum | Yamamoto | *Break* | Wang | *Panel*

Natural Teeth

Mandelaris | Tarnow | *Break* | Clem | *Panel*

Murphy | Urbán | *Break* | Simion | *Panel*

Management of Gingival Defects Around Teeth and Implants

Zucchelli

EXHIBITS

ess

Suzuki | Zuhr | *Panel*

Calesini | Agnini/Agnini | *Panel*

Misch | Sasaki | *Panel*

Thanks!

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SPEAKERS

Alessandro Agnini, DMD
Sunday, 1:30 PM–2:15 PM

Andrea M. Agnini, DDS
Sunday, 1:30 PM–2:15 PM

Edward P. Allen, DDS, PhD
Sunday, 9:00 AM–9:45 AM

Francesco Amato, MD, DDS, PhD
Thursday, 9:00 AM–9:45 AM

Harold S. Baumgarten, DMD
Thursday, 1:30 PM–2:15 PM

Tord Berglundh, DDS, PhD
Saturday, 9:15 AM–10:15 AM

Markus B. Blatz, DMD, PhD, Dr med dent habil
Friday, 2:00 PM–3:00 PM

Daniel Buser, DDS, Dr med dent
Saturday, 8:15 AM–9:15 AM

Gaetano Calesini, MD, DDS, CDT
Sunday, 12:45 PM–1:30 PM

Paulo M. Camargo, DDS, MS, MBA
Thursday, 8:15 AM–9:15 AM

Daniele Cardaropoli, DDS
Thursday, 10:15 AM–11:00 AM

Stephen J. Chu, DMD, MSD, CDT
Thursday, 11:00 AM–11:45 AM

Donald S. Clem, DDS
Saturday, 3:30 PM–4:30 PM

Christian Coachman, CDT, DDS
Sunday, 9:00 AM–9:45 AM

Lyndon F. Cooper, DDS, PhD
Friday, 9:15 AM–10:15 AM

Christer Dahlin, DDS, PhD
Saturday, 8:15 AM–9:15 AM

Nicholas M. Dello Russo, DMD, MScD
Moderator, Sunday all day

Sergio De Paoli, MD, DDS
Moderator, Saturday all day

Serge Dibart, DMD
Moderator, Friday afternoon

Joseph P. Fiorellini, DMD, DMSc
Thursday, 1:00 PM–2:00 PM

Mauro Fradeani, DMD
Sunday, 11:00 AM–11:45 AM

Stuart J. Froum, DDS
Saturday, 1:00 PM–2:00 PM

David A. Garber, DMD
Friday, 8:15 AM–9:15 AM

William V. Giannobile, DDS, DMSc
Thursday, 9:15 AM–10:15 AM

Ueli Grunder, DMD
Friday, 3:30 PM–4:30 PM

Galip Gürel, DDS, MSc
Friday, 9:15 AM–10:15 AM

Christoph H. F. Hämmerle, Dr med dent
Friday, 8:15 AM–9:15 AM

Richard Herman, DDS
Saturday, 10:45 AM–11:45 AM

Jim Janakievski, DDS, MSD
Friday, 2:00 PM–3:00 PM

Jaime Jimenez, DDS, PhD
Thursday, 3:30 PM–4:15 PM

David M. Kim, DDS, DMSc
Thursday, 10:45 AM–11:45 AM

Burton Langer, DMD, MSD
Friday, 2:00 PM–3:00 PM

Laureen Langer, DDS
Sunday, 8:15 AM–9:00 AM

Richard J. Lazzara, DMD, MScD
Moderator, Thursday all day

Ernesto A. Lee, DMD
Thursday, 8:15 AM–9:00 AM

Tomas Linkevičius, DDS, Dip Pros, PhD
Friday, 1:00 PM–2:00 PM

Kenneth A. Malament, DDS, MScD
Friday, 10:45 AM–11:45 AM

George A. Mandelaris, DDS, MS
Saturday, 1:00 PM–2:00 PM

Pamela K. McClain, DDS
Friday, 8:05 AM–9:00 AM

Adriana McGregor, DDS
Moderator, Sunday all day

Michael K. McGuire, DDS
Sunday, 8:15 AM–9:00 AM

Mauro Merli, MD, DDS
Saturday, 9:15 AM–10:15 AM

Konrad H. Meyenberg, Dr med dent
Friday, 3:30 PM–4:30 PM

Craig M. Misch, DDS, MDS
Sunday, 12:45 PM–1:30 PM

Kevin G. Murphy, DDS, MS
Saturday, 1:00 PM–2:00 PM

Daniel Nathanson, DMD, MSD
Moderator, Friday all day

Jay M. Neugarten, DDS, MD
Sunday, 10:15 AM–11:00 AM

Marc L. Nevins, DMD, MMSc
Friday, 10:45 AM–11:45 AM

Myron Nevins, DDS
Saturday, 9:15 AM–10:15 AM

Joan Otomo-Corgel, DDS, MPH
Moderator, Friday all day

David W. Paquette, DMD, MPH, DMSc
Thursday, 8:15 AM–9:15 AM

Stephen M. Parel, DDS
Sunday, 9:00 AM–9:45 AM

Stefano Parma-Benfenati, MD, DDS, MScD
Thursday, 3:30 PM–4:30 PM

Kirk L. Pasquinelli, DDS
Sunday, 11:00 AM–11:45 AM

Michael A. Pikos, DDS
Saturday, 10:45 AM–11:45 AM

Alfonso Piñeyro, DDS
Saturday, 10:45 AM–11:45 AM

Giulio Rasperini, DDS
Friday, 9:00 AM–10:00 AM

Mark A. Reynolds, DDS, PhD, MA
Thursday, 10:45 AM–11:45 AM

Giano Ricci, MD, DDS, MScD
Friday, 10:30 AM–11:30 AM

Chris R. Richardson, DDS, MS
Moderator, Friday morning

Isabella Rocchietta, DDS
Thursday, 2:00 PM–3:00 PM

Louis F. Rose, DDS, MD
Moderator, Saturday all day

Paul S. Rosen, DMD, MS
Thursday, 2:00 PM–3:00 PM

Irena Sailer, Dr med dent
Sunday, 10:15 AM–11:00 AM

Maurice A. Salama, DMD
Saturday, 8:15 AM–9:15 AM

David M. Sarver, DMD, MS
Friday, 1:05 PM–2:00 PM

Takeshi Sasaki, DDS
Sunday, 1:30 PM–2:15 PM

E. Todd Scheyer, DDS, MS
Thursday, 9:15 AM–10:15 AM

Massimo Simion, MD, DDS
Saturday, 3:30 PM–4:30 PM

Myron Spector, PhD
Moderator, Thursday all day

Jörg R. Strub, DDS, Dr med dent habil, Dr hc
Sunday, 8:15 AM–9:00 AM

Masana Suzuki, DDS
Sunday, 12:45 PM–1:30 PM

Dennis P. Tarnow, DDS
Saturday, 2:00 PM–3:00 PM

Tiziano Testori, MD, DDS
Thursday, 2:15 PM–3:00 PM
Sunday, 11:00 AM–11:45 AM

Carlo Tinti, MD, DDS
Thursday, 3:30 PM–4:30 PM

R. Gilbert Triplett, DDS, PhD
Moderator, Saturday all day

István Urbán, DMD, MD, PhD
Workshop, Thursday 8:00 AM–4:00 PM
Saturday, 2:00 PM–3:00 PM

Diego Velásquez, DDS, MSD
Thursday, 3:30 PM–4:30 PM

Stephen S. Wallace, DDS
Thursday, 1:00 PM–2:00 PM

Hom-Lay Wang, DDS, MSD, PhD
Saturday, 3:30 PM–4:30 PM

Arnold S. Weisgold, DDS
Moderator, Sunday all day

Ray C. Williams, DMD
Moderator, Thursday all day

Robert R. Winter, DDS
Friday, 1:00 PM–2:00 PM

Roger J. Wise, DDS
Friday, 3:30 PM–4:30 PM

Atsuhiko Yamamoto, DDS, PhD
Saturday, 2:00 PM–3:00 PM

Giovanni Zucchelli, DDS, PhD
Workshop, Saturday 9:00 AM–6:30 PM
Sunday, 10:15 AM–11:00 AM

Otto Zuhr, DDS, Dr med dent
Sunday, 1:30 PM–2:15 PM

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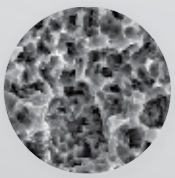

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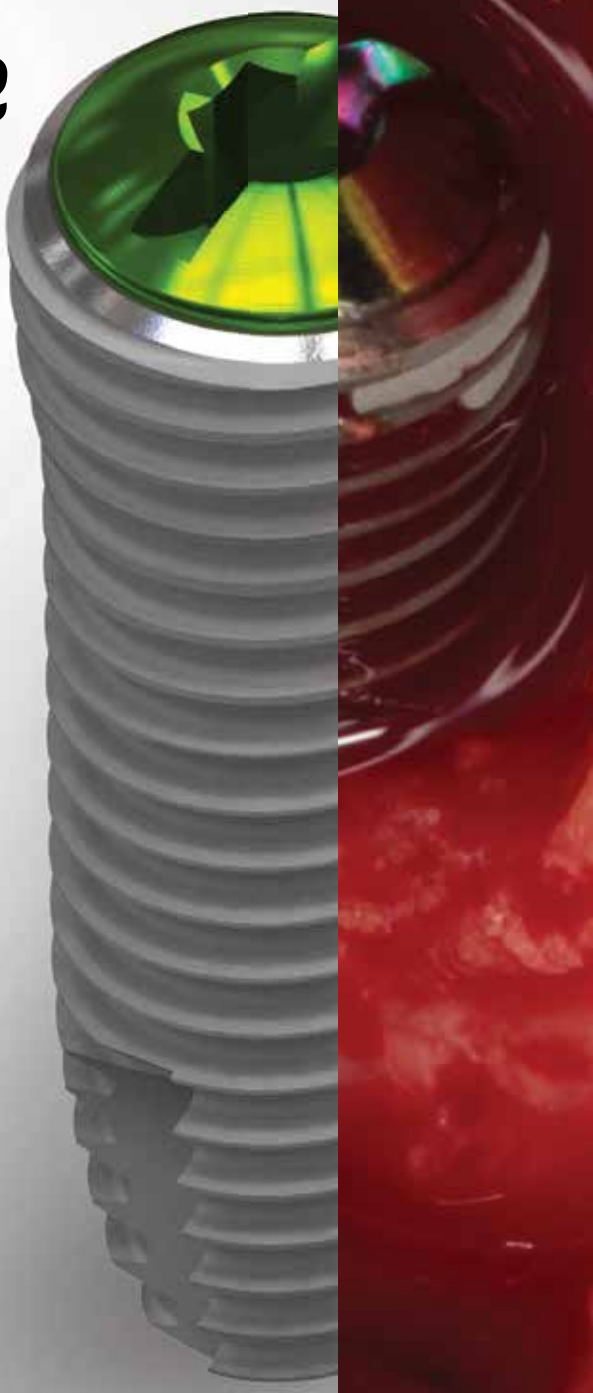

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SESSION I ■ 8:00 AM–5:00 PM

Richard J. Lazzara, DMD, MScD, Moderator

The Implant Future Is Now

Innovative techniques and technologies allow for improved esthetics, decreased treatment times, and greater patient satisfaction. They also engender concerns of risk and reward. Research and clinical experience continue to underscore the predictability of less invasive techniques with advanced diagnostic, surgical, and restorative procedures. New digital techniques increase precision as well as open up a new world of restorative materials and methods for both provisional and definitive implant-supported restorations. All of these innovations allow clinicians to treat complex cases with a high percentage of success.

OBJECTIVES

1. Learn to implement digital workflows into surgical planning.
2. Investigate CAD/CAM fabrication of restorations.
3. Realize the impact of immediate implants.

Ernesto A. Lee, DMD
High Smile Lines with Hard and Soft Tissue Defects: Contemporary Strategies for the Esthetic Implant Reconstruction of High-Risk Cases

Francesco Amato, MD, DDS, PhD
New Treatment Strategies to Simplify the Management of Complex Cases: Clinical Application and Research Data

Daniele Cardaropoli, DDS
New Perspectives in Soft Tissue Management for Immediate Implants

Stephen J. Chu, DMD, MSD, CDT
Prosthodontic Innovations in Soft Tissue Preservation Around Single-Tooth Implants in the Esthetic Zone

Harold S. Baumgarten, DMD
Digital Workflows in Implant Dentistry

Tiziano Testori, MD, DDS
Maxillary Sinus Elevation: The Lateral Approach Revisited

Jaime Jimenez, DDS, PhD
Full-Arch Treatment Planning: What Can We Achieve with Digital Dentistry Today?

SESSION II ■ 8:00 AM–5:00 PM

Myron Spector, PhD, Moderator

Strategies for Predictable Regenerative Therapies

Regeneration of bone and soft tissues has enabled many patients to achieve an improved self-image and quality of life. Previously, the quantity and quality of available bone could be a limiting factor in patient selection, and autogenous tissue harvesting, with its accompanying complications, was often required. This panel presents current concepts and emerging evidence for the clinical applications of tissue engineering for hard and soft tissue regeneration. The focus will be on the appropriate combination of biomaterial scaffolds and growth factors necessary to achieve constructive endpoint goals. Topics include periodontal regeneration, expansion of deficient alveolar ridges, the sinus elevation procedure, and soft tissue management for optimal results.

OBJECTIVES

1. Understand the benefits of growth factors.
2. Expand the application of surgical techniques.
3. Learn to select the appropriate biologics.

Paulo M. Camargo, DDS, MS, MBA
The Current Status of Alveolar Socket Preservation

E. Todd Scheyer, DDS, MS
Evidence-Based Material Selection for Hard and Soft Tissue Regeneration

David M. Kim, DDS, DMSc
Achieving Predictable and Successful Regenerative Outcomes with Innovative Biomaterials

Stephen S. Wallace, DDS
Advances in Maxillary Sinus Grafting

Isabella Rocchietta, DDS
Building Bone Without Bone: Is It Reality?

Diego Velásquez, DDS, MSD
Biomaterial and Barrier Membrane Selection for Predictable Tissue and Bone Regeneration

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Cocktail reception

Thursday, 16/6
5pm - 6:30pm

Friday, 17/6
5pm - 6:30pm

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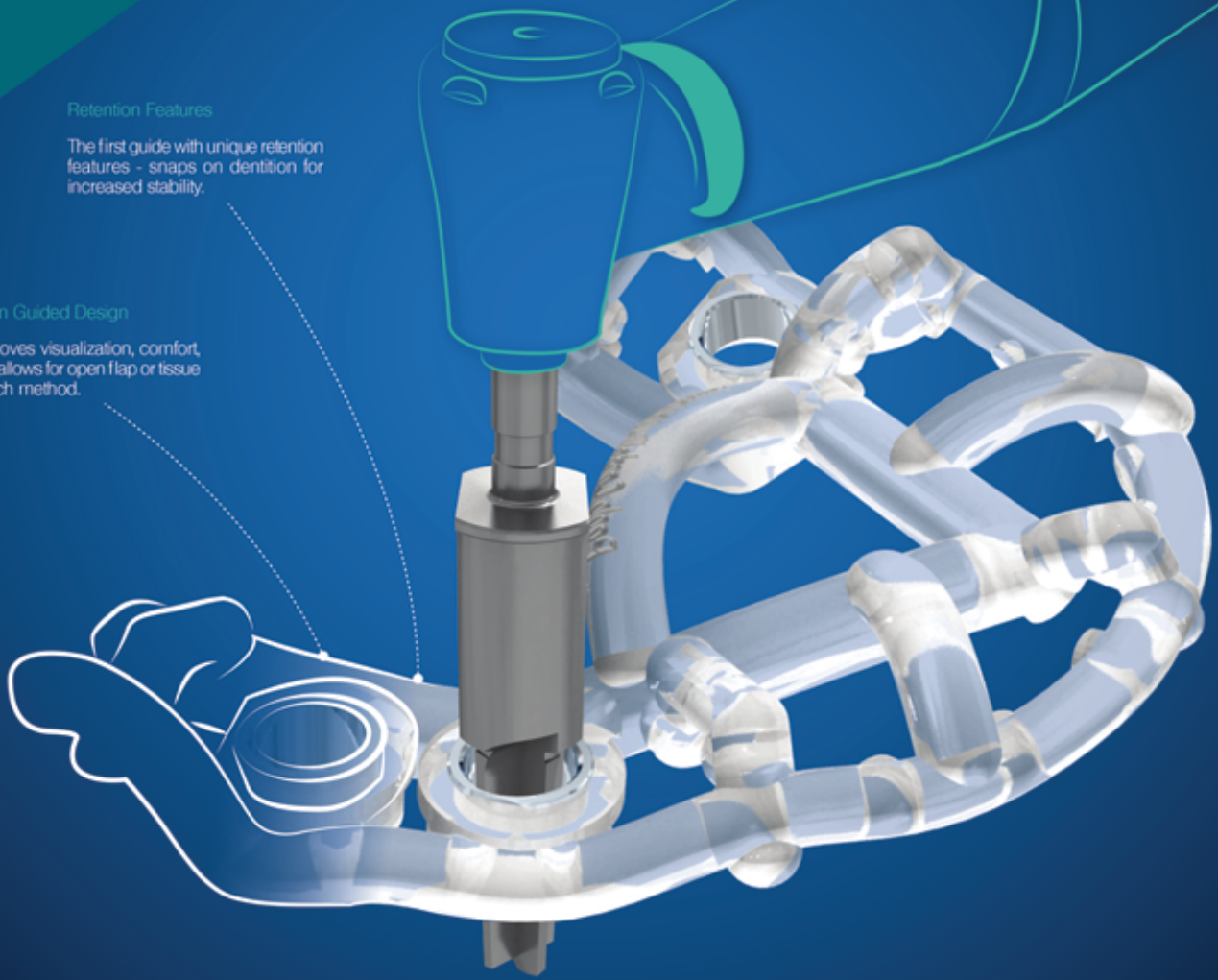

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SESSION III ■ 8:00 AM–5:00 PM

Ray C. Williams, DMD, Moderator

The Role of Technology in Managing Inflammatory Diseases: Lessons Learned, Opportunities Ahead

We all strive to accomplish optimal results for our patients with the least invasive techniques possible. This panel presents emerging evidence about how to understand clinical, biologic, genetic, and epigenetic risk factors in optimizing periodontal health and delivering personalized medicine. The use of antimicrobial and host-modulating agents enhances nonsurgical treatment strategies for this inflammatory disease. Advancements in regenerative medicine include biologics, scaffolds, and biostimulation. These presentations provide guidelines on state-of-the-art techniques and demonstrate research that will define future trends for soft and hard tissue regeneration for periodontitis and peri-implantitis.

OBJECTIVES

1. Understand the value of personalized medicine for patient selection.
2. Learn how to use new methods for nonsurgical therapy.
3. Evaluate the diagnostic and treatment regimen for peri-implantitis.

David W. Paquette, DMD, MPH, DMSc
Past and Current Developments in the Nonsurgical Management of Periodontal Disease

William V. Giannobile, DDS, DMSc
Personalized and Precision Periodontal Medicine

Mark A. Reynolds, DDS, PhD, MA
Regeneration of Hard and Soft Tissues: State of the Art and Future Directions

Joseph P. Fiorellini, DMD, DMSc
Emerging Technologies for Diagnosing Inflammatory Diseases: Are We There?

Paul S. Rosen, DMD, MS
Incorporating Technologic Advances in Inflammatory Disease Management for Clinical Practice

Carlo Tinti, MD, DDS, and **Stefano Parma-Benfenati,** MD, DDS, MScD
Peri-Implantitis: Surgical Therapeutic Approaches Based on Peri-Implantitis Defects

ALL-DAY HANDS-ON WORKSHOP ■ 8:00 AM–4:00 PM

István Urbán, DMD, MD, PhD

Vertical and Horizontal Augmentation of the Atrophic Alveolar Ridge: A Hands-On Workshop

This clinically oriented hands-on course will provide a complete review of atrophic alveolar ridge augmentation, from the biologic principles of bone grafting to the surgical anatomy and surgical protocols that are key to successful vertical and horizontal ridge reconstruction. The biology of graft incorporation into the host bone as well as the predicted long-term clinical outcome will be detailed. The hands-on practice provides an in-depth understanding of ridge augmentation surgery: Flap design, graft and membrane placement, effective flap mobilization, and double-layer sutures will be demonstrated. The management of the distortion of the mucogingival junction will also be discussed and practiced.

SOLD OUT

OBJECTIVES

1. Understand the biology of incorporating a bone graft.
2. Understand the surgical anatomy of the floor of the mouth.
3. Learn the surgical principles of ridge augmentation surgery.
4. Learn the surgical principles of reconstruction of the vestibule as well as the keratinized tissue after ridge augmentation.

SESSION I ■ 8:00 AM–5:00 PM

Daniel Nathanson, DMD, MSD, Moderator

The Ceramic Solution: Premium Esthetics for Longevity

Esthetics! Esthetics! Esthetics! The evolution of ceramic materials and adhesive technologies continues to influence the treatment options for optimal esthetics that combine natural beauty with biologic function and longevity. The use of monolithic all-ceramic restorations may offer fewer complications for restorative projects ranging from laminate veneers to complex periodontal-implant restorations. Treatment must be in harmony with the patient's desires and provide optimal and predictable long-term results. The application of these materials for comfortable posterior restorations of both teeth and implants is of increasing interest. However, questions remain in decision-making in knowing when to apply bilayered techniques to optimize patient and clinician satisfaction. Varying approaches to ceramic selection will be presented.

OBJECTIVES

1. Learn to select the appropriate ceramic material.
2. Evaluate the use of ceramics for posterior restorations.
3. Identify cases that are best treated with all-ceramic restorations.

David A. Garber, DMD
The "Last" Critical Pink Interface: Limitations, Options, Solutions

Galip Gürel, DDS, MSc
Reflecting Personality in Smile Design

Kenneth A. Malament, DDS, MScD
Integration of Esthetic Dentistry in Routine and Complex Prosthodontics

Robert R. Winter, DDS
Creating Enduring Ceramic Restorations: Four Important Aspects to Consider

Markus B. Blatz, DMD, PhD, Dr med dent habil
Ceramics and Adhesion—An Evolution

Konrad H. Meyenberg, Dr med dent
PFM Restorations—A Relic from Another Era or Still the Standard? Clinical Considerations with Special Regard to Implant-Supported and Posterior Restorations

SESSION II ■ 8:00 AM–5:00 PM

Joan Otomo-Corgel, DDS, MPH, Moderator

Esthetic Management of Compromised Extraction Sites

Optimal treatment protocols for the extraction of periodontally compromised teeth have come to the forefront of esthetic implant dentistry. Research and clinical practice underscore the value of regenerative approaches to provide a better environment for esthetic implant treatment. This program emphasizes effective decision-making for compromised sites that require regenerative therapy, including the selection of osteogenic biomaterials and growth factors, soft tissue management, and the timing of the procedures. Presenters discuss how to determine whether a staged approach or immediate implants should be used within the context of long-term results.

OBJECTIVES

1. Examine the timing of the extraction and implant placement.
2. Learn which hard tissue biologics are preferred.
3. Recognize the options for soft tissue surgery.

Christoph H. F. Hämmerle, Dr med dent
Ridge Preservation: Emerging Concepts and Clinical Indications

Lyndon F. Cooper, DDS, PhD
Biology Versus Technology: Which Prevails at the Extraction Site?

Marc L. Nevins, DMD, MMSc
Minimally Invasive Esthetic Site Development with Growth Factors

Tomas Linkevičius, DDS, Dip Pros, PhD
Successful Management of Thin Soft Tissue Biotype

Burton Langer, DMD, MSD
Correction and Avoidance of Esthetic Disfigurements on Teeth and Implants

Ueli Grunder, DMD
Augmentation: The Solution for Long-Term Soft Tissue and Bone Preservation for Compromised Extraction Sites in the Esthetic Zone

SESSION III ■ 8:00 AM–12:00 PM

Chris R. Richardson, DDS, MS, Moderator

Periodontal Regeneration: Saving Teeth

Sophisticated clinicians avoid the indiscriminate extraction of natural dentition. Most patients prefer to maintain their teeth if predictable and cost-effective results can be achieved. It is frequently necessary to provide periodontal regeneration for our patients, and this requires familiarity with various surgical techniques, biologics, barrier membranes, and laser therapies. Research continues to provide clinicians with new materials and techniques that enhance predictability, but understanding the needs of each individual patient is also an integral part of decision-making. This session provides diagnostic, technical, and biomaterial-selection guidelines for periodontal regenerative procedures. Decision-making concepts are presented in detail for improved case selection.

OBJECTIVES

1. Identify concepts for improved case selection for periodontal regeneration.
2. Learn how to apply various biomaterials and growth factors.
3. Learn to appreciate the patient's desire for preservation of the natural dentition.

Pamela K. McClain, DDS
Factors Affecting Success in Periodontal Regeneration

Giulio Rasperini, DDS
Surgical Approaches to Maximize Esthetic Periodontal Regenerative Outcomes

Giano Ricci, MD, DDS, MScD
Advanced Periodontal Regeneration or Implant Therapy? An Everyday Dilemma

SESSION IV ■ 1:00 PM–5:00 PM

Serge Dibart, DMD, Moderator

Orthodontics for Optimal Esthetics: Face, Smile, and Teeth

A comprehensive orthodontic treatment plan considers more than a cephalometric analysis with accompanying facial, smile, and dental examinations. Understanding skeletal, dentoalveolar, and soft tissue changes over time allows for an interdisciplinary approach that can encourage esthetics over a patient's lifetime. The option of tooth transplantation for adolescent patients with an ankylosed tooth provides a solution for tooth replacement that uses the natural process of eruption to develop hard and soft tissues that would otherwise be lost. This technique is presented for cases requiring optimal results. For adult orthodontic patients, multidisciplinary care is typically the standard. Providing patient-specific treatment plans based on the periodontal diagnosis leads to predictable outcomes and satisfied patients.

OBJECTIVES

1. Select the ideal technique for compromised sites in the esthetic zone.
2. Understand the options for tooth transplantation for esthetic outcomes.
3. Identify orthodontic guidelines for the adult periodontal patient.

David M. Sarver, DMD, MS
Orthodontics Has Changed: What That Really Means for the Dental Team

Jim Janakievski, DDS, MSD
Autotransplantation of Premolars to Replace Traumatized Maxillary Incisors in the Growing Patient

Roger J. Wise, DDS
Orthodontics for the Periodontally Compromised Patient

SESSION I ■ 8:00 AM–5:00 PM

Louis F. Rose, DDS, MD, Moderator

Prevention, Treatment, and Management of Peri-Implantitis: Myth or Reality?

The prevalence of peri-implantitis has been documented internationally. Debate continues as to the etiology of the problem, which may include severe periodontitis, cement-retained restorations, rough implant surfaces, and immunologic patient-related complications, among others. Nevertheless, this is a significant problem that must be diagnosed at an early stage. The treatment protocols for this disease vary from nonsurgical therapy and regenerative procedures to implant removal. Recent information provides insight into the need for implant surface decontamination regardless of the etiology to increase the likelihood of regeneration.

OBJECTIVES

1. Become familiar with the risk factors for peri-implantitis.
2. Consider alternative mechanisms for marginal bone breakdown.
3. Learn the surgical procedures that have proven to be successful.

Christer Dahlin, DDS, PhD
Alternative Mechanisms for Marginal Breakdown Around Oral Implants

Tord Berglundh, DDS, PhD
Peri-Implantitis—Prevalence, Risk Factors, and Treatment

Alfonso Piñeyro, DDS
Cement-Induced Peri-Implantitis: Myth or Reality?

Stuart J. Froum, DDS
Treatment of Peri-Implantitis

Atsuhiko Yamamoto, DDS, PhD
Predictable Treatment of Peri-Implantitis Using Er:YAG Laser–Water Spray Micro-Explosions

Hom-Lay Wang, DDS, MSD, PhD
Prevention of Peri-Implant Bone Loss Through Implant Positioning

SESSION II ■ 8:00 AM–5:00 PM

Sergio De Paoli, MD, DDS, Moderator

Treatment Planning for Complex Cases Involving Dental Implants and Natural Teeth

Treatment planning for complex cases focuses on determining which teeth to keep and which teeth to replace with dental implants to achieve long-term success and patient satisfaction. This panel discusses the rules for managing implant cases without compromised periodontal tissues as well as implant cases with advanced periodontal disease profiles. The orchestration of procedures must proceed with proper sequencing and timing of multidisciplinary therapeutics, and these clinical situations require unique treatment planning in the esthetic zone. The principles of periodontal regeneration and osteogenesis allow clinicians to retain teeth that previously would have required removal. In addition, both conventional endodontic and microsurgical techniques provide significant predictability for tooth retention.

OBJECTIVES

1. Learn a long-term maintenance protocol for patients undergoing regenerative therapy.
2. Understand the role of regenerative concepts in complex cases.
3. Know when to save or extract a tooth.

Daniel Buser, DDS, Dr med dent
Implant Therapy in Periodontally Noncompromised Patients: What Factors Are Important for Successful Long-Term Outcomes?

Myron Nevins, DDS
Long-Term Observations of Periodontally Compromised Patients

Richard Herman, DDS
Successful Long-Term Endodontics for the New Millennium

George A. Mandelaris, DDS, MS
Dentoalveolar and Alveoloskeletal Bone Engineering: Expanding the Limits and Reversing the Risks

Dennis P. Tarnow, DDS
Treating Esthetic Defects Around Implants and Teeth

Donald S. Clem, DDS
The Expansion of Regeneration for Teeth and Dental Implants

SESSION III ■ 8:00 AM–5:00 PM

R. Gilbert Triplett, DDS, PhD, Moderator

Predictable Solutions for Ridge Augmentation: Let It Grow!

This panel evaluates surgical techniques for bone reconstruction in severely atrophic jaws where implant placement has been planned. Vertical and horizontal ridge deficiencies represent significant challenges in implant therapy. Special attention is given to soft tissue management to gain primary tension-free closure without disturbing neurovascular structures. Grafting biomaterials will be evaluated along with the need for new bioresorbable scaffolds for three-dimensional space maintenance. Atrophy in the maxillary anterior and mandibular posterior areas will receive special attention, as will esthetic risk factors.

OBJECTIVES

1. Diagnose and classify challenging implant sites in the esthetic zone.
2. Understand optimal flap design in soft tissue management.
3. Learn which growth factors increase the amount of regeneration.

Maurice A. Salama, DMD
The Central-Lateral Replacement Dilemma in Esthetic Implant Dentistry: Clinical Alternatives and Case Management

Mauro Merli, MD, DDS
Bone Reconstruction and Soft Tissue Management in Complex Clinical Cases

Michael A. Pikos, DDS
Regenerative Strategies for Alveolar Ridge Deficiencies: 2016

Kevin G. Murphy, DDS, MS
The Use of Ultrasonically Fabricated Barriers for Enhanced Outcomes in Guided Bone Regeneration

István Urbán, DMD, MD, PhD
New Perspectives on Vertical and Horizontal Augmentation

Massimo Simion, MD, DDS
Esthetic Considerations and New Developments over the Last 25 Years

ALL-DAY HANDS-ON WORKSHOP ■ 9:00 AM–6:30 PM

Giovanni Zucchelli, DDS, PhD

Soft Tissue Plastic Surgery in the Esthetic Zone: Management of Gingival Defects Around Teeth and Implants

This hands-on course will address the management of commonplace gingival defects using soft tissue plastic surgery. Recession of the buccal soft tissue margin is a frequent complication of well-integrated dental implants. The appearance of metallic structure or even transparency through thin buccal soft tissues is also a common esthetic complaint of patients today. Moreover, malpositioned implant placement frequently results in excessive apical dislocation of the buccal soft tissue margin of the implant-supported crown. Soft tissue plastic surgery procedures and bilaminar techniques in particular can be successfully used in combination with pre- and postsurgical prosthetic approaches to increase the volume of the interdental soft tissue, to treat buccal gingival recessions and soft tissue dehiscence around dental implants, and to provide the new implant-supported crown with an esthetic transmucosal emergence profile.

OBJECTIVES

1. Understand the use of coronally advanced flaps and connective tissue grafts.
2. Learn about the bilaminar technique.
3. Learn how to treat multiple gingival recessions as well as buccal soft tissue dehiscence around implants.
4. Learn how to use different flap designs and de-epithelialized free gingival grafts in conjunction with the bilaminar technique.

Additional fee required (lunch included)

Attendance is limited to 25 participants.

SESSION I ■ 8:00 AM–2:45 PM

Adriana McGregor, DDS, Moderator

Surgical Solutions for Root Coverage Procedures: Optimize Your Success

The ability to reverse gingival recession is a significant advance to patients' periodontal health. The connective tissue graft has long been considered the gold standard, but new procedure-based outcomes allow for gains in attachment level and tissue thickness. Recession defects involving multiple teeth are frequently encountered, and techniques for harvesting increased amounts of autogenous connective tissue provide an effective means to address them. Alternative approaches such as the use of soft tissue allografts and microsurgical techniques that have been beneficial for periodontal plastic and implant surgery will be discussed.

OBJECTIVES

1. Learn the techniques for increasing connective tissue harvest.
2. Evaluate the results of autogenous substitutes for root coverage.
3. Understand the potential risks of these procedures.

Michael K. McGuire, DDS
Evidence-Based Alternatives for Autogenous Grafts: Outcomes, Attachments, and Stability

Edward P. Allen, DDS, PhD
Selecting the Optimal Grafting Procedure

Giovanni Zucchelli, DDS, PhD
Root Coverage Beyond Esthetics

Kirk L. Pasquinelli, DDS
Simultaneous Augmentation of Multiple Teeth with Autogenous Connective Tissue

Masana Suzuki, DDS
Microscopic Approaches for Root Coverage: Long-Term Observation of Recipient Sites of Connective Tissue Grafts

Otto Zuhr, DDS, Dr med dent
Surgery Without Papilla Incision: Tunneling Flap Procedures in Plastic Periodontal and Implant Surgery

SESSION II ■ 8:00 AM–2:45 PM

Arnold S. Weisgold, DDS, Moderator

Prosthetics 2020: Digital or Analog

The emergence of digital technologies is changing dentistry at a rapid pace. The ability to improve therapeutic outcomes in contemporary dental practice has increased the adoption of these innovative technologies. All disciplines are affected, with procedures ranging from diagnostic protocols to prosthetic CAD/CAM techniques. However, it is a challenge for the practicing clinician to determine which new approaches to adopt for optimal patient care and how to go about it. This panel will discuss the fundamental requirements to accomplish pleasing, functional, and long-lasting outcomes. The dental laboratory of the future will go beyond fabricating restorations and participate in interdisciplinary treatment planning.

OBJECTIVES

1. Understand the digital contributions to pretreatment diagnosis.
2. Learn to integrate digital information for the fabrication of dental restorations.
3. Learn to focus treatment to accomplish pleasing, functional outcomes.

Jörg R. Strub, DDS, Dr med dent habil, Dr hc
Digital Dental Medicine

Christian Coachman, CDT, DDS
Virtual Planning: The Future Is Now!

Irena Sailer, Dr med dent
The Virtual Patient—The Actual Status of Digital Planning Tools

Mauro Fradeani, DMD
Minimally Invasive Prosthetic Procedures: Digital Versus Analog

Gaetano Calesini, MD, DDS, CDT
Edentulous Site Enhancement: The Ultimate Peri-Implant Tissue Management

Andrea M. Agnini, DDS, and **Alessandro Agnini,** DMD
From Single Restoration to Full-Arch Case Rehabilitation: How New Technologies and Materials Are Affecting the Treatment Plan Sequence

SESSION III ■ 8:00 AM–2:45 PM

Nicholas M. Dello Russo, DMD, MScD, Moderator

Implant Solutions for the Edentulous Patient

The introduction of osseointegration irrevocably changed the lives of countless patients and dental practitioners. This concept is responsible for restoring the self-image and confidence of patients who require restoration of both the maxilla and mandible and is key to decisions where the transition from the natural dentition to implants is inevitable. There is a growing tendency to use graftless solutions such as tilted and zygomatic implants. It has now been two decades since some of these therapeutics were introduced. This panel will compare contemporary and classical approaches to rehabilitation of the edentulous patient.

OBJECTIVES

1. Become familiar with graftless solutions for edentulous patients.
2. Learn to transition the partially dentate patient to implant prostheses.
3. Be prepared to enhance bone volume with regenerative techniques.

Laureen Langer, DDS
Sequential Implant Placement for the Failing Dentition: Transitioning Patients to Fully Implant-Supported Prostheses Over Time

Stephen M. Parel, DDS
20 Years with the All-on-4 Approach: What Is New?

Jay M. Neugarten, DDS, MD
Rehabilitation of the Severely Compromised Maxilla: The Synergy of Prosthetics and Oral and Maxillofacial Surgery Providing Graftless and Grafting Solutions

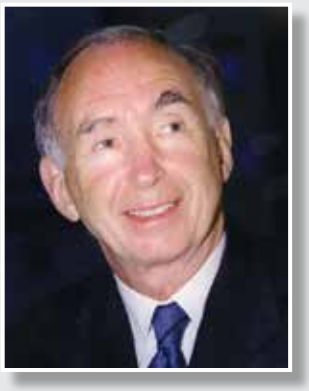
Tiziano Testori, MD, DDS
Severely Resorbed Mandibles and Maxillae: Whether or Not to Augment

Craig M. Misch, DDS, MDS
Is the Implant-Supported Bar Overdenture Becoming an Extinct Modality?

Takeshi Sasaki, DDS
Coexistence of Natural Teeth and Implants in Periodontally Compromised Patients

Distinguished Clinician Award

The Distinguished Clinician Award was established in 1997 to recognize the outstanding contributions of two clinicians to the advancement of dentistry. Award recipients are chosen for their excellence not only as clinicians and researchers but also as role models to their junior colleagues. This year the award will be given to:



Dr Burton Langer, DMD, MSD

Dr David A. Garber, DMD

The Award Ceremony will be held during the Welcome Reception on Friday, June 17. Previous recipients of the Distinguished Clinician Award include:

2013
James T. Mellonig, DDS, MS
Arnold S. Weisgold, DDS

2010
Robert G. Schallhorn, DDS, MS
Jörg R. Strub, DDS, Dr med dent habil, Dr hc

2007
Gerald M. Bowers, DDS, MS
Lloyd L. Miller, DMD

2004
Morton Amsterdam, DDS, ScD
Peter Schärer, DDS, MS

2000
Ulf Lekholm, LDS, PhD
George A. Zarb, BChD, DDS, MS

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THURSDAY, JUNE 16

Session I. The Implant Future Is Now

Moderated by Richard J. Lazzara

Richard J. Lazzara, DMD, MScD, *is a former assistant professor at both the University of Miami School of Medicine Dentistry Section and the University of Maryland School of Dentistry. He has authored numerous articles and textbook chapters related to implant surgery and restorative therapies and lectures extensively throughout the United States and internationally. Dr Lazzara maintains a private practice limited to periodontics and implant therapy in West Palm Beach, Florida.*

High Smile Lines with Hard and Soft Tissue Defects: Contemporary Strategies for the Esthetic Implant Reconstruction of High-Risk Cases

Ernesto A. Lee

Treatment of the compromised gingival-alveolar complex with dental implants constitutes one of the most difficult challenges in contemporary dentistry. Traditional surgical approaches will often result in inadequate peri-implant tissue architecture. Although the use of pink restorative materials has been proposed to disguise residual soft tissue deficits, maintenance issues and esthetic limitations are still a concern, especially in high–smile line cases. This presentation will focus on the predictable esthetic management of high-risk sites and will demonstrate the use of contemporary interdisciplinary strategies for the treatment of peri-implant esthetic dilemmas and complications.

Ernesto A. Lee, DMD, *is a clinical professor at the University of Pennsylvania School of Dental Medicine, where he serves as director of the Postgraduate Periodontal Prosthesis Program and the Postdoctoral Implant Fellowship. Dr Lee graduated summa cum laude from the University of Panama School of Dentistry and subsequently earned dual specialty degrees in periodontics and fixed prosthodontics from the University of Pennsylvania. He is the author of multiple publications, including journal articles and book chapters, and has presented over 200 lectures throughout the United States, Europe, Asia, and Latin America. Dr Lee maintains a private practice limited to prosthodontics and implant dentistry, with an emphasis on esthetic dentistry, in Bryn Mawr, Pennsylvania.*

New Treatment Strategies to Simplify the Management of Complex Cases: Clinical Application and Research Data

Francesco Amato

Today's trends in oral implantology focus on optimal esthetics, reduced treatment time, and minimal invasion. This presentation will describe new techniques and clinical protocols that will allow the clinician to achieve these three goals. Challenging cases that in the past required complex, lengthy treatment can now be treated with predictable results and a high percentage of success. Protocols, practical tips, and research data will be analyzed and presented to participants so that they may improve the efficiency of their daily practice.

Francesco Amato, MD, DDS, PhD, *received his MD from the University of Catania, Italy, before completing advanced programs in periodontics and implant dentistry at the New York University College of Dentistry and a PhD in biopharmaceutical microbiology at the University of Catania. He has published various articles in international journals and lectures internationally. Dr Amato maintains a private practice specializing in oral surgery, periodontics, and implant dentistry in Catania, Italy.*

New Perspectives in Soft Tissue Management for Immediate Implants

Daniele Cardaropoli

Tooth replacement with implants in fresh extraction sockets seems to be a reliable therapy for patients and offers reduced treatment time. Dimensional ridge contour changes may compromise the results of implant treatment, and in the case of immediate implant placement, the volumetric remodeling should be compensated. Flapless surgery and the use of a bone substitute to fill the bone-to-implant gap limit the amount of horizontal and vertical tissue alteration. Moreover, the use of an immediate restorative protocol may positively influence the final esthetic outcome by preserving the soft tissue contours in relation to the preoperative status.

Daniele Cardaropoli, DDS, *is a member of the Italian Society of Periodontology, the European Federation of Periodontology, the Italian Society of Osseointegrated Implantology, the Academy of Osseointegration, and the American Academy of Periodontology. He is the scientific director of the Institute for Professional Education (ProEd) in Torino, Italy, and a recipient of the Goldman Award from the Italian Society of Periodontology and the National Award from the Italian Society of Orthodontics. Dr Cardaropoli is an editorial consultant for* The International Journal of Periodontics & Restorative Dentistry *and a member of the editorial review board of the* American Journal of Orthodontics & Dentofacial Orthopedics. *He has authored several articles published in peer-reviewed journals and maintains a private practice in Torino, Italy.*

Prosthodontic Innovations in Soft Tissue Preservation Around Single-Tooth Implants in the Esthetic Zone

Stephen J. Chu

Implant dentistry is continuously evolving and offering new and more predictable forms of therapy with minimally invasive protocols. Innovative techniques now allow for better esthetics, reduced treatment times, and greater patient comfort. However, these new techniques and therapies continue to raise questions and concerns regarding the risks and rewards of each innovation. Specifically, there are controversial issues regarding survival and esthetic outcomes for implants placed immediately into postextraction sockets. This lecture will address current concepts (ie, platform switching), techniques, clinical research, histologic evidence, and innovations in immediate implant placement and provisional restoration, focusing on how they can enhance treatment procedures, treatment time, and clinical outcomes for greater patient comfort, care, and satisfaction. After this presentation, the attendee should be able to understand the following concepts associated with immediate implant placement and provisional restoration: soft tissue discoloration, the restoration's impact on peri-implant soft tissue thickness, and prefabricated prosthetic components to record peri-implant tissue shape.

Stephen J. Chu, DMD, MSD, CDT, *is a clinical associate professor in the Ashman Department of Periodontology and Implant Dentistry at the New York University College of Dentistry. He has published extensively; gives lectures nationally and internationally on the subjects of esthetic, restorative, and implant dentistry; and serves on the editorial review board of several peer-reviewed dental journals. Dr Chu is the recipient of the Peter Schärer Distinguished Lecturer Award from the European Academy of Esthetic Dentistry and maintains a private practice in fixed prosthodontics, esthetics, and implant dentistry in New York City.*

Digital Workflows in Implant Dentistry

Harold S. Baumgarten

While we have been waiting for our elastic impression materials to set, a major revolution has been occurring in dentistry. Traditional methods of information gathering, treatment planning, and therapy have been supplanted by digital workflows. These new digital techniques can provide greater precision and shorter treatment times and open a whole new world of restorative materials to the treatment team. This lecture will discuss the new digital workflows in surgical planning, computed tomography (CT) guided surgery, impression-making, model fabrication, and computer-aided design/computer-assisted manufacturing (CAD/CAM) fabrication of restorations. At the completion of this lecture, participants should be able to understand how computerized surgical planning can enhance surgical precision, understand the benefit of digital impression-making, understand how models can be fabricated using digital technology, list

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the many types of restorations that can be fabricated using CAD/CAM technology, and list the restorative materials that can be used in CAD/CAM processes.

Harold S. Baumgarten, DMD, *is a clinical professor at the University of Pennsylvania School of Dental Medicine. He lectures internationally on implant prosthodontics, advanced restorative dentistry, esthetics, occlusion, and the use of computers in dentistry. He is a member of the Academy of Osseointegration, the Greater New York Academy of Prosthodontics, the American Academy of Periodontology, the American Dental Association, the Philadelphia County Dental Society, and the Omicron Kappa Upsilon Honorary Dental Society. Dr Baumgarten is the author of several textbook chapters and peer-reviewed journal articles. He maintains a private practice that focuses on advanced dental implant procedures, such as immediate implant placement with immediate restoration and CT-guided surgery.*

Maxillary Sinus Elevation: The Lateral Approach Revisited

Tiziano Testori

The maxillary sinus elevation procedure has become an important preprosthetic surgical procedure for the creation of bone volume in the edentulous posterior maxilla for the placement of dental implants. Research and clinical experience over the past 30 years have increased the predictability of this procedure and reduced patient morbidity. In recent years, less invasive techniques using a crestal approach have been introduced; although these techniques have reduced the complication and morbidity risks, they require microsurgical skills. A recent Cochrane review showed that if the residual alveolar bone height is 3 to 6 mm, a crestal approach to elevating the sinus lining and placement of 8-mm implants may lead to fewer complications compared with a lateral window approach and placement of implants at least 10 mm long. This lecture on the progression of maxillary sinus augmentation from major surgery to a minimally invasive procedure explores various surgical approaches and discusses the advantages and disadvantages of each.

Tiziano Testori, MD, DDS, *currently serves as the head of the Implant Dentistry and Oral Rehabilitation section of the Department of Biomedical, Surgical, and Dental Science at the Galeazzi Orthopedic Institute in Milan, Italy, and as an associate clinical professor at the University of Milan School of Dentistry. He is a past president of the Italian Society of Oral Surgery and Implantology. Dr Testori has authored 97 peer-reviewed publications and serves on the editorial boards of* The International Journal of Oral & Maxillofacial Implants, *the* European Journal of Oral Implantology, *and* The International Journal of Periodontics & Restorative Dentistry.

Full-Arch Treatment Planning: What Can We Achieve with Digital Dentistry Today?

Jaime Jimenez

Teeth are the focal point of the human smile and masticatory function. Restoring the edentulous patient with implant prosthetics is the most challenging area in implant dentistry. Applications of various technologic advances in implant dentistry and in all aspects of the diagnostic, treatment planning, surgical, and restorative phases are gaining popularity. Computer-aided design/computer-assisted manufacturing (CAD/CAM) technology is used to generate stereolithographic surgical guides and prefabricated interim prostheses to facilitate implant surgery. When treating full-arch cases, there are still some clinical questions in terms of the limitations and possibilities for the clinician in the use of the intraoral scanner. This presentation reports on the clinical and laboratory procedures involved in the fabrication process for these types of cases.

Jaime Jimenez, DDS, PhD, *is chairman of the Implant Department and international program director for Oral Implantology at the European University of Madrid as well as an adjunct professor in the Periodontology and Implant Dentistry Department at the New York University College of Dentistry. He also lectures worldwide in the field of implant dentistry. Dr Jimenez is a fellow of the International College of Dentistry and a member of the Academy of Osseointegration, the Spanish Society of Prosthodontists, the Spanish Society of Implantologists, the Spanish Society of Minimally Invasive Dentistry, the European Academy of Osseointegration, and the Spanish Society of Periodontists.*

Session II. Strategies for Predictable Regenerative Therapies

Moderated by Myron Spector

Myron Spector, PhD, *is a professor of orthopedic surgery (biomaterials) at Harvard Medical School and director of orthopedic research at Brigham and Women's Hospital in Boston. He also serves as director of tissue engineering for the Veterans Affairs Boston Healthcare System and as a senior lecturer at the Massachusetts Institute of Technology. Dr Spector is the recipient of numerous awards and the author of over 300 journal publications. His research interests include musculoskeletal and nerve tissue engineering and regenerative medicine.*

The Current Status of Alveolar Socket Preservation

Paulo M. Camargo

Proper placement of implants in the esthetic zone is dependent on the presence of adequate bone volume following tooth extraction. It is well documented that if extraction sockets are allowed to heal naturally after tooth removal, substantial loss of the horizontal and vertical dimensions of the alveolar ridge can occur. Clinical trials have also shown the benefits of bone grafting, guided bone regeneration, and biologics in minimizing extraction socket dimensional changes. Some information about the most appropriate materials and surgical techniques to maximize the regenerative outcomes of extraction socket treatment have emerged, but knowledge is still incomplete. This presentation will address the current status of evidence-based regenerative treatment of extraction sockets and identify areas where additional scientific knowledge is necessary. The rationale for clinical decisions in performing such regenerative procedures will be discussed and cases presented.

Paulo M. Camargo, DDS, MS, MBA, *received his dental degree from the University of Parana, Brazil, and earned a certificate in periodontics, an MS in oral biology, and an MBA from the University of California, Los Angeles, where he currently serves as the Tarrson Family Endowed Chair in Periodontics and Associate Dean of Clinical Dental Sciences. Dr Camargo is a diplomate of the American Board of Periodontology and a fellow of the American College of Dentists. His current research focuses on salivary diagnostics for periodontal diseases, periodontal and bone regeneration, and peri-implantitis. Dr Camargo has over 80 publications and lectures extensively in the United States and abroad. He maintains a private practice limited to periodontics and dental implants in Los Angeles.*

Evidence-Based Material Selection for Hard and Soft Tissue Regeneration

E. Todd Scheyer

The ability to predictably treat oral hard and soft tissue defects has been one of the cornerstones of periodontal and implant therapy. Many surgical techniques and materials have been developed, refined, and modified to become less invasive and more esthetic. With all of the biomaterials available to clinicians today, it is helpful to apply an evidence-based approach to assist with the rapidly changing marketplace and to evaluate the legitimacy of new products. Tissue engineering and biomimetic materials are not new but still have not seen a broad spectrum of use in clinical practice. What are the next steps? This lecture will review the evidence-based approach, classic and current research on the topic, and how we can apply innovations to our everyday use. Comparisons with the gold standards will be used to draw some conclusions related to clinical outcomes, patient-reported outcomes, and long-term tissue stability. Particular focus will be given to periodontal regeneration, extraction site preservation, and sinus augmentation.

E. Todd Scheyer, DDS, MS, *is a clinical assistant instructor at the University of Texas School of Dentistry at Houston and a guest lecturer for the University of Texas Health Science Center at San Antonio. He is a diplomate of the American Board of Periodontology and current president of the Texas Society of Periodontists. Dr Scheyer lectures nationally and internationally, and his research interests include tissue engineering for periodontal regeneration and dental implant–based reconstruction using 3D treatment planning. He maintains a private practice limited to periodontics and implant dentistry in Houston.*

Achieving Predictable and Successful Regenerative Outcomes with Innovative Biomaterials

David M. Kim

Recent research has given us a better understanding of the wound healing processes of the hard and soft tissues. As a result, a number of innovative surgical techniques and biomaterials have been implemented to compensate for soft and hard tissue deficiencies following periodontal disease and tooth loss. This presentation will share current knowledge and clinical experiences with a wide array of biomaterials that have the potential to be utilized in both soft and hard tissue regeneration.

David M. Kim, DDS, DMSc, *is an associate professor and the director of the Postgraduate Program as well as Continuing Education in Periodontology at the Harvard School of Dental Medicine. He is a recipient of the Joseph L. Henry Award recognizing excellence in research and clinical training from Harvard as well as the Balint Orban Research Award, the Award for Outstanding Teaching and Mentoring in Periodontics, and a teaching fellowship from the American Academy of Periodontology. Dr Kim is a diplomate of the American Board of Periodontology and maintains a clinical practice in Boston.*

Advances in Maxillary Sinus Grafting

Stephen S. Wallace

Maxillary sinus grafting is considered the most successful of all the preprosthetic augmentation surgeries, but still our profession seeks to improve outcomes for our patients. While it is difficult to improve upon implant survival rates, it may be possible to significantly reduce treatment times. Evidence will be presented to show both positive and negative outcomes utilizing growth factors, bone morphogenetic proteins, and recently developed and newly introduced biomaterials.

Stephen S. Wallace, DDS, *is an associate clinical professor in the Division of Periodontics at the Columbia University College of Dental Medicine and lectures nationally and internationally on subjects relating to implant dentistry. He has authored over 40 peer-reviewed papers, contributed numerous textbook chapters, and coedited a textbook on maxillary sinus elevation surgery. He also helped develop the world's largest database on maxillary sinus elevation. Dr Wallace is a diplomate of the International Congress of Oral Implantologists and a fellow of the Academy of Osseointegration. In 2013, he received the American Academy of Periodontology's Master Clinician Award for outstanding service and level of practice. He maintains a private practice specializing in periodontics and implant dentistry in Waterbury, Connecticut.*

Building Bone Without Bone: Is It Reality?

Isabella Rocchietta

Prosthetically driven implant positioning requires a sufficient volume of bone in the desired position. However, sufficient bone volume is frequently lacking as a result of trauma or infectious diseases such as advanced periodontitis. Despite the numerous surgical techniques described in the literature that aim to regenerate bone in the vertical and horizontal dimensions, clinicians still struggle when faced with challenging vertical defects. The use of autogenous bone could be a viable option, but the procedure clearly causes discomfort to the patient and increases morbidity, and this bone undergoes a rapid degree of resorption. Advances in digital imaging and 3D reconstructions offer dramatic improvement in diagnostics in the face of severe vertical jaw defects. The use of guided bone regeneration associated with nonautogenous scaffolds constitutes the next generation of vertical bone augmentation.

Isabella Rocchietta, DDS, *is currently affiliated with the Department of Biomaterials, Institute for Clinical Sciences at Sahlgrenska Academy of the University of Gothenburg, Sweden. She is a member of the Experts Council of the Osteology Foundation and the Communication Committee of the European Academy of Osseointegration. Dr Rocchietta is the author of several peer-reviewed publications and book chapters and lectures internationally on bone regeneration by means of growth factors and scaffolds, tissue engineering, soft and hard tissue neoformation with autogenous living cells, and osseointegration and implant surface modifications. She performs clinical work limited to periodontics and implant dentistry in London.*

Biomaterial and Barrier Membrane Selection for Predictable Tissue and Bone Regeneration

Diego Velásquez

The performance of biomaterials is often determined by the clinical conditions encountered during regenerative therapy procedures, which aim to enhance bone and soft tissue healing after tooth removal and in preparation for future implant placement. Because all biomaterials have strengths and weaknesses, applicability concepts must be established in order to differentiate specific protocols that facilitate biomaterial selection in clinical practice. This presentation will review these concepts and translate them for clinical applications. Defect selection, surgical technique guidelines, outcomes, and research supporting therapy will also be presented.

Diego Velásquez, DDS, MSD, *is an adjunct clinical assistant professor at the University of Michigan School of Dentistry. He is a diplomate of the American Board of Periodontology and a recipient of the prestigious Dr and Mrs Gerald M. Kramer Scholarship for Excellence Award of the American Academy of Periodontology Foundation. Dr Velásquez is a consultant for both the* Journal of Periodontology *and* The International Journal of Periodontics & Restorative Dentistry. *He has lectured nationally and internationally and published a number of articles on prosthodontics, periodontics, and implants. He maintains a private practice in Fenton, Michigan.*

Session III. The Role of Technology in Managing Inflammatory Diseases: Lessons Learned, Opportunities Ahead

Moderated by Ray C. Williams

Ray C. Williams, DMD, *is an adjunct professor of periodontology at the University of North Carolina School of Dentistry and a fellow of both the American and International Colleges of Dentists. He is the immediate past dean of the Stony Brook University School of Dental Medicine and serves on the editorial boards of the* Journal of Periodontology, Compendium of Continuing Education in Dentistry, *the* Journal of Esthetic and Restorative Dentistry, The Chinese Journal of Dental Research, *and* The International Journal of Periodontics & Restorative Dentistry. *Dr Williams has authored 140 papers and coedited a textbook,* Periodontal Disease and Overall Health: A Clinician's Guide *(Professional Audience Communications, 2010). In 2008, he received the American Academy of Periodontology's Gold Medal Award.*

Past and Current Developments in the Nonsurgical Management of Periodontal Disease

David W. Paquette

Periodontal disease (periodontitis) is a common, chronic inflammatory condition that involves the supporting tissues around the teeth and affects approximately half of US adults. The disease is initiated by a pathogenic shift in the oral microbiome that triggers host expression of inflammatory mediators locally and systemically. Nonsurgical treatment strategies for periodontal disease generally focus on reducing the pathogenic microbiome via mechanical procedures. Over the past three decades, antimicrobial and host-modulatory agents have been developed as adjuncts to

nonsurgical mechanical therapy. This presentation will introduce the working model of periodontal disease etiology, discuss nonsurgical treatment strategies and challenges for clinicians, and evaluate the evidence on adjunctive antimicrobials and host modulators for the management of periodontal disease.

David W. Paquette, DMD, MPH, DMSc, *is a professor and associate dean of education at the Stony Brook University School of Dental Medicine. He is active in many international and national organizations, including the American Academy of Periodontology, the American Dental Education Association, and the American Dental Association. He serves as an associate editor for the* Journal of Periodontology. *Dr Paquette's major research interests include clinical trials, novel interventions for periodontal disease, and the interplay between periodontal disease and systemic conditions, in particular cardiovascular disease, diabetes, and obesity. He is a diplomate of the American Board of Periodontology and practices periodontics in Stony Brook, New York.*

Personalized and Precision Periodontal Medicine

William V. Giannobile

Patient stratification, precision, and personalized medicine strategies use clinical, biologic, and genetic risk factors for the customization of oral health care. The objective of this presentation is to present emerging evidence on the use of clinical, biologic, genetic, and epigenetic risk factors for the optimization of periodontal health care delivery. This presentation will give an overview of the use of large patient databases and the Michigan Personalized Prevention Study (MPPS). The MPPS population has been used for the identification of clinical and genetic risk factors to target those individuals who are at either low or high risk for tooth loss as a surrogate for periodontal disease progression. The personalized medicine principles—predictive, participatory, personalized, and preventive—will be used to demonstrate how current periodontal therapy decisions benefit from such approaches. In addition, the presentation will highlight how to improve health care delivery from a periodontal clinical practice and public health perspective to optimize resources for those patients who are at highest risk for disease progression and subsequent tooth loss.

William V. Giannobile, DDS, DMSc, *is the Najjar Endowed Professor and Chair of the Department of Periodontics and Oral Medicine at the University of Michigan School of Dentistry and a professor of biomedical engineering at the College of Engineering. He has lectured extensively in the areas of periodontal regenerative medicine, tissue engineering, and personalized medicine. He currently serves as editor-in-chief for the* Journal of Dental Research *and is a past president of the American Academy of Periodontology Foundation. Dr Giannobile is a diplomate of the American Board of Periodontology and has received numerous awards, most recently the Distinguished Scientist Award from the American Academy of Periodontology for his research contributions to the field. He practices periodontology in Ann Arbor, Michigan.*

Regeneration of Hard and Soft Tissues: State of the Art and Future Directions

Mark A. Reynolds

Advances in hard and soft tissue regeneration continue to transform the practice of clinical periodontics and implant dentistry. This presentation reviews current concepts and progress in hard and soft tissue regeneration. Emphasis will be placed on the rationale and evidence supporting the clinical application of scaffolds, growth factors, lasers, and stem cells in regeneration. Special consideration will be given to emerging regenerative strategies for hard and soft tissue reconstruction.

Mark A. Reynolds, DDS, PhD, MA, *is Dean of the University of Maryland School of Dentistry. He is a diplomate and co-chairman of the American Board of Periodontology and a fellow of the American College of Dentists, the International College of Dentists, and the Pierre Fauchard Academy. Dr Reynolds is a consultant to research and regulatory agencies, including the National Institutes of Health and the Food and Drug Administration, and currently serves on the editorial boards of four scientific journals. His research focuses primarily on bone and periodontal regeneration, and he has contributed over 125 clinical and scientific articles.*

Emerging Technologies for Diagnosing Inflammatory Diseases: Are We There?

Joseph P. Fiorellini

At present, there is a lack of diagnostic tools that permit early detection of periodontitis and peri-implantitis; diagnosis is only possible following a significant change in traditional clinical parameters. Once the anatomical loss of bone has occurred, the disease has already progressed to an advanced stage, and regeneration may be difficult or impossible to accomplish. Therefore, it is essential that an early-detection diagnostic tool be developed to evaluate periodontal and peri-implant status change prior to irreversible bone loss. Advances in inflammatory disease research have assisted periodontics and implant dentistry in the diagnosis and intervention of disease. Overall, this understanding is leading to advances in gingival crevicular fluid and tissue diagnostics.

Joseph P. Fiorellini, DMD, DMSc, *is a professor and director of the Postdoctoral Periodontic Program of the Department of Periodontics at the University of Pennsylvania School of Dental Medicine. He serves on the editorial boards of the* Journal of Periodontology *and* The International Journal of Periodontics & Restorative Dentistry *and is the 1994 recipient of the American Academy of Periodontology's Young Investigator Award. Dr Fiorellini's research interests include wound healing around endosseous implant materials, systemic illness, treatment of failing implants, and periodontal diagnostics.*

Incorporating Technologic Advances in Inflammatory Disease Management for Clinical Practice

Paul S. Rosen

The role of the periodontist continues to evolve from someone who strictly manages disease with anti-infective/resective approaches to a clinician who capitalizes on advancements in regenerative medicine, including biologics, scaffolds, and biostimulation. This course will examine how technology impacts the ways we manage our patients today and will highlight technologic advancements that are helping to redefine a hopeless prognosis for failing teeth and dental implants.

Paul S. Rosen, DMD, MS, *maintains a private practice limited to periodontics, surgical implant placement, and regenerative therapy in Yardley, Pennsylvania. He also holds appointments as a clinical professor of periodontics at the University of Maryland School of Dentistry and a clinical professor of periodontics and dental implantology at Temple University Dental School. He is a diplomate of the American Board of Periodontology and serves as an examiner for the Board. Dr Rosen is the 2015 recipient of the American Academy of Periodontology's prestigious Master Clinician Award. He serves on the editorial boards of a number of dental journals; has authored and coauthored several articles on periodontal regeneration, dental implants, and interrelated orthodontic-periodontal care; and lectures nationally and internationally on these topics.*

Peri-Implantitis: Surgical Therapeutic Approaches Based on Peri-Implantitis Defects

Carlo Tinti and Stefano Parma-Benfenati

Peri-implantitis is an inflammatory disease mediated by bacterial infection that results in the loss of supporting bone, and it occurs with some frequency. Early interception is a crucial factor that can improve treatment prognosis. The correct diagnosis will facilitate preoperative selection of appropriate techniques for the maintenance of peri-implant tissue health. However, it is difficult to select an adequate treatment plan for peri-implantitis due to very limited scientific evidence. The primary objective of surgical treatment of peri-implantitis lesions is to gain access to the exposed implant surface in order to remove any granulomatous tissue and de-

contaminate the implant surface. Additionally, it is often necessary to reconstruct the lost periodontal tissues, even though the process of reosseointegration is not currently considered predictable in humans. The morphology of the peri-implantitis defect dictates the therapeutic approach and presents a guideline for clinical management. The suggested therapeutic solutions in this presentation are derived from clinical experience and could be a useful guide for clinicians. Surgical approaches should be selected based on defect diagnosis and clinical expectations. Several peri-implantitis cases with short- and long-term follow-ups will be presented, along with descriptions of the strategies, clinical protocols, and techniques implemented in each case.

Carlo Tinti, MD, DDS, *maintains a private practice devoted to periodontology and implant dentistry in Flero, Italy. He is an active member of the Italian Society of Periodontology and the Italian Academy of Restorative Dentistry.*

Stefano Parma-Benfenati, MD, DDS, MScD, *is a visiting professor of periodontology at Torino University and a teaching professor of oral surgery and pathology at Parma University in Italy. He is an active member of the Italian Society of Periodontology and a coauthor of many book chapters and articles. He maintains a private practice limited to periodontology and implantology in Ferrara, Italy.*

FRIDAY, JUNE 17

Session I. The Ceramic Solution: Premium Esthetics for Longevity

Moderated by Daniel Nathanson

Daniel Nathanson, DMD, MSD, *is a professor and chairman of the Department of Restorative Sciences and Biomaterials at Boston University School of Dental Medicine. He is a past president of the American Academy of Esthetic Dentistry, a fellow of the Academy of Prosthodontics and the Academy of Dental Materials, and a member of the American College of Prosthodontists, the International Association for Dental Research, the Society for Color and Appearance in Dentistry, and other organizations. Dr Nathanson coauthored a book on esthetic dentistry and has published extensively. He lectures nationally and internationally and maintains a prosthodontics practice in Boston.*

The "Last" Critical Pink Interface: Limitations, Options, Solutions

David A. Garber

Cross-disciplinary interface planning has become an integral part of restorative esthetic dentistry, in particular regarding implants. In 2016, it remains essential to combine "white" tooth esthetics with "pink" gingival aspects in lip-generated smile designs. Our present understanding of the biologic limitations has resulted in novel alternative protocols to overcome these remaining esthetic issues. Preemptive cone-beam computed tomography (CBCT) and 3D computer-aided design/computer-assisted manufacturing (CAD/CAM) planning of soft and hard tissue procedures, implant placement, ridge reduction, and restorative design now utilize innovative protocols for the entire restoration from top to bottom—implant, abutment, and crown. This program will address prognostic 3D planning of the complete procedure, protocols to overcome biologic esthetic limitations for the single implant, the current relevance of artificial prosthetic gingivae, vital root submergence, periodontal osseous resective surgery to optimize esthetics, partial extraction therapy, and the root membrane technique.

David A. Garber, DMD, *is one of the internationally recognized multidisciplinary educators known as "Team Atlanta." As a dual-trained clinician, he holds appointments as a professor in the Departments of Periodontics and Oral Rehabilitation at the Medical College of Georgia and as a clinical professor in the Department of Prosthodontics at Louisiana State University and in the Department of Restorative Dentistry at the University of Texas at San Antonio. Dr Garber has received numerous awards and honors and is an honorary member of the Kois Center for Advancing Dentistry Through Science. He is a past president of the American Academy of Esthetic Dentistry (AAED) and has served on the boards of both the AAED and the American Academy of Fixed Prosthodontics. He is a former editor of the* Journal of Esthetic Dentistry *and coauthor of* Bleaching Teeth *(Quintessence, 1987),* Porcelain Laminate Veneers *(Quintessence, 1988),* Porcelain & Composite Inlays and Onlays *(Quintessence, 1994), and* Complete Dental Bleaching *(Quintessence, 1995). He has published more than 60 articles and textbook chapters.*

Reflecting Personality in Smile Design

Galip Gürel

While part of the esthetic goal is to create the "wow" effect, some results may fail to meet the patient's expectations due to disharmony between the smile design and the patient's personality. The patient may feel that the restored teeth do not really "belong" to him or her. Without the proper knowledge, the origin of this disharmony can be difficult to identify. For decades, dental clinicians have sought to harmonize the shapes of the teeth with the entire face based on parameters such as gender, personality, and age; however, truly successful results have been elusive. Most of the smiles are being designed by the dentist or the ceramist. The aim of this lecture is to present a novel concept that involves the creation of a customized personal image expressing a person's sense of identity. This concept, called the *Visagism concept*, helps dental clinicians provide restorations that account not only for esthetics but also for the psychosocial features of the created image, which affects the patient's emotions, sense of identity, behavior, and self-esteem.

Galip Gürel, DDS, MSc, *is a visiting professor at the New York University College of Dentistry, the Aix-Marseille University Faculty of Dentistry in France, and the Yeditepe University Institute of Health Sciences in Istanbul. He is one of the founders and honorary president of the Turkish Academy of Esthetic Dentistry as well as a past president of the European Academy of Esthetic Dentistry. In 2014, Dr Gürel received the Smigel Prize in Aesthetic Dentistry from the New York University College of Dentistry. He lectures internationally on esthetic dentistry and is the author of* The Science and Art of Porcelain Laminate Veneers *(Quintessence, 2003), which has been translated into 12 languages. He maintains a private practice specializing in esthetic dentistry in Istanbul.*

Integration of Esthetic Dentistry in Routine and Complex Prosthodontics

Kenneth A. Malament

Ceramics are the most consistently predictable esthetic dental materials. Metal-ceramics have long been the "state of the art" materials for complex implant prosthodontics; however, monolithic all-ceramic materials have become increasingly popular because they do not chip as easily as bilayered ceramic materials, thereby ensuring more long-term success. Bilayered materials were developed to improve ceramic color and marginal fit, but despite substantial improvements in material strength and toughness, they still fail at relatively high rates because of breakage and chipping. The lithium disilicate e.max (Ivoclar Vivadent) and zirconia monolithic all-ceramic materials are changing dentistry and the expectation for long-term ceramic survival. Ultimately, crown performance is based on a complex set of interactions between crown material and geometry, the characteristics of the support structure of the cement and crown, and the clinical loading history. This lecture will present original research on the clinical behavior of over 5,000 all-ceramic restorations. Life history and fracture rates were studied over 20 years in relationship to factors that might affect success.

Kenneth A. Malament, DDS, MScD, *maintains a private practice limited to prosthodontics in Boston. He also serves as a clinical professor and course director in the Postgraduate Department of Prosthodontics at Tufts University. Dr Malament was on the research and development teams for two different well-known ceramic products and has developed instrumenta-*

tion used in clinical practice. He is a past president of the American Board of Prosthodontics, the Greater New York Academy of Prosthodontics, the Northeastern Gnathological Society, and the Northeast Prosthodontic Society; a fellow of the American College of Prosthodontists, the Academy of Prosthodontics, the Greater New York Academy of Prosthodontics, and the Northeastern Gnathological Society; and an active member of the International College of Prosthodontists, the American Academy of Fixed Prosthodontics, the American Academy of Esthetic Dentistry, and the Academy of Osseointegration.

Creating Enduring Ceramic Restorations: Four Important Aspects to Consider

Robert R. Winter

To maintain proper function and create enduring restorations, four aspects require careful consideration. First and foremost is the analysis of the patient's presenting occlusal scenario: The functional, parafunctional, and bruxing forces that will be applied to the restoration must be evaluated. Second, the choice of restorative material and the material thickness required for strength are influenced or dictated by the occlusal forces that are present. Third, using the correct tooth-preparation design is essential to maximize the longevity of the material selected. Last, specific techniques for intraoral occlusal adjustment should be followed to prevent microfractures in the ceramic that could decrease the restoration's longevity. Participants will learn how to design the occlusal scheme of the restoration, choose the appropriate ceramic for predictable longevity, design the tooth preparation to meet thickness requirements for the selected ceramic, and adjust and polish the ceramic restorations intraorally to avoid microfractures.

Robert R. Winter, DDS, *is a member of the faculty of Spear Education in Scottsdale, Arizona, and the founder of the Winter Laboratory in Laguna Beach, California. He also serves on the faculty at the University of Washington, the University of Southern California, and the Midwestern University College of Dental Medicine in Glendale, Arizona. Dr Winter is the immediate past president of the American Academy of Esthetic Dentistry and serves on the editorial boards of the* Journal of Esthetic and Restorative Dentistry *and* The International Journal of Periodontics & Restorative Dentistry. *He is involved in research and product development pertaining to new dental materials and has taught more than 700 didactic, clinical, and technical courses in over 40 countries. He maintains a private practice limited to prosthodontics in Newport Beach, California.*

Ceramics and Adhesion—An Evolution

Markus B. Blatz

The evolution of ceramic materials and adhesive technologies has shifted traditional treatment paradigms and offers a new range of treatment options that are not only more esthetic but also less invasive and longer-lasting, enabling true patient-centered care. These new materials and technologies can be applied for a wide range of treatment options, from conservative resin-bonded laminate veneers to full-mouth implant-supported rehabilitations. Concurrently, digital technologies have drastically altered workflows, treatment planning, restoration fabrication, and clinical protocols. The crucial aspects for successful integration and long-term clinical success of modern ceramic materials are knowledge and understanding of the latest scientific research, proper case selection and treatment planning, and updated laboratory and clinical handling protocols, such as preparation, cementation, and resin bonding. This program will provide an update on the science of dental esthetics, ceramics, adhesion, and computer-aided design/computer-assisted manufacturing (CAD/CAM) technologies for long-term clinical success with tooth- and implant-supported restorations.

Markus B. Blatz, DMD, PHD, Dr med dent habil, *is a professor of restorative dentistry and chairman of the Department of Preventive and Restorative Sciences at the University of Pennsylvania School of Dental Medicine in Philadelphia, where he also founded the Penn Dental Medicine CAD/CAM Ceramic Center. He is the cofounder and current president of the International Academy for Adhesive Dentistry, a fellow of the American College of Dentists, and a member of multiple other professional organizations. He also serves on the editorial boards of numerous scientific dental journals and is a clinical associate editor of* Quintessence International. *Dr Blatz is the coauthor of* Evolution: Contemporary Protocols for Anterior Single-Tooth Implants *(Quintessence, 2014). He is the recipient of multiple teaching and research awards and has published and lectured extensively on dental esthetics, restorative materials, and implant dentistry.*

PFM Restorations—A Relic from Another Era or Still the Standard? Clinical Considerations with Special Regard to Implant-Supported and Posterior Restorations

Konrad H. Meyenberg

Porcelain-fused-to-metal (PFM) crowns have long been the state-of-the-art restorations with regard to the best compromise between longevity and esthetics. However, this concept has been challenged first by noninvasive treatment modalities and second by technically simpler and less expensive all-ceramic crowns, mainly monolithic high-strength materials. This presentation will focus on two aspects: the optimal restoration of compromised posterior teeth and the restoration of posterior implants. The selection process and the potential of PFM restorations, including specific advantages in regard to the potential for reintervention, will be discussed by means of clinical cases and studies under these key topics: exploring and understanding the drawbacks of the present materials and overcoming current preconceptions by using smart approaches driven by an all-encompassing treatment concept.

Konrad H. Meyenberg, Dr med dent, *graduated from the University of Zurich in Switzerland, where he is now a senior lecturer of reconstructive dentistry. He is an active member of the European Academy of Esthetic Dentistry, the Academy of Osseointegration, and the Swiss Society of Reconstructive Dentistry and is certified as a specialist of reconstructive dentistry by the Swiss and European dental societies. He is also a reviewer and member of the editorial boards of* The International Journal of Periodontics & Restorative Dentistry, *the* International Journal of Esthetic Dentistry, *and* Implantologie. *Dr Meyenberg has presented at more than 500 congresses and events and has published numerous articles in the fields of esthetic dentistry, perioprosthodontics, and implant prosthodontics. He maintains a private practice focused on esthetic reconstructive dentistry in Zurich.*

Session II. Esthetic Management of Compromised Extraction Sites

Moderated by Joan Otomo-Corgel

Joan Otomo-Corgel, DDS, MPH, *is a clinical associate professor at the University of California, Los Angeles (UCLA) School of Dentistry and serves on the dental faculty of the Veterans Affairs Greater Los Angeles Health Care System. She is the immediate past president of the American Academy of Periodontology and a past president of the Western Society of Periodontology and the California Society of Periodontists. She is a member of numerous professional organizations, a fellow of the American College of Dentists, and the 1997 UCLA School of Dentistry Alumnus of the Year. Dr Otomo-Corgel lectures extensively on periodontal medicine, medical emergencies, over-the-counter dental products, and clinical periodontal topics and has contributed to more than 60 journals and textbooks. She maintains a private practice limited to periodontics, oral medicine, and implantology in Los Angeles, California.*

Ridge Preservation: Emerging Concepts and Clinical Indications

Christoph H. F. Hämmerle

Many teeth are extracted in dental practices every day; therefore, a common question for every dentist is how best to manage an extraction socket. A large body of research shows that if left to spontaneous healing, the ridge will lose about 50% of its horizontal volume within the first 6 to 12 months after tooth extraction. When preserving the ridge, both hard and soft tissue aspects

have to be taken into consideration. By applying newly developed methods to quantitatively assess volume changes of the ridge, it has become possible to evaluate advantages and disadvantages of different techniques for ridge preservation. Various new techniques for managing extraction sockets have recently been published, but some show controversial data. It appears that filling the socket with an appropriate grafting material and sealing the entrance to the socket with autogenous tissue (or suitable biomaterials) can prevent some if not most of the ridge collapse that occurs during the first 3 to 12 months following tooth extraction. The next step regarding ridge preservation is to identify the clinical situations in which these techniques render a clinical benefit for the patient and the clinician. Based on an overall comparison, a decision tree will be provided that outlines how best to manage various clinical situations regarding hard and soft tissue preservation of the ridge.

Christoph H. F. Hämmerle, Dr med dent, *is the director and chairman of the Clinic for Fixed and Removable Prosthodontics and Dental Materials Science and vice dean of the medical faculty for the Center for Dentistry at the University of Zurich in Switzerland. He is certified in both prosthodontics and periodontics. His clinical and research efforts focus on the comprehensive treatment of complex partially edentulous patients. Dr Hämmerle has published more than 150 original articles and lectures internationally. He is a past president of the European Association of Osseointegration and the current president of the Osteology Foundation.*

Biology Versus Technology: Which Prevails at the Extraction Site?

Lyndon F. Cooper

This presentation will focus on the clinical tension that exists between what technology offers dentists for managing implants in extraction sites and what biology defines as relevant outcomes. Three key points will be addressed: *(1)* which technologies are best used to define the condition of the extraction site and how these should be deployed for diagnosis and planning, *(2)* what technologies exist to overcome limitations at the extraction site and when these should be deployed in therapy, and *(3)* what technologies exist to overcome limitations presented in the restorative management of implant- or tooth-based replacement of extracted teeth. Clinical illustrations of our evidence base for treatment of compromised extraction sites will be provided during the discussion of these three points.

Lyndon F. Cooper, DDS, PhD, *is Associate Dean for Research and head of the Department of Oral Biology at the University of Illinois College of Dentistry. He is a diplomate of the American Board of Prosthodontics and served as the 2010 president of the American College of Prosthodontists (ACP). He received the ACP's 2004 Clinician/Researcher Award and the International Association for Dental Research's 2009 Distinguished Scientist Award for Prosthodontics and Implantology. Dr Cooper has led an innovative team in translational research evaluating the role of a variety of pro- and anti-inflammatory biomarkers as well as innovative medical device designs to create research-oriented clinical solutions for relevant patient care. He has published extensively and lectures nationally and internationally.*

Minimally Invasive Esthetic Site Development with Growth Factors

Marc L. Nevins

This presentation will provide a clinical update on minimally invasive approaches for esthetic implant site development. The use of recombinant human platelet-derived growth factor-BB (rhPDGF-BB) has accelerated the trend toward minimally invasive surgical procedures that preserve and enhance the esthetic foundation for implant-supported restorations. This program will present guidelines for incremental levels of flap elevation for implant site development, from flapless to open procedures. The use of growth factors has facilitated optimal hard and soft tissue regeneration with less invasive techniques. This course will provide a decision matrix for managing extraction site defects, including whether to raise a flap and how to sequence soft tissue grafting. Participants will also learn techniques for using rhPDGF-BB in combined hard and soft tissue grafting.

Marc L. Nevins, DMD, MMSc, *graduated from the Tufts University School of Dental Medicine and received his certificate for graduate training in periodontology and a Master of Medical Sciences degree in oral biology from the Harvard School of Dental Medicine, where he now serves as an assistant clinical professor of oral medicine, infection, and immunity. He is a diplomate of the American Board of Periodontology and also serves as the coeditor-in-chief of* The International Journal of Periodontics & Restorative Dentistry. *Dr Nevins maintains a private practice limited to periodontics and implant dentistry in Boston and conducts research in the clinical applications of tissue engineering for regenerative periodontics and implant dentistry.*

Successful Management of Thin Soft Tissue Biotype

Tomas Linkevičius

The role of soft tissue thickness is well established in esthetic treatment. It is known that thin soft tissues present an unfavorable situation for implant placement, crestal bone stability, and subsequent prosthetic treatment. Therefore, guidelines for the successful management of implant placement in patients with thin soft tissue biotype are necessary for satisfactory clinical outcomes.

Tomas Linkevičius, DDS, Dip Pros, PhD, *received his DDS from Kaunas University in Lithuania and completed postgraduate studies in prosthodontics at Vilnius University in Lithuania. He earned a PhD degree at Riga Stradins University in Latvia. Dr Linkevičius lectures internationally on the topics of peri-implant soft tissue and prosthetic treatment of dental implants and is the author or coauthor of more than 20 publications in peer-reviewed international dental journals and books. He is on the staff of the Vilnius Implantology Center, a multidisciplinary practice.*

Correction and Avoidance of Esthetic Disfigurements on Teeth and Implants

Burton Langer

This presentation will illustrate an array of soft and hard tissue surgical procedures designed to avoid the esthetic defects that can arise from dental disease and/or trauma. This essential treatment sequence is often crucial to the final outcome. Unfortunately, there are situations in which implant placement results in esthetic nightmares. Reversal of these unsightly results to a favorable outcome will be highlighted. In concert with the regenerative techniques, there are many steps that can be undertaken by our restorative colleagues that may preclude the need for more surgical procedures and thereby simplify the treatment for the patient.

Burton Langer, DMD, MSD, *is a diplomate of the American Board of Periodontology and was one of the first periodontists trained in osseointegration by Professor Per-Ingvar Brånemark. Dr Langer has developed several new modalities of therapy, such as the subepithelial connective tissue graft for ridge augmentation and recession on teeth, the wide implant, and various flap procedures for implants, which have become standard methods of treatment. He lectures extensively throughout the world and has written more than 50 articles and chapters for six textbooks. He received the Isador Hirschfeld Award for Clinical Excellence in 1992 and the American Academy of Periodontology Master Clinician Award in 1997.*

Augmentation: The Solution for Long-Term Soft Tissue and Bone Preservation for Compromised Extraction Sites in the Esthetic Zone

Ueli Grunder

Insufficient soft tissue is the main reason for compromised results in the esthetic zone. However, because the soft tissue has to be supported by a sufficient amount of bone, our focus must also be on bone. Because there is no bone-preservation technique currently available for use at the time of tooth extraction, augmentation procedures are still needed. Appropriate bone and soft tissue engineering in all three dimensions enhances the esthetic performance of long-lasting

restorations that blend in and emerge from the peri-implant sulcus in harmony with the neighboring teeth. Upon completion of this lecture, participants should be able to select the ideal technique in compromised sites in the esthetic zone, understand the need for augmentation procedures in many different situations, and know the scientific data regarding long-term esthetics with implants.

Ueli Grunder, DMD, *is certified as a specialist in fixed prosthodontics by the Swiss Society of Prosthodontics and in implantology by the Swiss Society of Oral Implantology. He is a past president of the Swiss Society of Oral Implantology and the European Academy of Esthetic Dentistry. He lectures internationally on the surgical and prosthetic aspects of implant dentistry and maintains a private practice in Zollikon-Zurich, Switzerland. Dr Grunder has published numerous papers and a book,* Implants in the Esthetic Zone: A Step-by-Step Treatment Strategy *(Quintessence, 2015).*

Session III. Periodontal Regeneration: Saving Teeth

Moderated by Chris R. Richardson

Chris R. Richardson, DDS, MS, *maintains a private practice limited to periodontics in Richmond, Virginia. He is a member of the clinical faculty of the Graduate Periodontics Department at the Virginia Commonwealth University Medical College. Dr Richardson has published several articles, lectures nationally, and currently serves as a reviewer for* The International Journal of Periodontics & Restorative Dentistry. *He is an active member of the American Academy of Periodontology, the Academy of Osseointegration, the Southern Academy of Periodontology, the American Dental Association, the Virginia Dental Association, and many organizations at the local level.*

Factors Affecting Success in Periodontal Regeneration

Pamela K. McClain

Regeneration of the periodontium remains a key goal in periodontal therapy. Research continues to provide clinicians with new materials and techniques that enhance predictability and long-term success. However, there are a number of other factors that impact outcomes. This course will address the areas that appear to have significant influence on treatment success, including therapist- and patient-related factors, surgical considerations, defect-specific factors, and postsurgical management and maintenance.

Pamela K. McClain, DDS, *is an associate clinical professor in the Department of Surgical Dentistry at the University of Colorado School of Dental Medicine. She is a diplomate of the American Board of Periodontology and a past president of the American Academy of Periodontology and the Rocky Mountain Society of Periodontists. She also served on the Council of the American Academy of Restorative Dentistry and has received a number of prestigious awards for her research and other accomplishments. Dr McClain lectures on a variety of topics throughout the United States and abroad and has published more than 20 journal articles and textbook chapters. She maintains a private practice in periodontics that incorporates clinical research.*

Surgical Approaches to Maximize Esthetic Periodontal Regenerative Outcomes

Giulio Rasperini

Classical periodontal surgical techniques and their combination with new flap designs for plastic surgery, using an appropriate suturing approach and the indicated biomaterials, promote predictable periodontal regeneration. The aim of this innovative surgical approach is to allow blood-clot stabilization and to promote better wound healing. Guided tissue regeneration, periodontal tissue engineering by means of growth factors, and modified and simplified papilla-preservation techniques provide innovative solutions to address high-level esthetic requirements. This presentation will highlight reconstructive approaches and discuss the importance of careful presurgical treatment planning in avoiding postoperative esthetic failures. In addition, the presentation will emphasize the importance of the multidisciplinary approach, including periodontal, prosthetic, orthodontic, and surgical parameters. The presentation will conclude with the demonstration of key elements of surgical techniques, including flap design, suturing techniques, and wound management, that are critical for enhancing periodontal wound repair and maximizing esthetic and clinical outcomes.

Giulio Rasperini, DDS, *is a professor of periodontology in the Department of Biomedical, Surgical, and Dental Sciences at the University of Milan in Italy and the Ramfiord Visiting Assistant Professor at the University of Michigan in Ann Arbor. He is an active member of the Italian Society of Periodontology and the European Academy of Esthetic Dentistry and a fellow of the International Team for Implantology. Dr Rasperini is a member of the editorial board of* The International Journal of Periodontics & Restorative Dentistry *and the author of several publications focused on periodontology and implantology. He has received several awards for his research, most recently the 2012 R. Earl Robinson Periodontal Regeneration Award from the American Academy of Periodontology Foundation and a 2013 Align Research Award. He maintains a private practice limited to periodontics and implant therapy in Piacenza, Italy.*

Advanced Periodontal Regeneration or Implant Therapy? An Everyday Dilemma

Giano Ricci

Treatment of advanced periodontal cases has changed significantly due to implants. Successful long-term outcomes for therapy in strictly periodontal cases depend on a proper diagnosis and the adequate execution of surgical procedures, the combination of which will allow for a good prognosis even for teeth that are extremely compromised. The sophisticated clinician must avoid indiscriminate extraction of the natural dentition for the placement of implants. The decision-making process of whether to perform advanced periodontal therapy or extract teeth and place implants is an everyday dilemma. This presentation will discuss the periodontal guidelines for making the proper decision and choosing between these therapeutic modalities.

Giano Ricci, MD, DDS, MScD, *has authored numerous papers on topics related to periodontics as well as a recent textbook,* Periodontal Diagnosis and Therapy *(Quintessence, 2014). He serves as an associate editor for the* European Journal of Esthetic Dentistry, *a reviewer for* The International Journal of Periodontics & Restorative Dentistry, *and a section editor for the* Rivista Italiana di Stomatologia. *He is an active member of many prestigious international scientific societies, the current president of the European Academy of Esthetic Dentistry, and a cofounder and past president of the Italian Society of Periodontology. He lectures extensively in Europe, the United States, and Japan. Dr Ricci maintains a multidisciplinary private practice in Florence, Italy.*

Session IV. Orthodontics for Optimal Esthetics: Face, Smile, and Teeth

Moderated by Serge Dibart

Serge Dibart, DMD, *is a professor and chair of the Department of Periodontology at the Boston University Henry M. Goldman School of Dental Medicine. His research focuses on accelerated orthodontic tooth movement, and he is the developer of Piezocision. He has published numerous scientific articles in peer-reviewed journals and is the author of four books. Dr Dibart lectures nationally and internationally and maintains a private practice limited to periodontics and implant dentistry in Boston.*

Orthodontics Has Changed: What That Really Means for the Dental Team

David M. Sarver

Wrapped in the inscrutability of cephalometric analysis and its complexities, orthodontics has long been intimidating. But orthodontic diagnosis focuses on the same things that restorative dentists do—the coordination of the face, the smile, and

the dental components for a complete approach to esthetic planning. Understanding the skeletal, dentoalveolar, and soft tissue changes that occur over time gives clinicians a great advantage in attaining the types of long-term esthetic outcomes that cannot be achieved without this interdisciplinary approach. During this presentation, participants will learn about macro-, mini-, and micro-esthetic evaluation, long-term hard and soft tissue maturation, the direct implication of implant and esthetic planning, and digital coordination strategies for the esthetic team.

David M. Sarver, DMD, MS, *is a diplomate of the American Board of Orthodontics and a member of the Edward H. Angle Society of Orthodontists. He holds the appointment of adjunct professor at both the University of North Carolina and the University of Alabama at Birmingham. He has authored more than 60 scientific articles, 14 book chapters, and a book,* Esthetics in Orthodontics and Orthognathic Surgery *(Mosby, 1998). He also coauthored the surgical text* Contemporary Treatment of Dentofacial Deformity *(Mosby, 2002) and the 4th and 5th editions of William R. Proffit's classic textbook,* Contemporary Orthodontics *(Mosby, 2007, 2012). An article he wrote with Marc Ackerman on smile analysis won the 2004 B. F. Dewel Award for the best clinical article in the* American Journal of Orthodontics & Dentofacial Orthopedics. *He maintains a private practice limited to orthodontics in Vestavia Hills, Alabama.*

Autotransplantation of Premolars to Replace Traumatized Maxillary Incisors in the Growing Patient

Jim Janakievski

Options for replacing missing, ankylosed, or nonrestorable teeth in the anterior maxillary region are limited in the growing patient. Treatment is usually aimed at developing the alveolar ridge for future dental implant placement. Autotransplantation of a premolar to the central incisor site offers a permanent tooth replacement using a natural tooth to achieve the optimal esthetic and functional outcome. This presentation will review the surgical, orthodontic, and restorative considerations for autotransplantation. Attendees will learn the appropriate time to plan for tooth autotransplantation, surgical considerations for an optimal outcome, proper orthodontic positioning of the transplanted tooth, and how to restore a transplanted premolar so that it mimics a central incisor.

Jim Janakievski, DDS, MSD, *completed his dental degree followed by a general practice residency at the University of Toronto. He later pursued postgraduate training at the University of Washington, where he continues to teach as an affiliate assistant professor in the Department of Periodontology. Dr Janakievski is a diplomate of the American Board of Periodontology and a member of the American Academy of Esthetic Dentistry. He has been invited to present at national and international conferences and is a reviewer for several dental journals. He has published articles on the topics of dental implants and tooth autotransplantation and maintains a private practice limited to periodontology, implant dentistry, and oral plastic surgery in Tacoma, Washington.*

Orthodontics for the Periodontally Compromised Patient

Roger J. Wise

The key to achieving extraordinary treatment outcomes in the adult orthodontic patient is a multidisciplinary team working together. Esthetics-driven outcomes are dependent on how the clinician addresses the unique periodontal considerations of each patient, which may affect the clinician's ability to meet patient expectations. The clinician must sit and listen to the patient and communicate the art and creativity involved in attaining a natural-looking smile where there are periodontal involvements. Sometimes the least invasive treatment can be the best and most natural one. In these cases, success is a satisfied patient with great esthetics and function with a stable, healthy periodontium.

Roger J. Wise, DDS, *is a lecturer in the Department of Orthodontics at Boston University and a former faculty member and lecturer in the Departments of Orthodontics and Periodontics at the Harvard School of Dental Medicine. One of the few dental specialists in the world fully trained in both periodontics and orthodontics, he has presented more than 200 lectures throughout the United States and abroad on adult orthodontics and the interrelationship of periodontics, orthodontics, and restorative dentistry. Dr Wise has published four textbook chapters and numerous papers in peer-reviewed journals. He served for 15 years as a consultant for the* American Journal of Orthodontics & Dentofacial Orthopedics *and is a diplomate of the American Board of Periodontology. He practices periodontics, adult orthodontics, and implantology at three locations in the greater Boston metropolitan area.*

SATURDAY, JUNE 18

Session I. Prevention, Treatment, and Management of Peri-Implantitis: Myth or Reality?

Moderated by Louis F. Rose

Louis F. Rose, DDS, MD, *is a clinical professor of periodontics at the University of Pennsylvania School of Dental Medicine and a professor of medicine and surgery at the Drexel University College of Medicine. He is a diplomate of the American Board of Periodontology, serves on the editorial board of several peer-reviewed journals, and is the editor-in-chief of the* Compendium of Continuing Education in Dentistry. *Dr Rose lectures nationally and internationally on periodontics, implant dentistry, and periodontal medicine and has published extensively on these subjects, including two textbooks:* Internal Medicine for Dentistry *(Mosby, 1983) and* Periodontics: Medicine, Surgery, and Implants *(Elsevier, 2004). He is the recipient of the 2013 Gold Medal Award from the American Academy of Periodontology and maintains a private practice limited to periodontics and implant dentistry in Philadelphia.*

Alternative Mechanisms for Marginal Breakdown Around Oral Implants

Christer Dahlin

Classifying marginal bone loss as an inflammatory periodontal disease is no longer the only theory behind its cause. A growing number of theories have emerged in recent years to explain the process of oral implant failure. This presentation will discuss the current knowledge of the healing mechanisms controlling implant-host interactions, thus interpreting peri-implant bone loss as an immunologic and patient-related complication rather than a primary disease process. Possible changes in treatment protocols will also be presented.

Christer Dahlin, DDS, PhD, *is a professor of oral surgery and guided tissue regeneration in the Department of Biomaterials Science, Institute for Clinical Sciences at Sahlgrenska Academy of the University of Gothenburg in Sweden. He is also a senior consultant of oral and maxillofacial surgery, with a focus on implant treatment, at the NÄL Medical Centre Hospital in Trollhättan, Sweden. He is a board member of the Osteology Foundation and a member of the editorial board of several respected journals. Dr Dahlin has more than 25 years of experience in implant treatment and related research and is considered one of the pioneers in the development of guided bone regeneration (GBR), which remains his main focus within research. He has published numerous articles and textbooks and travels worldwide to lecture, conduct research, and teach on GBR and other implant-related topics.*

Peri-Implantitis—Prevalence, Risk Factors, and Treatment

Tord Berglundh

Peri-implantitis is characterized by bleeding and/or suppuration on probing, together with loss of supporting bone. Recent evaluations on the prevalence of the disease indicate that about 15% to 20% of patients with implants present with significant peri-implantitis problems. However, this assessment depends on case definitions. Patients with a history of severe periodontitis have a higher risk of developing peri-implantitis. This presentation will discuss new data from large clinical evaluations on treatment outcomes

in implant dentistry. Results from recent studies on peri-implantitis and periodontitis using experimental protocols and human samples will be presented, and important differences between the two conditions will be described. Other topics addressed will include the current understanding of the onset and progression of peri-implantitis, the role of implant surface characteristics in relation to the disease, and the surgical therapy of peri-implantitis as well as the treatment outcomes reported in clinical trials and experimental studies.

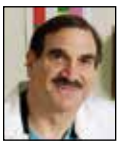
Tord Berglundh, DDS, PhD, *is professor and chairman of the Department of Periodontology at Sahlgrenska Academy of the University of Gothenburg in Sweden. He is an associate editor of the textbook* Clinical Periodontology and Implant Dentistry *(Wiley-Blackwell, 2015) and of the journals* Clinical Oral Implants Research *and* Journal of Clinical Periodontology, *and he serves on the editorial board of several other journals. Dr Berglundh has received numerous awards and produced more than 190 scientific publications within the fields of dental implants, periodontology, immunology, genetics, tissue integration, and tissue regeneration.*

Cement-Induced Peri-Implantitis: Myth or Reality?

Alfonso Piñeyro

Cement-retained implant restorations have become increasingly popular due to their ability to manage esthetics, occlusion, and passive fit. However, evidence is emerging that suggests cementation procedures may have a detrimental effect on the health of peri-implant hard and soft tissues. This lecture will explore these issues through a science-based approach, highlighting problems with cement selection, application techniques, and implant abutment design. New technologies with respect to abutment modification and prosthetics will be discussed as an alternative to this problem.

Alfonso Piñeyro, DDS, *is currently an affiliate instructor in the Department of Restorative Dentistry at the University of Washington School of Dentistry, where his research focuses on dental implants. He is a past president of the Washington State Society of Prosthodontists and is a member of the American College of Prosthodontists and the American Prosthodontics Society. Dr Piñeyro has authored several publications in peer-reviewed dental journals and lectures for organizations such as the American Academy of Periodontology, the American Academy of Implant Dentistry, the American Academy of Fixed Prosthodontics, and the American College of Prosthodontists. He maintains a private practice limited to prosthodontics in Seattle.*



Treatment of Peri-Implantitis

Stuart J. Froum

The prevalence of peri-implantitis (peri-implant inflammation accompanied by bone loss) is increasing. Treatment for this disease varies from nonsurgical therapy to regenerative procedures and even implant removal. This presentation will discuss treatment options and examine their clinical success and predictability. It will also present the results of a case series of over 170 implants consecutively treated with a specific regenerative protocol. In addition, the key factors necessary for successful treatment of peri-implantitis will be discussed.

Stuart J. Froum, DDS, *is a clinical professor and the director of clinical research in the Department of Periodontology and Implant Dentistry at the New York University Krieser Dental Center. He is a past president of the American Academy of Periodontology (AAP) and the Northeast Society of Periodontics and a diplomate of the American Board of Periodontology. He is on the Continuing Education Oversight Committee of the AAP and the Research Committee of the Academy of Osseointegration. Dr Froum is a recipient of the Northeastern Society of Periodontists' 1999 Isador Hirschfeld Award and the AAP's 2002 Clinical Research Award and 2006 William J. Gies Award. He is the editor of the book* Dental Implant Complications: Etiology, Prevention, and Treatment *(Wiley-Blackwell, 2010) and maintains a private practice limited to periodontics and implant dentistry in New York City.*

Predictable Treatment of Peri-Implantitis Using Er:YAG Laser–Water Spray Micro-Explosions

Atsuhiko Yamamoto

When treating peri-implantitis, it is extremely important to perform debridement, sterilization, and lipopolysaccharide detoxification of the contaminated implant surface in order to obtain reosseointegration. Unlike conventional methods, our treatment method uses the micro-explosions created when water is absorbed by the erbium laser to simultaneously debride, sterilize, and detoxify the implant surface without causing any damage. This method is therefore the only treatment option that can completely restore the implant surface to its precontamination state.

Atsuhiko Yamamoto, DDS, PhD, *is a lecturer at the Japan Institute for Advanced Dental Studies and a visiting lecturer at the Tokyo Medical and Dental University and the Asahi University School of Dentistry in Mizuho, Japan. He is the president of the Perio-Implant Hospital AUTIS in Osaka, Japan, and a member of the Academy of Osseointegration, the Japanese Society of Oral Implantology, the Japanese Academy of Clinical Periodontology, and the World Federation for Laser Dentistry; he is also an international member of the American Academy of Periodontology.*

Prevention of Peri-Implant Bone Loss Through Implant Positioning

Hom-Lay Wang

Proper implant positioning not only ensures good esthetics and long-term stability but can also prevent implant complications such as peri-implant bone loss. This presentation will therefore discuss three key points: *(1)* how to avoid implant complications and maintain long-term stability, *(2)* how to achieve proper implant positioning and thereby esthetic treatment outcomes, and *(3)* how to use various techniques (soft tissue, hard tissue, and restorative aspects) to enhance long-term stability.

Hom-Lay Wang, DDS, MSD, PhD, *is the Collegiate Professor of Periodontics and the director of graduate periodontics at the University of Michigan School of Dentistry. He has published more than 20 book chapters and 250 scientific articles and is a fellow of the American College of Dentists, a diplomate and former director of the American Board of Periodontology, and a diplomate and former president of the International Congress of Oral Implantologists. He serves as an associate editor for* The International Journal of Oral & Maxillofacial Implants *and the* International Chinese Journal of Dentistry *and serves on the editorial boards of many other esteemed publications. Dr Wang is the recipient of the 2004 Charles E. English Annual Award in Clinical Science and Techniques and the 2007 Morton L. Perel Annual Award for Dental Implant Educators, among several others.*

Session II. Treatment Planning for Complex Cases Involving Dental Implants and Natural Teeth

Moderated by Sergio De Paoli

Sergio De Paoli, MD, DDS, *is an assistant professor of periodontology at the University of Ancona in Italy, where he also maintains a private practice limited to periodontics. He received his MD degree from the University of Bologna in Italy and his DDS from the University of Geneva in Switzerland before completing his postgraduate studies in periodontology at Boston University. Dr De Paoli is a coeditor of the Italian edition of* The International Journal of Periodontics & Restorative Dentistry.

Implant Therapy in Periodontally Noncompromised Patients: What Factors Are Important for Successful Long-Term Outcomes?

Daniel Buser

This lecture will discuss the relevant factors for achieving successful long-term outcomes with implant therapy in periodontally noncompromised patients. It will present data from various clinical studies performed at the University of Bern that have shown excel-

lent long-term results with a low risk for biologic complications such as peri-implantitis. First, the surgical strategies used by our group will be presented, which include evidence-based treatment approaches and the exclusive use of biomaterials with a proven record based on preclinical and clinical studies. Second, the most important basic surgical rules to ensure long-term stability of dental implants will be discussed, including *(1)* implant placement in a correct 3D position, often called *restoration-driven implant placement*; *(2)* circumferential implant anchorage in bone with an oral and buccal bone wall of at least 1 to 2 mm; and *(3)* positioning of the implant in keratinized mucosa. Step-by-step surgical procedures for various clinical situations will be shown with case reports documented by clinical and radiographic studies.

Daniel Buser, DDS, Dr med dent, *is professor and chairman of the Department of Oral Surgery at the University of Bern in Switzerland. He has served as president of the European Association for Osseointegration, the Swiss Society of Oral Implantology, and the Swiss Society of Oral Surgery and Stomatology, and he is the immediate past president of the International Team for Implantology (ITI). He has received scientific awards from several professional organizations such as the ITI, the Academy of Osseointegration (AO), the American Academy of Periodontology, and the American Association of Oral and Maxillofacial Surgery. Recently, he accepted an honorary professorship from the University of Buenos Aires (2011), the Brånemark Osseointegration Award from the AO Foundation (2013), and an Honoris Causa Award from the University of Szeged (2014). Dr Buser lectures widely at international conferences and has authored more than 300 publications and several textbooks.*

Long-Term Observations of Periodontally Compromised Patients

Myron Nevins

Longevity of the therapeutic outcome is important to every patient. The predictability offered by osseointegration requires clinicians to reassess how they make decisions regarding the natural dentition. Great progress has also been made with periodontal regeneration, resulting in the successful treatment of many questionable teeth. Factors to consider include the state of repair of the tooth, the periodontal prognosis, and the endpoint goals of the patient. Specific problem-based treatment plans need to be developed to achieve optimal esthetics in even the most compromised cases. These decisions benefit from multidisciplinary contributions.

Myron Nevins, DDS, *is the coeditor-in-chief of* The International Journal of Periodontics & Restorative Dentistry *and an associate clinical professor of periodontology at the Harvard School of Dental Medicine. He also holds the appointment of clinical professor of periodontics at the University of Pennsylvania School of Dentistry and Temple University Kornberg School of Dentistry. Dr Nevins is a past president of the American Academy of Periodontology and a former director and chairman of the American Board of Periodontology, where his contributions have been recognized with the Gold Medal and the Master Clinician Awards. He maintains a private practice limited to periodontics and implantology in Swampscott, Massachusetts, and is the founder and president of Perio Imp Research, Inc.*

Successful Long-Term Endodontics for the New Millennium

Richard Herman

Endodontic therapy has demonstrated increased success as a result of new technology and techniques. Recent literature reports success rates in the range of 90% to 95%. These rates apply not only for conventional endodontics but also for retreatment and microsurgery. This presentation will show how correct treatment planning will result in successful endodontic treatment of complex cases involving natural teeth.

Richard Herman, DDS, *is an adjunct clinical professor of postdoctoral endodontics at Nova Southeastern University College of Dental Medicine in Fort Lauderdale, Florida. He previously served as the chief of endodontics in the Department of Dental Medicine at North Shore University Hospital in Manhasset, New York, and as an Attending in the General Practice Residency program at Long Island Jewish Medical Center. Dr Herman is a diplomate of the American Board of Endodontics and a fellow of the American College of Dentists. He has been in private practice for over 40 years and is certified to conduct lectures and seminars in endodontics.*

Dentoalveolar and Alveoloskeletal Bone Engineering: Expanding the Limits and Reversing the Risks

George A. Mandelaris

Patients who desire more ideal facial esthetics and better function may request treatment options that risk placing the teeth outside the alveolar walls. Surgically facilitated orthodontic therapy to alter the dentoalveolar and/or alveoloskeletal bone has the potential to optimally position the roots of the teeth for facial esthetics. Space may be appropriated to enable the restorative dentist to create natural tooth size and morphology in the worn, eroded, or otherwise altered dentition. This lecture will present surgical, orthodontic, and restorative perspectives using a bottom-up, restoratively driven approach in the management of complex interdisciplinary therapy.

George A. Mandelaris, DDS, MS, *is an adjunct clinical assistant professor in the Department of Graduate Periodontics at the University of Illinois College of Dentistry in Chicago. He is a diplomate of the American Board of Periodontology (ABP) and has served as an examiner for the oral portion of the ABP certification process. Dr Mandelaris is a past president of the Illinois Society of Periodontists, and he lectures nationally and internationally. He maintains a private practice limited to periodontology, dental implants, and bone reconstruction surgery in Park Ridge and Oakbrook Terrace, Illinois.*

Treating Esthetic Defects Around Implants and Teeth

Dennis P. Tarnow

Treatment planning for complex cases requires a high level of knowledge and skill from the treating team. Proper orchestration, sequencing, and timing of procedures are necessary for a successful outcome. The final goal for the case, in conjunction with the patient's needs and clinical situation, will direct the course of treatment. The team must manage complicated decisions such as whether to save or extract compromised teeth, whether implants should be placed immediately or using a delayed protocol, whether multiple implants should be placed in the esthetic zone, when and how to implement orthodontics if necessary for site development, whether pink ceramic should be used or ridge augmentation performed, whether the case should be splinted or broken up into separate partial dentures or individual teeth, how to provisionalize the case throughout treatment, and when to immediately load implants versus perform serial extraction. All of these concerns will be addressed in this interdisciplinary approach to our most challenging cases.

Dennis P. Tarnow, DDS, *is a clinical professor of periodontology and director of implant education at Columbia University School of Dental Medicine. He is a former professor and chairman of the Department of Periodontology and Implant Dentistry at New York University (NYU) College of Dentistry, where a wing was named after him. He holds certificates in periodontics and prosthodontics and is a diplomate of the American Board of Periodontology. He is a recipient of the Master Clinician Award from the American Academy of Periodontology and the Teacher of the Year Award from NYU. Dr Tarnow maintains a private practice in New York City and lectures internationally. He has published more than 100 articles on periodontics and prosthodontics and implant dentistry and has coauthored three textbooks, including* Aesthetic Restorative Dentistry: Principles and Practice *(Montage Media, 2008).*

The Expansion of Regeneration for Teeth and Dental Implants

Donald S. Clem

In recent years, the management of periodontal diseases has shifted from arrestive and resective therapies to the regeneration of lost hard and soft tissues. The science of regenerative

therapy has developed to include modulation of the host response and wound healing in an effort to enhance both predictability and the extent of bone, periodontal ligament, and gingival restoration. The progress of regenerative therapy not only allows the clinician to retain more teeth but also enables more patients to be restored using dental implants. During this lecture, participants will learn the current theories regarding the etiology of inflammatory bone loss around teeth and implants, options for enhancing wound healing during regeneration attempts, the basics of bone substitutes, the role of regenerative concepts in managing peri-implant bone loss, a protocol for long-term maintenance care of patients undergoing regeneration, and future considerations for adopting new regenerative protocols and materials.

Donald S. Clem, DDS, *is a diplomate of the American Board of Periodontology and a fellow of the American College of Dentists, the International College of Dentists, and the Pierre Fauchard Academy. He received the award for Outstanding Contributions to the Field of Periodontics from the California Society of Periodontists and a Clinical Research Award from the American Academy of Periodontology (AAP). He is a past president of the California Society of Periodontists, the AAP, and the AAP Foundation. He previously served on the board of directors of the Academy of Osseointegration and is a member of the Loyola University Council of Regents. Dr Clem has published in the fields of sedation, periodontal regeneration, dental implants, and bone healing and continues to lecture on these topics internationally. He maintains a private practice limited to periodontics and dental implants in Fullerton, California.*

Session III. Predictable Solutions for Ridge Augmentation: Let It Grow!

Moderated by R. Gilbert Triplett

R. Gilbert Triplett, DDS, PhD, *is a Regents Professor and vice chairman of the Department of Oral and Maxillofacial Surgery at the Texas A&M University Baylor College of Dentistry and chief of the Division of Oral and Maxillofacial Surgery in the Department of Surgery at the Baylor University Medical Center in Dallas. His areas of research include the treatment of edentulism, implant dentistry, and bone regeneration.*

The Central-Lateral Replacement Dilemma in Esthetic Implant Dentistry: Clinical Alternatives and Case Management

Maurice A. Salama

Clinicians today have access to an astounding array of new technologies, tools, and materials to use in their progressive and esthetically oriented practices. However, no amount of resources can ensure success if the treatment design is inadequate. This presentation will identify the risk factors affecting successful esthetic outcomes in multiple adjacent tooth replacements within the esthetic zone, specifically the replacement of adjacent maxillary lateral and central incisors. It will also discuss appropriate solutions for mitigating these risks. A clear blueprint will be outlined that will incorporate digital and biomaterial technology with advanced surgical protocols to overcome esthetic challenges and predictably achieve successful results. In addition, specific guidelines for the use of new regenerative products will be reviewed as well as new technologies and applications for future enhancement. Upon completion of this presentation, participants should be able to diagnose and classify challenging implant recipient sites in the esthetic zone, apply preservation techniques at the time of extraction, and manage the deficient site using horizontal and vertical augmentation techniques.

Maurice A. Salama, DMD, *earned his DMD degree as well as dual-specialty certification in orthodontics and periodontics from the University of Pennsylvania School of Dental Medicine, where he is currently a clinical assistant professor of periodontics. He holds the same appointment at the Augusta University Dental College of Georgia. Dr Salama is a member of the scientific committee for DentalXP and a member of "Team Atlanta," a dental practice that is world-renowned for clinical research in reconstructive and esthetic dentistry.*

Bone Reconstruction and Soft Tissue Management in Complex Clinical Cases

Mauro Merli

This presentation will evaluate surgical techniques for bone reconstruction in severely atrophic jaws where implant placement has been planned and will also focus on the many complex aspects regarding soft tissue handling in dental implant surgery. The presentation will also discuss the management of peri-implant soft tissue using techniques applied prior to or during abutment connection with the intention of providing not only an esthetic but also a biologic benefit, compared with peri-implant plastic surgery that is performed after abutment connection. A critical analysis of the most recent scientific literature regarding the various surgical procedures available will be presented, as well as the results of clinical research intended to guide clinicians in making the best choice for each case. The concepts discussed will be supported by anatomical illustrations and clinical images.

Mauro Merli, MD, DDS, *is a professor of periodontology at Marche Polytechnic University in Ancona, Italy, and the scientific director of Indent–International Dental Research and Education. He is a past president of the Italian Society of Periodontology and Implantology and an active member of the Italian Academy of Prosthetic Dentistry and the European Association for Cranio-Maxillofacial Surgery. He is the author of several scientific articles and the book* Implant Therapy: Integrated Treatment Planning, Volume 1 *(Quintessence, 2013). Dr Merli serves on the editorial boards of the* European Journal of Oral Implantology *and* The International Journal of Periodontics & Restorative Dentistry. *He lectures internationally and, together with his brother and sister, maintains a private practice founded by his father.*

Regenerative Strategies for Alveolar Ridge Deficiencies: 2016

Michael A. Pikos

This presentation will focus on the treatment of horizontal and vertical alveolar ridge deficiencies in the maxilla and mandible, from a single tooth to the entire arch. It will feature a spectrum of surgical protocols that include the use of autogenous, allogeneic, and xenogeneic bone together with bioactive modifiers such as recombinant human bone morphogenetic protein 2 and recombinant human platelet-derived growth factor.

Michael A. Pikos, DDS, *is an adjunct assistant professor in the Department of Oral and Maxillofacial Surgery at the Ohio State University College of Dentistry and the Nova Southeastern University College of Dental Medicine. He is also a courtesy clinical associate professor in the Departments of Periodontology and Prosthodontics at the University of Florida College of Dentistry. He is a diplomate of the American Board of Oral and Maxillofacial Surgery, the American Board of Oral Implantology/Implant Dentistry, and the International Congress of Oral Implantologists. In 2006, he received the Aaron Gershkoff Memorial Award from the American Academy of Implant Dentistry. Dr Pikos serves on the editorial boards of* Implant Dentistry, Case Reports in Dentistry, *and* The Journal of Implant and Advanced Clinical Dentistry. *He is a well-published author who has lectured extensively on dental implants both nationally and internationally. Dr Pikos is the founder and CEO of the Pikos Institute and maintains a private practice limited to implant surgery in Palm Harbor, Florida.*

The Use of Ultrasonically Fabricated Barriers for Enhanced Outcomes in Guided Bone Regeneration

Kevin G. Murphy

Resorb x (KLS Martin) is a bioresorbable barrier membrane for guided bone regeneration that can be molded into any desired 3D space-maintaining form. Using a combination of thermoplastic and ultrasonic energies, these barrier membranes have successfully been used to create the proper environment for both large lateral and vertical ridge augmentations in situations previously

only treated with block grafting or distraction. This presentation will outline the basic science, clinical techniques, and outcomes of using ultrasonically fabricated barriers.

Kevin G. Murphy, DDS, MS, *is an associate professor in the Department of Periodontics at the University of Maryland Dental School, where he teaches in the Periodontal Prosthesis Fellowship Program. He serves on the editorial review board of several journals and is a board member of the Pankey Foundation. He has published numerous articles and textbook chapters on periodontal regeneration and implant dentistry and has lectured nationally and internationally on corticotomy-facilitated orthodontia, periodontal regeneration, placement and restoration of dental implants, and periodontal prostheses. Dr Murphy is a diplomate and member of the American Academy of Periodontology, the American Academy of Esthetic Dentistry, and the American Academy of Restorative Dentistry. He maintains a private practice in Baltimore, Maryland, limited to prosthodontics, periodontics, and implant dentistry.*

New Perspectives on Vertical and Horizontal Augmentation

István Urbán

Vertical and horizontal ridge deficiency is one of the greatest challenges of bone regeneration in implant dentistry. This presentation will review the anatomical and surgical principles of posterior mandibular and anterior maxillary ridge augmentation. A major goal during these procedures should be to achieve tension-free closure without any disturbance of the neurovascular structures. The presentation will therefore include a detailed demonstration of anatomically guided lingual flap mobilization that protects the mental nerve. In anterior maxillary defects, the buccal mucosa is often broadly released, which can result in severe apical translocation of the mucogingival line and loss of the vestibule and keratinized mucosa. Recently, a technique utilizing a collagen matrix in combination with an autogenous strip gingival graft has been documented to be a successful alternative to completely autogenous soft tissue grafting. Surgical techniques for preserving the regenerated crestal bone following bone and soft tissue augmentation will be discussed, as well as scientific results.

István Urbán, DMD, MD, PhD, *teaches implant dentistry in the graduate program at Loma Linda University School of Dentistry in California. He received his DMD and MD degrees from the Semmelweis University School of Medicine in Budapest, Hungary, and his PhD degree in periodontology from the University of Szeged, where he is an honorary professor. He also completed a program in oral surgery at Saint István Hospital in Budapest and an internship program at the University of California, Los Angeles School of Dentistry. Dr Urbán was appointed assistant professor at Loma Linda University 1 year after graduating from the fellowship program there. He has published scientific articles and textbook chapers on bone regeneration and soft tissue reconstructive surgery around dental implants and maintains a private practice in Budapest.*

Esthetic Considerations and New Developments over the Last 25 Years

Massimo Simion

The history of guided bone regeneration can be divided into three main periods: the Developing Period, the Consolidation Period, and the Simplification Period. The Development Period began in 1989 with a famous study in rabbits from Dr Dahlin and continued until 1996 when the surgical technique became well defined. During the Consolidation Period, the results of the technique were confirmed with retrospective and prospective clinical studies. The Simplification Period began in 2005 when tissue engineering techniques were implemented to reduce the complexity of the regenerative surgery and the morbidity for the patient. In the near future, the use of growth factors could eliminate the need for the barrier membrane and autogenous bone harvesting from the patient, resulting in easier and less invasive surgical techniques.

Massimo Simion, MD, DDS, *is a professor and chairman of the Department of Periodontology at the University of Milan School of Dentistry. He is a past president and a member of the Council of the European Academy of Osseointegration. He serves on the editorial boards of the* Journal of Periodontology, The International Journal of Periodontics & Restorative Dentistry, *and* Clinical Oral Implants Research. *He has published several scientific papers and lectures internationally on topics in periodontology, osseointegration, and bone regeneration.*

SUNDAY, JUNE 19

Session I. Surgical Solutions for Root Coverage Procedures: Optimize Your Success

Moderated by Adriana McGregor

Adriana McGregor, DDS, *is a co-instructor at the Microsurgery Training Institute in Santa Barbara, California, with Dennis Shanelec, the father of microsurgery. She is a coauthor of the microsurgery chapter in* Carranza's Clinical Periodontology *(Saunders, 2006) and a past president of the Academy of Microscope-Enhanced Dentistry. She serves on the editorial boards of* The International Journal of Microdentistry *and* The International Journal of Periodontics & Restorative Dentistry. *Dr McGregor lectures internationally on esthetic periodontal and implant microsurgery and maintains a private practice limited to esthetic periodontal and implant microsurgery in Westlake Village and Santa Barbara, California.*

Evidence-Based Alternatives for Autogenous Grafts: Outcomes, Attachments, and Stability

Michael K. McGuire

The ability to predictably treat gingival defects using soft tissue grafts has been one of the cornerstones of periodontal therapy over the past quarter-century. During this time, surgical techniques have been refined and modified to be less invasive and more esthetic. This presentation will review and contrast alternatives to autogenous grafts as they relate to clinical outcomes, patient-based outcomes, root surface attachment, and long-term stability. The advantages of live-cell devices, growth factors, and biologically based devices will also be discussed.

Michael K. McGuire, DDS, *is a director and co-chairman of the American Board of Periodontology and has served as president of numerous dental organizations, including the American Academy of Periodontology (AAP) and the AAP Foundation. He serves on the editorial boards of multiple publications, including the* Journal of Periodontology, The International Journal of Periodontics & Restorative Dentistry, *and* The International Journal of Oral & Maxillofacial Implants. *Dr McGuire lectures both nationally and internationally and is the author of more than 50 scientific articles and textbook chapters. His research has received the AAP's Robinson Regeneration Award twice and the Clinical Research Award twice; he is also the recipient of the AAP's Master Clinician Award and its highest honor, the Gold Medal Award.*

Selecting the Optimal Grafting Procedure

Edward P. Allen

The connective tissue graft (CTG) has been considered the gold standard for root coverage grafting since its introduction 30 years ago. Compared with free gingival grafts, CTGs provide predictable root coverage and enhanced esthetics while reducing palatal harvest site discomfort. Outcome parameters of new techniques are commonly compared with those achieved using CTGs. These procedure-based outcomes include root coverage, an increase in tissue thickness, clinical attachment level gain, and keratinized tissue gain. Recently, attention has shifted toward patient-based parameters, including cost, pain, inconvenience, esthetics, and lasting benefit. This lecture will explore data regarding both procedure-based and patient-based outcome parameters for the evidence-based selection of an optimal root coverage grafting method.

Edward P. Allen, DDS, PhD, *has served as president of the American Academy of Esthetic Dentistry (AAED), the American Academy of Restorative Dentistry, and the American Academy of Periodontology (AAP) Foundation. He is the recipient of the AAP's Master Clinician Award, the AAED's President's Award for Excellence in Dental Education, and the Seattle Study Club's Saul Schluger Award for Excellence in Diagnosis and Treatment Planning. Currently, he is the Periodontal Section Editor for the* Journal of Esthetic and Restorative Dentistry *and serves on the editorial boards of the* Journal of Periodontology *and* The International Journal of Periodontics & Restorative Dentistry. *Dr Allen is the founder of the Center for Advanced Dental Education in Dallas, Texas, where he teaches surgical technique courses. He has authored more than 100 publications and lectures and provides surgical demonstrations worldwide.*

Root Coverage Beyond Esthetics

Giovanni Zucchelli

Despite the frequency of deep gingival recession in the mandibular incisors, especially in postorthodontic patients, there is a lack of evidence on successful treatment. Treatment of this condition is demanding and challenging, in part due to the poor mucogingival conditions that are often present in the mandibular incisor area and may preclude the execution of a coronally advanced flap (CAF) procedure. A CAF combined with a connective tissue graft (CTG) is the most predictable root coverage surgical technique. Removal of the labial submucosal tissue during CAF surgery and the use of a thin CTG, derived from the extraoral de-epithelialization of a free gingival graft, allows clinicians to achieve successful root coverage. Furthermore, the clinically significant pocket depth reduction and clinical attachment level gain, together with the increase in gingival tissue and keratinized tissue height, represent critical improvements in the periodontal conditions and could be beneficial for the prognosis of the affected tooth. These benefits alone could justify the treatment of deep gingival recession affecting mandibular incisors, even without the traditional esthetic indications or dentin hypersensitivity.

Giovanni Zucchelli, DDS, PhD, *is a professor of periodontology at the University of Bologna, Italy. He is the innovator of several soft tissue plastic surgical techniques. In 2006 and 2008, he received the E. Bud Tarrson Research Award in Oral Plastic Surgery from the American Academy of Periodontology Foundation. Dr Zucchelli is an active member of the European Academy of Esthetic Dentistry, the Italian Society of Periodontology, the Italian Society of Osseointegration, and the European Federation of Periodontology. He is an associate editor of* The International Journal of Esthetic Dentistry *and serves on the editorial board of* The International Journal of Periodontics & Restorative Dentistry. *He is an international lecturer and also teaches hands-on surgical courses. Dr Zucchelli is the author of more than 100 publications, including the book* Mucogingival Esthetic Surgery *(Quintessence, 2013).*

Simultaneous Augmentation of Multiple Teeth with Autogenous Connective Tissue

Kirk L. Pasquinelli

Recession defects frequently involve multiple teeth in one or even both arches. The clinician treating these defects using autogenous connective tissue grafts will usually resort to multiple surgeries due to a belief that insufficient connective tissue material can be harvested from the palate. This program will present surgical modalities that allow clinicians to harvest greater amounts of autogenous connective tissue, thus enabling them to reduce the number of surgical visits for their patients. Participants will learn the possibilities and techniques for harvesting larger connective tissue grafts, recipient site flap design for using these grafts, and the potential risks of these procedures.

Kirk L. Pasquinelli, DDS, *is an assistant clinical professor in the Division of Graduate Prosthetics at the University of California at San Francisco (UCSF) School of Dentistry. He has taught continuing dental education at both UCSF and the University of the Pacific School of Dentistry and serves on the faculty of the Interdisciplinary Dental Education Academy as well as the Foundation for Advanced Continuing Education. He also teaches select groups nationally and internationally and has authored numerous articles on periodontal and restorative dentistry. Dr Pasquinelli maintains a private practice in San Francisco.*

Microscopic Approaches for Root Coverage: Long-Term Observation of Recipient Sites of Connective Tissue Grafts

Masana Suzuki

It has been two decades since microscopic surgical techniques were adapted to periodontal surgeries. During this period, many changes have been made to the handling procedures of connective tissue grafts (CTGs) and flaps, and these changes have improved postoperative outcomes. This lecture will present data from more than 10 years of clinical cases that document the way to handle CTGs with flap operation techniques in order to obtain a successful root coverage outcome.

Masana Suzuki, DDS, *received his DDS from the Nippon University School of Dentistry at Matsudo, where he is currently a visiting professor. He is an active member of the Japan Periodontal Association, an instructor of the Japan Clinical Periodontology Association, an advisor of the Society of Japan Clinical Dentistry–Tokyo, a past president of the Osseointegration Study Club of Japan, and a board member of the Japan Association of Microscopic Dentistry. Dr Suzuki has authored numerous publications on topics such as periodontal microsurgery, periodontal prosthodontics, and esthetic dentistry. He maintains a private practice in Tokyo, Japan.*

Surgery Without Papilla Incision: Tunneling Flap Procedures in Plastic Periodontal and Implant Surgery

Otto Zuhr

Microsurgical techniques in plastic periodontal and implant surgery allow the clinician to perform very precise surgery using smaller instruments and finer suture materials than formerly possible. Additionally, new flap techniques known as "tunneling techniques" have been developed to reduce the number of vertical incisions and avoid cutting any papillae. The use of tunneling techniques results in natural-looking, more harmonious transitions between tissue structures and avoids scarring in the esthetic zone. This presentation will discuss the relevant advantages of tunneling flaps, such as improved wound healing, over former concepts in plastic esthetic periodontal surgery. It will also outline the essential parameters of a successful treatment outcome and give an overview of innovation and evidence in tunneling flap procedures.

Otto Zuhr, DDS, Dr med dent, *currently holds an assistant professorship in the Department of Periodontology at the Goethe University of Frankfurt Dental School. In 2001, he was named a Specialist in Periodontology by the German Society of Periodontology. From 1999 to 2008, he worked at the Institute of Periodontology and Implantology in Munich, and in 2009 he founded a new clinic with Marc Hürzeler. From 2007 to 2014, he served as a board member of the German Society of Periodontology. Dr Zuhr has authored several articles in the field of periodontology and lectures nationally and internationally. He is coauthor of the book* Plastic-Esthetic Periodontal and Implant Surgery: A Microsurgical Approach *(Quintessence, 2012).*

Session II. Prosthetics 2020: Digital or Analog

Moderated by Arnold S. Weisgold

Arnold S. Weisgold, DDS, *is an adjunct professor of periodontology and former director of Postdoctoral Periodontal Prostheses at the University of Pennsylvania School of Dental Medicine, where he established the Department of Form and Function of the Masticatory System. In 2013, Dr Weisgold received the Distinguished Clinician Award at the 11th International Symposium on Periodontics & Restorative Dentistry. He is a consulting editor for the* Compendium of Continuing Education in Dentistry *and* The International Journal of Periodontics & Restorative Dentistry. *Dr Weisgold lectures and has published extensively on restorative dentistry, implant prosthodontics, and occlusion.*

Digital Dental Medicine

Jörg R. Strub

The use of digital technologies is unavoidable in a contemporary dental practice. The application spectrum of digital technologies covers all dental disciplines, and uses vary among data acquisition, treatment planning, and computer-aided design/computer-assisted manufacturing (CAD/CAM) techniques. In reconstructive dentistry, the ultimate goal in using these technologies is to improve the quality of care and capabilities of the clinician in examination, diagnosis, and treatment of the patient. When compared with conventional methods, use of digital technologies in the dental practice generally facilitates more accurate data acquisition and assessment, superior efficacy in treatment planning, and more controlled and faster manufacturing processes, all of which result in a higher level of patient care and better satisfaction for both the patient and the dentist. Future developments in digital technologies will focus on expanding the range of applications and reducing manufacturing fees. This presentation will provide an overview of the digital workflow in reconstructive dentistry, discuss its possibilities and advantages, and provide insights on future developments.

Jörg R. Strub, DDS, Dr med dent habil, Dr hc, *is a professor and chair of the Department of Prosthodontics at the Albert-Ludwigs University in Freiburg, Germany, where he was the former dean and is now the associate dean for clinical affairs. He is also a visiting professor in the Department of Preventive and Restorative Sciences at the University of Pennsylvania School of Dental Medicine. In 2010, Dr Strub received the Distinguished Clinician Award at the 10th International Symposium on Periodontics & Restorative Dentistry.*

Virtual Planning: The Future Is Now!

Christian Coachman

The dental laboratory of the future will go beyond simply fabricating restorations and appliances; it will become the starting point for any interdisciplinary treatment plan and a key partner for increasing case acceptance by utilizing software to transform our restorative experience into something much more efficient, predictable, and beautiful. That technology is already here, and the future is now. During this presentation, participants will learn how to use the smile frame to identify the esthetic potential of the case; integrate 2D smile design projects into interdisciplinary 3D software for better treatment-planning decisions; integrate facially guided smile design principles to digital wax-ups to reduce intraoral esthetic adjustments; develop educational presentations for patient motivation using the concept of emotional dentistry; coordinate an interdisciplinary team using asynchronous communication; integrate orthodontics into daily restorative procedures; use 3D digital implant planning guided by smile design to create precision and predictability in full-mouth implant rehabilitation; and use the SKYN concept for esthetic anterior monolithic CAD/CAM restorations without wax-ups and layering.

Christian Coachman, CDT, DDS, *was the head ceramist for "Team Atlanta" (Drs Goldstein, Garber, and Salama) for 4 years and currently serves as a consultant for dental offices and companies developing products and implementing concepts. He is the developer of the pink hybrid implant restoration technique and the Digital Smile Design concept. Dr Coachman is a member of the Brazilian Academy of Esthetic Dentistry and the American Academy of Esthetic Dentistry. He has published extensively and lectures internationally in the fields of esthetic dentistry, digital dentistry, dental photography, oral rehabilitation, dental ceramics, and implants. He maintains a private practice in São Paulo together with his father, uncle, and brother.*

The Virtual Patient—The Actual Status of Digital Planning Tools

Irena Sailer

Surgical or prosthetic rehabilitation often leads to significant changes in the patient's physical appearance. In complex situations, it is often difficult for patients to envision these changes and to decide whether they agree with the planned treatment. Thus, thorough pretreatment diagnostics are crucial not only for predictable treatment planning and execution by the treating specialists but also for patient decision-making. Some of the tools routinely used today for pretreatment diagnostics and planning in the clinical environment are 2D extra- and intraoral patient photographs, patient records, study casts of the actual situation, and 2D and/or 3D radiographs. One shortcoming of the present visualization methods is that the physical effect of the treatment on the patient's facial appearance remains uncertain during the treatment. In order to assist the patient and the clinician during pretreatment decision-making, a 3D facial scanner with high resolution and accuracy, software to accurately combine the 3D extraoral scans with 3D intraoral scans and radiographs, and software to modify the combined data according to the treatment plan are needed. Several recent developments aim to fulfill these demands; this lecture will evaluate those options and their feasibility for clinical practice.

Irena Sailer, Dr med dent, *is the head of the Division of Fixed Prosthodontics and Biomaterials at the University of Geneva in Switzerland. She has served as a visiting scholar in the Department of Biomaterials and Biomimetics at the New York University College of Dentistry and currently holds an adjunct associate professorship of restorative dentistry at the University of Pennsylvania School of Dental Medicine. Dr Sailer is certified as a specialist in prosthodontics by the Swiss Society for Reconstructive Dentistry and in dental implantology by the Swiss Society for Dentistry.*

Minimally Invasive Prosthetic Procedures: Digital Versus Analog

Mauro Fradeani

This presentation will discuss the fundamentals for achieving a pleasing, functional, and long-term esthetic outcome: treatment planning, team collaboration, an understanding of the patient's needs, and the appropriate selection of restorative materials. An innovative operative protocol using a minimally invasive prosthetic procedure allows the clinician to manage highly compromised clinical situations and guarantee an excellent, long-term esthetic result and better patient acceptance of the treatment. Participants will learn how to transition from the traditional to the digital workflow, starting with the impression and ending with fabrication of the definitive restoration.

Mauro Fradeani, DMD, *is a past president of the European Academy of Esthetic Dentistry and the Italian Academy of Prosthetic Dentistry. He is an associate editor of* The International Journal of Esthetic Dentistry *and a member of the editorial board of the* Journal of Esthetic and Restorative Dentistry. *He is an active member of the American Academy of Esthetic Dentistry and the American Academy of Fixed Prosthodontics. Dr Fradeani is the founder and director of the Advanced Continuing Education Institute in Pesaro, Italy, and of Mauro Fradeani Education. He is the author of the two-volume series* Esthetic Rehabilitation in Fixed Prosthodontics *(Quintessence, 2004, 2008) and maintains a private practice limited to prosthodontics and dental implants in Pesaro, Italy.*

Edentulous Site Enhancement: The Ultimate Peri-Implant Tissue Management

Gaetano Calesini

Developments in osseointegration have led to substantial change in the decisional paradigms in dentistry. In the last decade, clinicians and technicians have shifted their attention from the functional aspect, now taken for granted, to the additional esthetic resolution of the tooth loss. Following the loss of the natu-

ral dentition, the anatomy of the receiving site undergoes substantial modification. If clinicians use osseointegrated implants only to anchor the fixed or removable treatment apparatus, thereby conforming to the existing anatomy rather than modifying the anatomy and improving it, they are neglecting a formidable tool for creating an ideal context in which to insert restorations. Further, the conformative approach potentially compromises the final result. This presentation will focus on the edentulous site enhancement approach, particularly the use of osseointegrated implants as tools for modifying, recovering, and stabilizing the anatomical situation, favoring the construction of a prosthesis capable of truly recovering the oral homeostasis of the patient.

Gaetano Calesini, MD, DDS, CDT, *lectures internationally and is the coauthor of several articles and two books. He is a past president of the Italian Academy of Prosthetic Dentistry, an active member of the Italian Society of Osseointegration, and an honorary partner of the Italian Society of Operative Dentistry. Dr Calesini maintains a private practice in Rome, where he specializes in esthetics, prosthodontics, and the resolution of complex cases.*


From Single Restoration to Full-Arch Case Rehabilitation: How New Technologies and Materials Are Affecting the Treatment Plan Sequence

Andrea M. Agnini and Alessandro Agnini

The advent of new technologies has enabled the dental team to use new materials and equipment that produce an accurate, adaptive prosthetic rehabilitation that, until now, had been difficult to obtain. Today, intraoral mapping technology is one of the most exciting new areas in dentistry, as 3D scanning of the mouth is required in a large number of procedures in prosthodontics, implant dentistry, and orthodontics. Intraoral scanners attempt to overcome the limitations and disadvantages of the traditional impression procedure while maintaining a high level of accuracy. This presentation will analyze different cases and highlight the operational differences that have developed over time.

Andrea M. Agnini, DDS, *received his DDS from the University of Modena and Reggio Emilia in Italy and attended the New York University College of Dentistry, where he was also a clinical research fellow in the Ashman Department of Periodontology and Implant Dentistry. He lectures internationally and serves as a member of the editorial board for DentalXP. Dr Agnini has written numerous articles and is coauthor of the book* Digital Dental Revolution: The Learning Curve *(Quintessence, 2015). He maintains a private practice limited to fixed prosthodontics, periodontology, and implant dentistry in Modena and Sassuolo, Italy.*

Alessandro Agnini, DMD, *received his DMD from the University of Modena and Reggio Emilia in Italy, where he is an adjunct professor of fixed prosthodontics and implant dentistry. He also completed fellowships in periodontology and implant dentistry with Gianfranco Di Febo, Gianfranco Carnevale, and Mauro Merli. He is an active member of the Italian Academy of Prosthetic Dentistry and lectures internationally. Dr Agnini is a member of the editorial board for DentalXP, has written numerous articles, and is coauthor of the book* Digital Dental Revolution: The Learning Curve *(Quintessence, 2015). He maintains a private practice limited to fixed prosthodontics, periodontology, and implant dentistry in Modena and Sassuolo, Italy.*

Session III. Implant Solutions for the Edentulous Patient

Moderated by Nicholas M. Dello Russo

Nicholas M. Dello Russo, DMD, MScD, *completed his specialty training in periodontology at the Boston University School of Graduate Dentistry, receiving an MScD and certificate in periodontology. He currently serves as an instructor in periodontology at the Harvard School of Dental Medicine. He is a past president of the Massachusetts Society of Periodontists and a member of the Massachusetts Dental Society, the American Academy of Periodontology, and the Academy of Osseointegration. Dr Dello Russo is a diplomate of the American Board of Periodontology and an attending periodontist at Massachusetts General Hospital.*

Sequential Implant Placement for the Failing Dentition: Transitioning Patients to Fully Implant-Supported Prostheses Over Time

Laureen Langer

As our population ages, many well-cared-for patients present with dentitions that are not completely hopeless. They struggle to keep their natural teeth for as long as is reasonably possible. The timing of when to make the change from partial edentulism or a partially implant-supported restoration to a fully implant-supported restoration is critical. This presentation will highlight a variety of surgical and prosthetic techniques that have been employed to transition a patient into a full implant prosthesis without the need to wear removable prostheses during the surgical stages of treatment. Techniques of in situ bone grafting and immediate implant placement will be highlighted to give predictable, long-lasting results with the least amount of inconvenience to these older patients.

Laureen Langer, DDS, *served as an associate clinical professor at Columbia for 18 years and was codirector of the implant program in the Postgraduate Division of Periodontics. She has published articles in a number of peer-reviewed journals and chapters in six textbooks. Dr Langer is a diplomate of the American Board of Periodontology and a fellow of the Academy of Osseointegration. She is a past president of the Osseointegration Foundation and the Northeastern Society of Periodontists (NESP). In 2006 she received the NESP's Isador Hirschfeld Award for Clinical Excellence, and in 2008 she received the Distinguished Alumnus Award from Columbia University's Periodontal Alumni Association.*

20 Years with the All-on-4 Approach: What Is New?

Stephen M. Parel

It has been roughly 20 years since the use of tilted implants gave rise to the All-on-4 approach. For the clinicians managing edentulism or the failing dentition, it has been practice-changing; for the patients, it has been life-changing. This presentation will review the efficacy of the All-on-4 concept, both retrospectively and currently, using over 30 years of clinical findings. While the success of this approach may be unprecedented, complications can still occur. Thus, a primary emphasis of this lecture will be managing unanticipated results and complications.

Stephen M. Parel, DDS, *held faculty appointments at the University of Texas beginning in 1975, rising to the rank of full professor in the San Antonio Medical and Dental Schools and serving as head of the Maxillofacial Prosthetics Division in the Department of Prosthodontics. He is a diplomate of the American Board of Prosthodontics and a fellow of the American College of Dentists and the International College of Dentists. He is a past president of the American Academy of Maxillofacial Prosthetics, the Academy of Osseointegration (AO), and the AO Foundation. He has authored more than 45 scientific articles, multiple textbook chapters, and three books. Dr Parel has received numerous awards, most recently the Nobel Biocare Brånemark Osseointegration Award for lifetime achievement in the field of implant dentistry, the highest honor bestowed by the AO Foundation. He is presently in private practice.*

Rehabilitation of the Severely Compromised Maxilla: The Synergy of Prosthetics and Oral and Maxillofacial Surgery Providing Graftless and Grafting Solutions

Jay M. Neugarten

Patients seek a long-term solution that restores function, esthetics, and ultimately their quality of life. One challenge in the prosthetic rehabilitation of patients who present with severe maxillary bone resorption is the clinician's inability to obtain sufficient anchorage in the atrophic tissue. Treatment options include osseous grafting to restore the atrophy or a nongrafting solution such as zygomatic implant placement. This discussion will focus on the use of zygomatic implants. Zygomatic implant placement allows for shortened surgical sequences and reduced treatment time while still meeting the patient's expectations of success. This presentation will highlight prosthetically driven

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treatment planning in order to meet the patient's desires and anatomical needs with or without grafting. These treatment options will explore delayed and immediate loading protocols. Participants will review the biologic and anatomical considerations of the maxilla and the zygoma and will learn the design, indications and contraindications, and outcome assessment of the zygomatic implant.

Jay M. Neugarten, DDS, MD, *is an associate clinical professor at both the New York-Presbyterian Cornell-Weill Medical Center and the Northwell Health Long Island Jewish Medical Center. He is a diplomate of the American Board of Oral and Maxillofacial Surgery and a fellow of the American College of Surgeons. Dr Neugarten maintains a private practice in New York City limited to oral and maxillofacial surgery. His areas of special interest are the management of patients requiring a multidisciplinary approach for complex implant and bone grafting reconstruction as well as the treatment of patients with skeletofacial and craniofacial deformities utilizing corrective jaw surgery and distraction osteogenesis.*

Severely Resorbed Mandibles and Maxillae: Whether or Not to Augment

Tiziano Testori

In many edentulous maxillae, posterior alveolar atrophy requires bone grafting before implants can be placed; however, patient treatment acceptance is increased and graft morbidity is diminished by using tilted implants instead of grafting. This lecture will present an alternative treatment procedure in the maxilla using the tilted implant approach and will show the long-term outcomes of this procedure. While oral implant treatment of severely atrophic edentulous mandibles has been presented in numerous studies, no long-term follow-up studies with only short implants have been conducted. This lecture will illustrate the long-term treatment outcomes of patients with severely resorbed edentulous mandibles who were treated with short (6–7 mm) implants, showing that placement of short implants without the use of bone grafting procedures is a highly predictable treatment. Placement of short or tilted implants could reduce surgical complications and patient morbidity in situations where vertical augmentation procedures are needed.

Tiziano Testori—*See bio on page 25.*

Is the Implant-Supported Bar Overdenture Becoming an Extinct Modality?

Craig M. Misch

There is a growing trend toward managing the edentulous patient (or terminal dentition) with graftless solutions, such as use of tilted and zygomatic implants, to support fixed prostheses. As few as four implants can provide adequate support for fixed options. The prosthetic complexity and greater need for maintenance of the implant-supported bar overdenture has led many dentists to prefer fixed prostheses. This presentation will discuss indications for removable versus fixed prostheses and prosthetic design alternatives.

Craig M. Misch, DDS, MDS, *holds certificates in prosthodontics and oral implantology and completed specialty training in oral and maxillofacial surgery. He is a diplomate of the American Board of Oral and Maxillofacial Surgery. Currently, Dr Misch is a clinical associate professor of periodontics and prosthodontics at the University of Florida College of Dentistry. He serves on the editorial boards of* The International Journal of Oral & Maxillofacial Implants, The International Journal of Periodontics & Restorative Dentistry, Implant Dentistry, *and the* Journal of Oral Implantology. *He maintains a private practice as a dual specialist in Sarasota, Florida.*

Coexistence of Natural Teeth and Implants in Periodontally Compromised Patients

Takeshi Sasaki

Most patients with missing teeth want to restore lost function and esthetics, preserve remaining natural teeth, and maintain the treatment outcome for many years. Comprehensive treatment is essential for successfully treating complicated problems in periodontally compromised patients with coexisting natural teeth and implants. This presentation will discuss the importance of comprehensive treatment based on a consistent concept for saving teeth and promoting longevity in partially edentulous patients.

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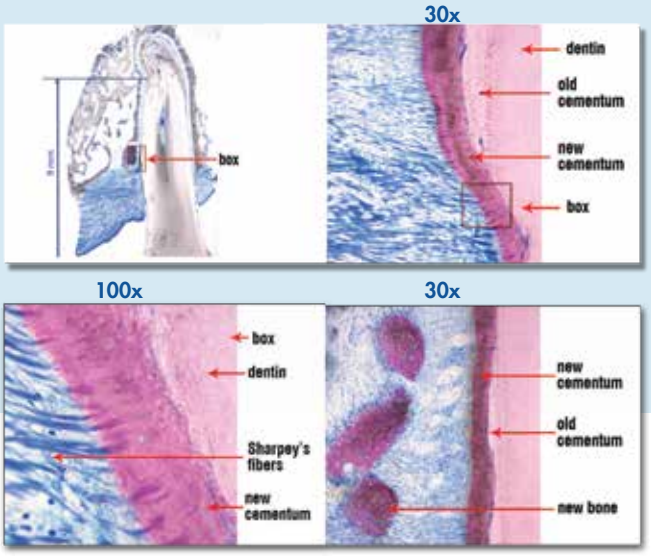

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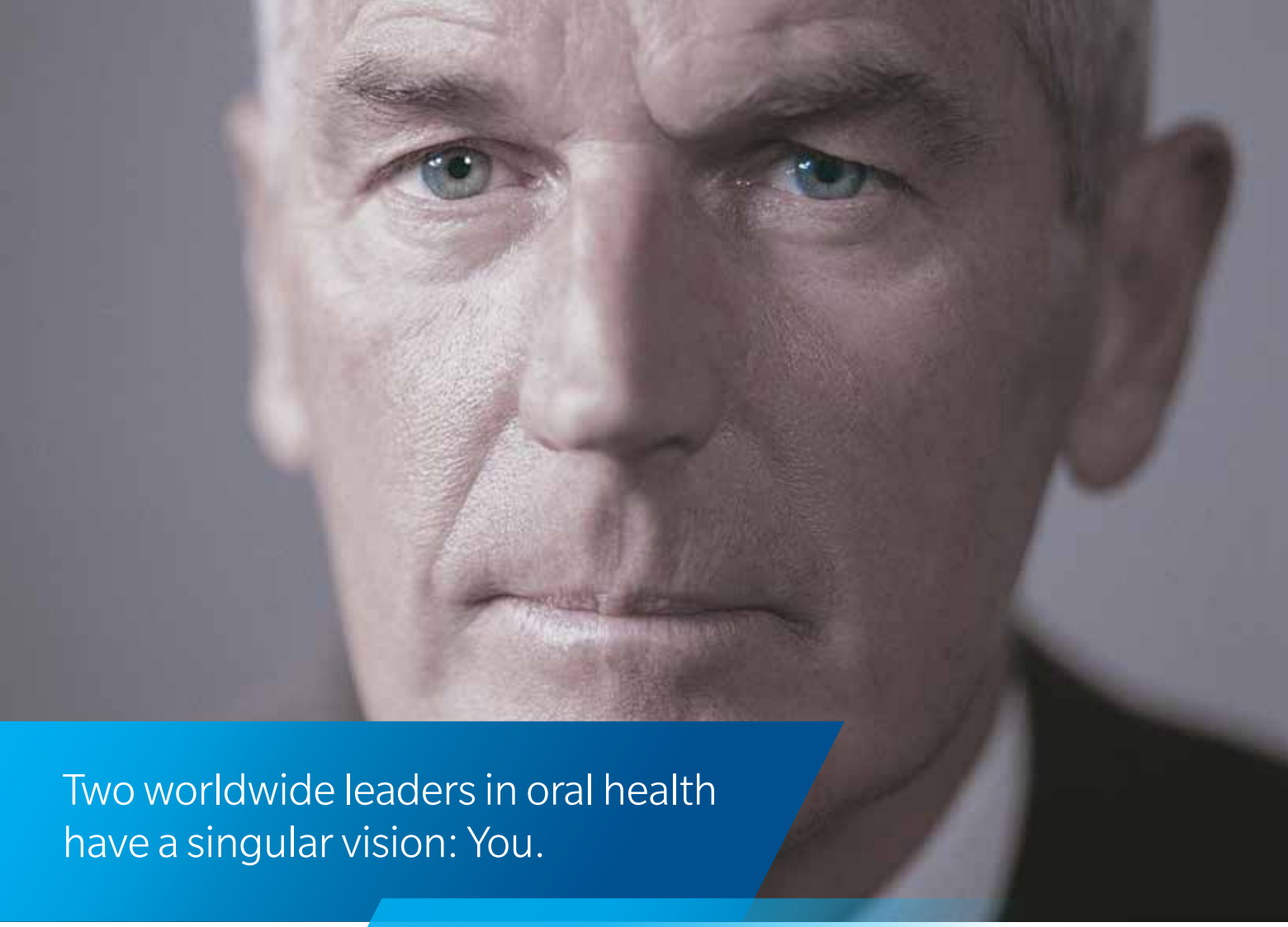

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